MANAGING AND MITIGATING SUFFERING AT WORK

EDITED BY: M. Isabel Sanchez-Hernandez, Živile Stankeviciute, Rūta Adamonienė and Martina Blašková

PUBLISHED IN: Frontiers in Psychology

frontiers Research Topics

frontiers

ISSN 1664-8714
ISBN 978-2-83250-729-2
DOI 10.3389/978-2-83250-729-2

About Frontiers

Frontiers is more than just an open-access publisher of scholarly articles: it is a pioneering approach to the world of academia, radically improving the way scholarly research is managed. The grand vision of Frontiers is a world where all people have an equal opportunity to seek, share and generate knowledge. Frontiers provides immediate and permanent online open access to all its publications, but this alone is not enough to realize our grand goals.

Frontiers Journal Series

The Frontiers Journal Series is a multi-tier and interdisciplinary set of open-access, online journals, promising a paradigm shift from the current review, selection and dissemination processes in academic publishing. All Frontiers journals are driven by researchers for researchers; therefore, they constitute a service to the scholarly community. At the same time, the Frontiers Journal Series operates on a revolutionary invention, the tiered publishing system, initially addressing specific communities of scholars, and gradually climbing up to broader public understanding, thus serving the interests of the lay society, too.

Dedication to Quality

Each Frontiers article is a landmark of the highest quality, thanks to genuinely collaborative interactions between authors and review editors, who include some of the world's best academicians. Research must be certified by peers before entering a stream of knowledge that may eventually reach the public - and shape society; therefore, Frontiers only applies the most rigorous and unbiased reviews.
Frontiers revolutionizes research publishing by freely delivering the most outstanding research, evaluated with no bias from both the academic and social point of view. By applying the most advanced information technologies, Frontiers is catapulting scholarly publishing into a new generation.

What are Frontiers Research Topics?

Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: frontiersin.org/about/contact

MANAGING AND MITIGATING SUFFERING AT WORK

Topic Editors:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain
Živile Stankeviciute, Kaunas University of Technology, Lithuania
Rūta Adamonienė, Mykolas Romeris University, Lithuania
Martina Blašková, Police Academy of the Czech Republic, Czechia

Citation: Sanchez-Hernandez, M. I., Stankeviciute, Ž., Adamonienė, R., Blašková, M., eds. (2022). Managing and Mitigating Suffering at Work. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-83250-729-2

Table of Contents

frontiers | Frontiers in Psychology

TYPE Editorial
PUBLISHED 24 October 2022
DOI 10.3389/fpsyg.2022.1033440

OPEN ACCESS

EDITED AND REVIEWED BY
Giulio Arcangeli,
University of Florence, Italy

*CORRESPONDENCE
M. Isabel Sánchez-Hernández
isanchez@unex.es

SPECIALTY SECTION
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

RECEIVED 31 August 2022
ACCEPTED 20 September 2022
PUBLISHED 24 October 2022

CITATION
Sánchez-Hernández MI, Stankevičiūtė Ž, Adamonienė R and Blašková M (2022) Editorial: Managing and mitigating suffering at work. *Front. Psychol.* 13:1033440. doi: 10.3389/fpsyg.2022.1033440

Editorial: Managing and mitigating suffering at work

M. Isabel Sánchez-Hernández[1]*, Živilė Stankevičiūtė[2], Rūta Adamonienė[3] and Martina Blašková[4]

[1]Department of Business Administration and Sociology, School of Economics and Business Administration, University of Extremadura, Badajoz, Spain, [2]School of Economics and Business, Kaunas University of Technology, Kaunas, Lithuania, [3]Mykolas Romeris University, Public Security Academy, Kaunas, Lithuania, [4]Department of Management and Informatics, Faculty of Security Management, Police Academy of the Czech Republic in Prague, Prague, Czechia

KEYWORDS

burnout, job insecurity, techno-stress, suffering, wellbeing, workplace

Editorial on the Research Topic
Managing and mitigating suffering at work

Introduction

This special issue of the Journal Frontiers in Psychology, in the section on Organizational Psychology, is devoted to the multi-faceted emergent concept in the current world of work of employees' suffering. We define suffering at work as a destabilizing psychological experience arising when employees run into insuperable and tenacious barriers, after having used up all their available resources trying to improve a situation, looking for wellbeing in the workplace, or a better organization of work with regards to quality and safety.

Unfortunately, different factors could negatively affect the working experience in highly volatile, uncertain, complex, and ambiguous (VUCA) contexts. For instance, and even considering that the implementation of teleworking was a security practice to face the crisis resulting from the COVID-19 pandemic, the increasing use of technology has led to the worsening of technostress among workers. In the same line, the current organizational downsizing processes are also causing suffering, as has been evidenced in managers' mental health, employees' job insecurity, or affective disorders of employees such as depression or anxiety.

Researchers are becoming increasingly interested in understanding suffering at work, and practitioners are conscious about the organizational problems associated with it. Employees suffering at work can lead to lower productivity, negative deviant behaviors, lost workdays, and a higher staff turnover. Managers, supervisors, or employers could help lower workplace suffering. New trends in Human Resources Management (HRM)

contribute to combatting suffering such as responsible job designs or mindfulness, but there is still a lack of evidence, both theoretical and empirical, regarding how to manage suffering. To fill the gap, the twenty-one articles published in this special issue present the recent advances on the topic and make a significant contribution to a better understanding of managing and mitigating suffering at work.

As a whole, the published manuscripts address three specific areas of interest, namely sources of suffering, consequences, and potential solutions, that are presented and commented as follows.

Sources of suffering

Although a huge variety of job demands might serve as sources of suffering at work, this special issue focuses on seven antecedents, namely job insecurity, abusive supervision, stress and technostress, workplace violence, abusive and inefficient red tape, unsatisfactory personal relations, and role-overload.

Job insecurity

Job insecurity, which refers to a perceived threat to the continuity and stability of employment as it is currently experienced, is considered as a hindrance stressor and one of the huge issues in today's contemporary working life. Job insecurity impedes employees' overall functioning, personal growth, and development, and is more problematic for their wellbeing than the certainty of dismissal. Moreover, job insecurity causes negative consequences not only for employees, but also for businesses, leading to lower organizational performance.

Drawing upon the strength model of self-control, He et al. examined whether job insecurity was harmful to different types of proactive behaviors of employees. Based on two-wave data collected from 227 employees in China, the authors concluded that job insecurity was negatively associated with two types of proactive behaviors, namely individual-oriented and organization-oriented proactive behaviors. While acknowledging that complete elimination of job insecurity is infeasible for organizations, the paper reveals that the role of future work self-salience and socioeconomic status, as motivational and situational factors, can independently and interactively moderate the relationship between job insecurity and proactive behavior. These findings not only extend the strength model of self-control, but also encourage the organizations to develop differentiated management strategies for different employees.

The paper by Stankevičiute et al. deals with the link between job insecurity and its potential outcomes referring to the current volatility, uncertainty, complexity, and ambiguity (VUCA) context. Firstly, treating job insecurity as a hindrance stressor, the paper claims a negative association between job insecurity and trust in the organization, subjective wellbeing, and task performance. Secondly, the paper focuses on the relationship between constructs in the virtuous cycle, analyzing how trust in the organization, subjective wellbeing, and task performance are related. The authors suggest that the complex of actions with respect to employee development, transparent communication, taking part in decision-making, and the increase in organizational justice of the business actions might create a synergic effect and reduce job insecurity as such.

Abusive supervision

The study by Gul et al. focused on knowledge-hiding behaviors and abusive supervision. In their paper, social exchange theory was employed as the main theoretical framework predicting knowledge concealing in the presence of abusive supervision. Based on empirical results derived from a study conducted in Pakistan which received 340 responses, it was demonstrated that abusive supervision was positively related to three types of employees' knowledge-hiding behavior, namely evasive hiding, playing dumb, and rationalized hiding behaviors. Further, the paper provided evidence that psychological contract breach partially mediated the abusive supervision-knowledge hiding behavior linkage. Finally, the core contribution of the paper lies in the approach tackling the negative aspect, namely knowledge-hiding instead of the positive aspect, i.e., knowledge-sharing.

Stress and technostress

The stress produced by the massive lay-offs to adjust the labor market to the new market situation is an object of study as a source of suffering at work, especially in sectors more susceptible to modernization and restructuration processes, like the financial one. Robina-Ramírez et al. study how a sample of 601 employees from the banking sector in Spain have faced this adversity. In adversity at work, the authors focus their attention on promoting values, more specifically employees' spirituality and transcendence, for a better adaptation of workers to the pressure and stressful tasks at the companies.

Another source of suffering at work is technostress, which can affect the individual, group, and professional sphere of the sufferer, and also be a cause of burnout. Specifically, hyper-connection to different devices because of the COVID-19 pandemic situation has left workers susceptible

to exhaustion. Also, under the Conservation of Resources as a theoretical framework, a multidimensional scale of technostress with four dimensions (anxiety, fatigue, skepticism, and ineffectiveness) is verified by Buenadicha-Maetos et al. in a sample of 333 university students representing the next generations at work. This work highlights the dark side of technology if is not well managed. In addition, this work demonstrates that perceived stress and the individual students' conflicts have a mediation effect between technostress and emotional exhaustion.

Considering the perceptions of 339 Dutch childcare workers, the study by Bauwens et al. tests a model in which technostress influences the quality of care delivered, and the relationship is mediated by the emotional exhaustion of workers. In the model, empowering leadership is considered a moderator variable to be managed for stimulating employees' responsibility and accountability for the different dimensions of technostress.

Workplace violence

Workplace violence, especially in the health sector, is a common problem around the globe. The study by Kader et al. explores factors that influence incidents of violence against healthcare professionals in Bangladesh, analyzing the content of 157 incidents reported by doctors on social media. Findings show that the analyzed primary care centers experienced more violence than other facilities, largely due to insufficient human resources to meet patients' demands and expectations.

Red tape

New compulsory procedures and regulations are dramatically mushrooming at work, being categorized as red tape. Instead of improving job satisfaction, they lack functionality and generate suffering. In healthcare organizations, Muylaert et al., with a sample of 277 head nurses in elderly care homes in Flanders, empirically prove that red tape undermines head nurses' job satisfaction and discretionary room acts as an underlying mechanism in this process. This relationship is weaker when autonomous motivation is higher.

Poor personal relations and opportunistic behavior

The study by Yuan and Gao determines the main causes of employees' complaints in China with two complementary samples of 268 and 349 workers respectively. The main conclusion of the research indicates that dissatisfaction with personal relations is the most significant problem.

Also in China, the work of Chen et al. investigates the influence of opportunistic behavior tolerance on response strategy selection in a sample of 206 border agents in channel transactions. The authors focus their attention on the fact that channel transactions are increasing, and there is also an increase in negative acts of channel's members seeking self-interest. Some channel members suffer at the expense of other channel members' interests to maximize benefits, including fraud, breach of contract, dishonesty, and distortion of facts.

Role-overload

Generally, role overload is characterized by work demands or a set of responsibilities that exceeds the employees' time, energy, and capabilities. The work of Tang and Vanderberghe, which will be commented on in the next section, considers role-overload as a source of suffering at work.

Consequences of suffering

Recently, employee turnover has become one of the most relevant concerns for organizations. This special issue offers works devoted to analyzing specific consequences of suffering at work that are connected in a negative circle: underperformance, deviant work behavior, and employee turnover.

Underperformance

Role overload, considered as a challenge stressor, has been analyzed in the work of Tang and Vandenberghe to demonstrate that it undermines performance. To mitigate this negative effect, the authors propose that this relation must be buffered by leader-member exchange. Two complementary studies, and a supplementary panel, are presented involving a total of 502 customer-service employees in Canada. This research accentuates the scope of consequences of role overload by examining various aspects of performance such as in-role performance, job dedication, voice behavior, and reward recommendations. It is confirmed that role overload not only harms the individual, since it may engender such severe psychological strain as depression, but it can also threaten the organization, indirectly undermining work performance, particularly when leader-member exchange is low.

Deviant work behavior

According to Memon et al., deviant work behavior is considered to be a consequence of suffering at work, referring to counterproductive work behaviors, turnover intention, and prohibitive voice behavior. As such behaviors can also have significant negative effects on organizations, the authors addressed the potential measures for decreasing them. The results obtained from 385 employees of 40 large manufacturing organizations operating in Pakistan revealed that both internal and external CSR contributed to the reduced level of deviant work behaviors. Additionally, job satisfaction fully mediated the relationship for internal CSR while partially mediating for external CSR.

Employee turnover

Sometimes preceded by deviant work behavior, one of the consequences of suffering at work is the intention to quit the company. Turnover intention reflects an employee's inclination to search for alternative employment and is considered a direct and essential predictor of an organization's actual turnover. Employee turnover is a major concern for many organizations around the world as turnover usually negatively affects the performance and profitability of the organization, and increases the chances of losing good employees. Still, adopting appropriate management practices allows organizations to find ways to lower employee turnover. Along this line, Awan et al. argue and demonstrate through a sample of 220 bank employees in Pakistan that role conflict and job embeddedness are opposing factors that lead workers to quit or remain within the company.

Returning to work after a serious illness or injury that necessitates time off work and a subsequent re-engagement with the work environment is also a cause of suffering. The paper by Woods and Matthewson explores how the process is negotiated and executed in Australia, according to the workers' compensation legislation. It could be supportive and successful, or it could exacerbate the suffering of returning workers. The authors also discuss how the suffering that workers experience could be mitigated, describing several factors like alignment of worker, the advocacy provided by the return-to-work coordinator, and employer expectations.

Potential solutions for mitigating suffering at work

The current publications reveal several important aspects. First, work-life balance, meaningful work, mindfulness, and organizational culture can serve for organizations as the means for reducing suffering at work. Second, by eliminating or reducing suffering at work, organizations will better control its negative effects such as employee turnover.

Promoting work-life balance

Work-life balance refers to obtaining a sufficient degree of satisfaction at both home and work. Usually, achieving a satisfactory work-life balance is understood as restricting one side (usually work), to have more time for the other. In recent decades, a great deal of emphasis has been placed on work-life balance, as improving work–life balance is generally linked to employees' motivation, satisfaction, and engagement at the individual level, and higher productivity and organizational competitiveness at the organizational level. In contrast, the impossibility to reconcile professional and personal life is a source of suffering for employees, causing problems at the medium term to the organization as a whole.

The paper by Lonska et al. evaluates the flexibility of reconciling work and private life for Latvian employees during the COVID-19 pandemic. The authors analyze the work–life balance requirements and notice that they are highly dependent on the individual's personal circumstances. To avoid gender gaps, flexibility is desirable for both women and men.

Creating meaningful work

Recently, more individuals are desiring meaningful work. In general, meaningful work captures three elements: significance, broader purpose, and self-realization. As meaningful work positively correlates with many important individual work and career outcomes, such as work engagement or career development, more and more organizations are engaged in fostering meaningful work by implementing diverse practices. Moreover, meaningful work has the potential to reduce the harm employees experience at work. In line with this, Tariq et al. explore envy at work as a cause of suffering and highlight that meaningful work will help employees to regulate its negative effects. The empirical work, with a sample of 439 employees in Pakistan from four famous fast-food companies, demonstrates that a narrow span of supervision will increase work engagement and reduce envy.

Practicing mindfulness

Tu et al. defend that mindfulness practice could reduce burnout. This article, co-authored by researchers from China and the USA, has put the attention on 537 social workers in China, and examines the relations existing between job demands, resources, and burnout. This investigation has resulted in the suggestion that job demands and resources really

affect burnout, especially through both health and motivation impairment. High job demands were linked to high burnout while high job resources were linked to a reduction in burnout. This emphasizes and calls for applying mindfulness practice not only among social workers but also among other work categories and groups.

It is obvious that the topic of wellbeing is increasingly penetrating the education sector too. Along this line, the study of Song et al. searched for the links between basic psychologic needs and positive emotions of 398 Chinese preschool teachers and confirmed the hypothesis that trait mindfulness can predict and improve job satisfaction. Results have accented that basic psychological needs and positive emotions play a sequential intermediary role between preschool teachers' trait mindfulness and job satisfaction. From the practical perspective, the managers should establish a strong emotional support system to create an environment conducive to releasing and eliminating emotions and encourage preschool teachers to carry out internal self-dialogue and positive psychological suggestion.

The study by Song and Park puts the attention on customer injustice, referring to the unfair treatment that employees experience during service encounters, such as verbal aggressions or disrespect. Authors pointed out that escalated negative customer behavior has bad impacts on frontline employees' wellbeing and the prosperity of organization and, based on the survey of 259 participants in South Korea, their hypotheses were confirmed—emotional stability and attentiveness moderate relations between customer injustice and customer-directed sabotage.

Managing organizational culture

To manage and mitigate suffering, it is necessary to understand the type of organizational culture and its relationships with the environment. Assens-Serra et al. analyze the capacity of some environment variables, business strategies, and organizational competencies to predict the presence of specific cultures in a subsample of 362 Spanish managers, and a subsample of 1,317 Peruvian managers. Surprisingly, when compared to the literature, the authors found almost no relations between the environment variables and the culture types. In addition, strategy and competencies have a significant predictive capacity, especially in a situation of clan, hierarchy, and market culture. The article concludes showing the characteristics of the types of organizational culture that could be useful for a better management of suffering.

A further inter-continental study, the article by Kumpikaite-Valiuniene et al., connects authors from Lithuania and China to investigate the impact of different types of organization cultures on the adjustment of self-initiated expatriates. With participation from 125 expatriates around the world, their work and non-work-related adjustment was explored in very well-known types of culture: clan, adhocracy, market, and hierarchy. Although clan culture has expressed a positive effect on the expatriates' work and non-work-related adjustment, innovative culture was discovered to have a negative impact in this area. In line with the soul of this Special Issue in Frontiers in Psychology, culture types based on friendly and supportive relations and values fit the self-initiated expatriates' values and fostered their adjustment in the organization and the host country.

Conclusion

As a result of work intensification, increased work demands, unstable employment conditions, violence at work, abusive supervision, and other work-related aspects, suffering at work has become one of the main issues in our contemporary working world. In the meantime, decent work—sought by Sustainable Development Goal number 8—and good health and wellbeing—sought by Sustainable Development Goal number 3—can be achieved only by minimizing, if not eliminating, suffering at work.

New perspectives for a better management of employees' suffering are needed to deal with present and future concerns. From the point of view of systematic efforts in the area of improving management decisions and mechanisms designed to eliminate or at least alleviate the work suffering of employees, it is extremely important to take into account relationship-procedural imperfections and from them resulting and often arising mental discomfort. The feeling of low acceptance by colleagues or even the feeling of social and environmental alienation, one's own personal and professional inadequacy, low resilience to ever-increasing demands, fear of failing to meet new challenges, etc., is expanding and affecting more and more individuals and working groups.

Natural psychological mechanisms try to warn their bearers (individuals and groups) with gentle signals at first. However, specialists need to be involved in addressing and coping with the origins of psychological and social disorders. Facilitation, psychological support, consultant assistance, psycho-hygiene centers, mechanisms for increasing tolerance, mutual understanding, and cohesion are particularly appropriate in such situations.

It should be emphasized that it is always demanding and sensitive to prepare really meaningful and systemic measures in real organizations of various industries and sizes, with a chance to help and strengthen employees mentally. This effort transcends the boundaries of a single scientific discipline, and uncompromisingly calls for an active partnership of organizational psychologists, clinical psychologists or psychiatrists, sociologists, behaviorists, managers, Human Resources Managers, and many others. Scientific and academic incubators, in close connection with associations of suitable

specialists as well as pro-actively managed (mostly large) organizations, should also be involved in better managing work suffering in the future.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

Acknowledgments

The authors would like to extend our sincere thanks to the authors and the institutions participating in this special issue.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

frontiers in Psychology

ORIGINAL RESEARCH
published: 21 May 2021
doi: 10.3389/fpsyg.2021.691207

Role Overload and Work Performance: The Role of Psychological Strain and Leader–Member Exchange

Wei-Gang Tang and Christian Vandenberghe*

Department of Management, HEC Montréal, Montréal, QC, Canada

The relation between role overload and work performance remains insufficiently understood. Drawing upon conservation of resources theory, we expected role overload to negatively relate to performance through psychological strain and this relation to be buffered by leader–member exchange (LMX). Study 1 (*N* = 212) examined depression as a severe type of strain that mediates between role overload and in-role performance, job dedication, and voice behavior. Study 2 (*N* = 191) used generic, perceived strain as a mediator between role overload and in-role performance and reward recommendations. Both studies tested LMX's buffering effect, controlling for role ambiguity and conflict. A supplementary panel study (*N* = 99) assessed the temporal relationship between role overload and strain. Role overload triggered psychological strain, which undermined performance, and LMX acted as a buffer on role overload, but not on role ambiguity or role conflict. We discuss the implications of these findings for theory and practice.

Keywords: role overload, work performance, leader–member exchange, psychological strain, depression

OPEN ACCESS

Edited by:
Martina Blašková, Police Academy of the Czech Republic, Czechia

Reviewed by:
Irena Figurska, Pomeranian University in Slupsk, Poland

****Correspondence:***
Wei-Gang Tang
weigang.tang@hec.ca

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *05 April 2021*
Accepted: *26 April 2021*
Published: *21 May 2021*

Citation:
Tang W-G and Vandenberghe C (2021) Role Overload and Work Performance: The Role of Psychological Strain and Leader–Member Exchange. Front. Psychol. 12:691207. doi: 10.3389/fpsyg.2021.691207

INTRODUCTION

Roleoverload,[1] a work condition where people perceive role demands as exceeding their time, energy, and capabilities (Rizzo et al., 1970), looms ever larger in the workplace nowadays, inflicting significant costs on employees and organizations (Alfes et al., 2018). Role overload is associated with an array of negative consequences such as psychological strain (Glazer and Beehr, 2005), turnover intention (Jensen et al., 2013), reduced organizational citizenship behaviors (OCBs; Eatough et al., 2011), lack of organizational commitment (Fisher, 2014), and low work performance (Gilboa et al., 2008). In parallel, the workplace becomes increasingly driven by performance due to the escalating global competition (Tsui, 2007). Work performance has been established as the key yardstick by which employees are evaluated and rewarded, for it is the cornerstone of the organization's success. Thus, it is important for management scholars and practitioners to understand how and when role overload impacts work performance.

Although role overload and work performance have been long studied, the mechanisms underlying this relationship and associated boundary conditions remain insufficiently understood.

[1]Role overload and workload are often used interchangeably in the occupational stress literature (Webster et al., 2011), although some researchers categorize the former as a challenge stressor and the latter a hindrance stressor (Crawford et al., 2010; Mazzola and Disselhorst, 2019).

Regarding the mechanisms, we argue that psychological strain is a potential pathway through which role overload undermines work performance. Drawing on conservation of resources (COR) theory (Hobfoll, 1989, 2001), we consider role overload taxing because it reflects the perception that situational demands exceed one's personal resources. As such, role overload can trigger a variety of stress reactions, ranging from mild forms of psychological strain such as anxiety (Mazzola and Disselhorst, 2019) to more severe ones such as depression (Beehr et al., 2000). In line with COR theory, psychological strain captures the resource depletion process in which employees feel a significant loss of energy and resources (Halbesleben et al., 2014). Thus, role overload may act as a hindrance stressor that triggers psychological strain, which would ultimately impede work performance (LePine et al., 2005).

Prior studies regarding potential boundary conditions of role overload are scarce. Although stress theorists have long emphasized the need to "specify the conditions under which some stimuli are stressors" (Lazarus and Folkman, 1984, p. 21), few researchers have examined the boundary conditions that specifically apply to role overload. As some studies have reported the relation between role overload and performance to be negative while others have reported it to be positive (e.g., LePine et al., 2004; Gilboa et al., 2008; Bowling et al., 2015), boundary conditions likely operate. We contend that leader–member exchange (LMX; Dulebohn et al., 2012), which refers to the quality of the exchange relationship between the employee and the leader, moderates the relationship between role overload and psychological strain, ultimately affecting work performance. From a COR theory perspective (Hobfoll, 2001), high-quality LMX constitutes a social context abounding in opportunities and resources, which feeds the resource pool of employees (e.g., Ozer et al., 2014), suggesting that LMX can enable employees to better deal with their workload (Harris and Kacmar, 2005). We thus expect LMX to weaken the positive relationship between role overload and psychological strain, thereby protecting work performance.

Our research makes four major contributions. First, we examine a wider spectrum of strain mechanisms than did prior research by which role overload undermines work performance. This endeavor answers Gilboa et al.'s (2008, p. 256) call for more studies to explore the "mechanisms (mediators) through which role stressors affect performance." In doing so we expand the role stress literature by adding depression as an essential strain pathway, thus substantiating the notion that if the imbalance between role demands and resources tilts too much toward the demands, people may fall victim to depression, which in turn will hurt their functioning (e.g., job performance). Second, to enrich the understanding of the scope of consequences role overload can induce, we examine multiple aspects of work performance (in-role performance, job dedication, voice behavior, and reward recommendations). Prior studies mainly zeroed in on single employee outcomes like innovative behavior (Montani et al., 2020) and mental health (Alfes et al., 2018). Our research extends previous work by demonstrating that role overload can undermine multiple aspects of performance-related outcomes. Third, we demonstrate that LMX represents an important relational context that can buffer the hindering effects of role overload. According to COR theory, LMX constitutes a reservoir of resources available to employees (Beehr et al., 1990). Fourth, we show that the moderating effect of LMX applies only to role overload, but not to role ambiguity and role conflict, thereby illustrating the sensitivity of role overload to resource-providing contexts. In the following sections, we present our hypotheses and research model (**Figure 1**).

THEORY AND HYPOTHESIS DEVELOPMENT

Role Overload, Psychological Strain, and Work Performance

Among the various work stressors that have been studied, the trilogy of role stressors—namely role overload, role ambiguity, and role conflict—has emerged as a prominent typology from the perspective of role theory (Kahn et al., 1964; Rizzo et al., 1970), which posits that employees are organized to fulfill requisite roles (i.e., interdependent, recurring behaviors; Katz and Kahn, 1978) for the going concern of the organization. It is the recurring interactions among individuals within and across different functions that give rise to stressful encounters, hence role stressors. Specifically, role ambiguity and role conflict refer to situations where the behaviors expected of an employee are unclear and contradictory, respectively (Rizzo et al., 1970), while role overload refers to situations where role demands exceed an employee's resources such as time, energy, and capability (Eatough et al., 2011).

Unlike role ambiguity and role conflict which have been found to negatively associate with performance, several meta-analyses have reported role overload to be non-significantly related to performance (Örtqvist and Wincent, 2006; Gilboa et al., 2008; Eatough et al., 2011). The non-significant relationship can be explained by two factors: (a) role overload may be perceived as a hindrance or a challenge, which obscures the nature of its contribution to performance, and (b) competing mechanisms may be at play such as role overload positively affecting performance through enhanced motivation while negatively affecting it through increased strain. Although not examined in the context of role overload, these explanations are derived from the challenge-hindrance model of work stress (e.g., Crawford et al., 2010; Mazzola and Disselhorst, 2019).

We focus on the hindrance mechanism that presumably connects role overload to reduced work performance. Specifically, we posit that psychological strain represents a critical pathway through which role overload may affect performance. Psychological strain reflects adverse employee reactions that feature a strong sense of loss and lack of energy (Vuori and Vinokur, 2005; Vuori et al., 2012) and as such are affective in nature, such as job dissatisfaction (Spector et al., 2000) and negative emotions (Spector et al., 2000; Boswell et al., 2004). Embodying a resource depletion process in response to work stressors (Hobfoll, 1989; Grandey et al., 2012), psychological strain has drawn significant attention to its major aspects,

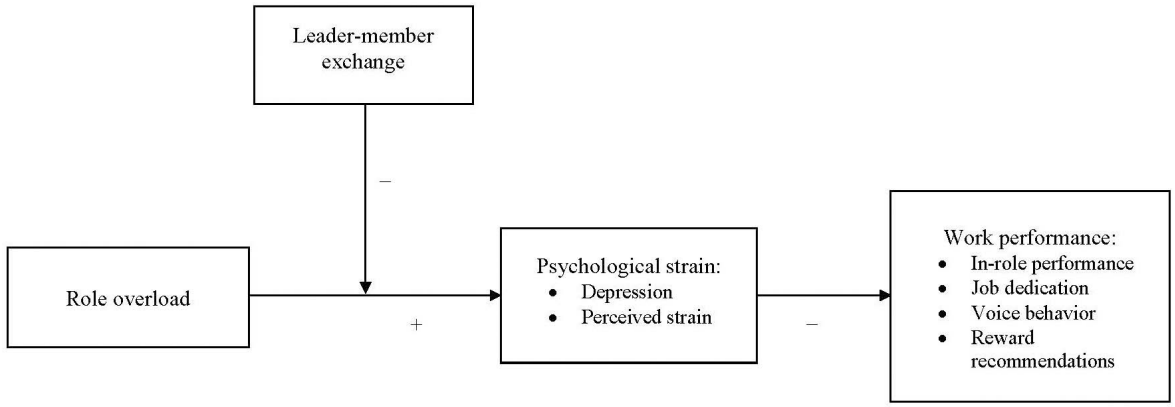

FIGURE 1 | Theoretical Model for the Study.

such as emotional exhaustion (Ford et al., 2014; McCarthy et al., 2016) and depression (Dormann and Zapf, 1999; Tucker et al., 2005; Diestel and Schmidt, 2011). Among various aspects of psychological strain, depression exerts perhaps the most devastating effects on work performance (Diestel and Schmidt, 2011) and was thus selected, together with perceived strain, as the core components of psychological strain for the current research.

Role overload is a specific stressor that reflects the perception that the demands of one's work role exceeds personal resources (Eatough et al., 2011). As such, role overload has the potential to give rise to resource depletion, a phenomenon that can be understood through the COR lens. COR theory posits that individuals seek to retain, protect, and create resources, and that stress reactions result from actual or anticipated resource losses (Hobfoll, 1989, 2001). The experience or the expectation of resource losses leads to a sense of depletion and lack of energy (Crawford et al., 2010; Halbesleben et al., 2014). Thus, the more severe the imbalance between role demands and resources inherent to role overload, the more critical the experience of resource loss and strain (e.g., ranging from general perceived strain to depression). Empirical studies have shown that role overload is associated with various aspects of psychological strain, such as increased job stress (Bolino and Turnley, 2005; Shultz et al., 2010), psychological distress (Jex et al., 2001; Rafferty and Jimmieson, 2010), job tension (Perrewé et al., 2005), anxiety (e.g., Glazer and Beehr, 2005), and depression (Beehr et al., 2000). Moreover, when individuals devote time and resources to dealing with overwhelming role demands, concurrently they lack the resources required to complete in-role duties, let alone the extra-role behaviors that benefit the organization (LePine et al., 2005). Indeed, role overload has been found to be related to increased psychological strain (de Croon et al., 2004; Örtqvist and Wincent, 2006) while the latter has been shown to be negatively related to work performance (Ford et al., 2011). Drawing upon COR theory (Hobfoll, 1989, 2001), we thus contend that psychological strain constitutes a key resource-depletion mechanism through which role overload may undermine work performance. Moreover, as role overload is distinct from the other two role stressors (Eatough et al., 2011), we expect our contention to hold while controlling for role ambiguity and role conflict. Thus, we give the following hypotheses.

> *Hypothesis 1a*: Controlling for role ambiguity and role conflict, role overload is positively related to psychological strain.
> *Hypothesis 1b*: Controlling for role ambiguity and role conflict, role overload is indirectly, negatively related to work performance through increased psychological strain.

The Moderating Role of LMX

The role stress literature has seldom considered the role of context in shaping the effects of role overload. We contend that contextual characteristics that can create opportunities would make role overload less hindering. In one of the few attempts that looked at the influence of social context on role overload's effects, Fisher (2014) found empowerment practices and cooperative climate to buffer the negative relationship between role overload and affective commitment. These effects were explained by the increased resilience provided by empowerment practices and the availability of psychological and instrumental resources afforded by cooperative relations with others. Of incidental interest as well is another study (Dormann and Zapf, 1999) that addressed the longitudinal effects of social stressors (assessed through a general measure of irritating work events) and found supervisor support to mitigate the positive relationship of social stressors to depressive symptoms.

According to COR theory (Hobfoll, 1989, 2001), a relational context that feeds individuals' resources has the potential to mitigate the effect of role overload on psychological strain. Such context can be described through the quality of LMX relationships. Guided by role theory, LMX research (Graen and Uhl-Bien, 1995; Dulebohn et al., 2012) has shown that individuals in high-LMX relationships enjoy valued advantages such as trustful relationships with, and emotional support from, the leader, as well as more rewards. These individuals may experience role overload as less hindering thanks to

the resources available to them in handling role demands (Harris and Kacmar, 2005). For instance, they may expect being rewarded when meeting the expectations of their jobs. In contrast, individuals in low-LMX relationships do not receive the same advantages, are confined to narrowly defined roles, and receive assignments with little decision latitude (Liden et al., 1993). Therefore, they are more likely to experience role overload as hindering because they anticipate resource losses while dealing with role demands with little hope of receiving support that would sustain their effort. Moreover, these individuals have few rewards to expect even when they handle role demands successfully.

We were not able to locate any study that addressed the moderating role of LMX between role overload and psychological strain. However, at least two studies warrant a mention because even though they did not assess role overload *per se*, they looked at LMX as a moderator between social stressors and strain. Harris and Kacmar (2005) found that perceived politics (i.e., a social stressor) was less strongly associated with psychological strain (measured through anxiety) among employees reporting high LMX. In contrast, another study (Hesselgreaves and Scholarios, 2014) found no evidence for LMX to buffer the straining effect of role demands. However, that study used an undifferentiated measure of role demands that contained a variety of stressful conditions. Finally, one study (Harris et al., 2008) reported that LMX mitigated the relationship between strain and turnover intention. It must be noted that, according to COR theory (Hobfoll, 1989, 2001), it is the relationship between role overload and strain— but not between strain and outcomes—that LMX should moderate. This is because LMX serves to build individuals' resources in the face of role overload.

By the above reasoning, we posit that when enjoying high LMX, employees tend to experience role overload less negatively, and thus will feel less psychological strain. Moreover, meta-analysis has shown that psychological strain variables (e.g., depression and general anxiety) have moderate-to-strong negative correlations with a variety of work performance criteria (Ford et al., 2011). Therefore, the moderating effect of LMX should extend to the indirect relationship between role overload and work performance through psychological strain. We also maintain that these effects will hold while controlling for the interactive effects of role ambiguity and role conflict with LMX. As our reasoning suggests LMX acts as a relational context offering resources to employees, it is important to show that LMX uniquely interacts with role overload. Specifically, role overload features a perceived imbalance between role demands and personal resources (e.g., Eatough et al., 2011), making it sensitive to LMX's buffering effect; whereas role ambiguity and role conflict reflect stressors that do not speak to resource imbalance. The above reasoning leads to the following hypotheses.

Hypothesis 2a: Controlling for role ambiguity and role conflict, LMX moderates the positive relationship between role overload and psychological strain such that this relationship is less (vs. more) positive when LMX is high (vs. low).

Hypothesis 2b: Controlling for role ambiguity and role conflict, LMX moderates the indirect, negative relationship between role overload and work performance through increased psychological strain such that this relationship is less (vs. more) negative when LMX is high (vs. low).

OVERVIEW OF THE STUDIES

To test our hypotheses, we conducted two primary studies, sampling customer-service employees in Canada, for this population of employees are reputed to be highly exposed to job stress and their performance tends to suffer from having to meet various expectations of multiple stakeholders (Netemeyer et al., 2005). Meanwhile, this population of employees are also sensitive to the exchange relationship with their supervisors (Eisenberger et al., 2014). Thus, participants in both studies made ideal samples for testing our hypotheses. In both studies, we used role overload and LMX as interactive predictors of psychological strain, operationalized through depression in Study 1 and perceived strain in Study 2. We also included role ambiguity and role conflict in both studies, controlling for their main effects and their interaction effects with LMX on psychological strain. Moreover, we examined various aspects of work performance rated by supervisors, namely in-role performance, job dedication, and voice behavior in Study 1, as well as in-role performance and reward recommendations in Study 2. As both studies were conducted in French, a translation-back-translation procedure was used to translate the English survey items into French (Schaffer and Riordan, 2003). Unless otherwise stated, items in both studies were rated using a 5-point Likert-type scale (1 = *strongly disagree*; 5 = *strongly agree*).

STUDY 1 METHOD

Sample and Procedure

We obtained agreement from the customer service departments of Canadian companies operating in various industries (telecommunications, electronic equipment, insurance, electricity, and marketing services) to participate in a study about leadership and performance. The number of employees per department ranged from 40 to 70 (M = 51.83; SD = 12.37). The employee questionnaires contained, among others, measures of role stressors, LMX, depressive symptoms, and demographics. Managers separately assessed employees' in-role performance, job dedication, and voice behavior. A cover letter informed employees and managers of the study purposes, ensuring that responses would be confidentially treated. Questionnaires were coded so that employee and manager responses could be matched and were completed during work hours and later collected by the researchers. As a compensation for their time, employees received a $5 gift card while managers received a $30 gift card for rating employee performance. We collected 220 (out of 311) usable employee responses, for a 70.74% response

rate (ranging from 48.57 to 84.44% across departments). The managers rated the performance of all employees, among whom 45.40% were female, average age was 34.73 years (*SD* = 7.97), average organizational tenure was 3.84 years (*SD* = 5.14), and average tenure with the manager was 2.46 years (*SD* = 2.98).

Measures

Role Overload

We measured role overload (α = 0.75) using Schaubroeck et al. (1989) 3-item scale (e.g., "I never seem to have enough time to get everything done at work").

Leader–Member Exchange (LMX)

We measured LMX (α = 0.92) using Liden and Maslyn (1998) 12-item scale, which comprises four dimensions: affect (3 items; e.g., "I like my supervisor very much as a person"), loyalty (3 items; e.g., "My supervisor would come to my defense if I were 'attacked' by others"), contribution (3 items; e.g., "I do not mind working my hardest for my supervisor"), and professional respect (3 items; e.g., "I admire my supervisor's professional skills").

Depression

We measured depression (α = 0.92) using Salokangas et al. (1994) scale of depressive symptoms. Respondents indicated the extent to which they experienced 10 depressive symptoms (over the past month), such as "feeling worthless," "feeling blue," "feeling a lack of energy," or "not enjoying life" (Vuori and Vinokur, 2005). One item—referring to "sleeping disorders"— represented a somatic complaint, hence was dropped.

Work Performance

Managers rated employee performance along three dimensions. First, *in-role performance* (α = 0.92) was assessed by Williams and Anderson (1991) 7-item scale. This scale measures the prescribed aspects of job activities (e.g., "Adequately completes assigned duties"). Second, *job dedication* (α = 0.98) was measured by Van Scotter et al., 2000, p. 529) 6-item scale, which captures "effort, initiative, persistence, and self-discipline" (e.g., "Persists in overcoming obstacles to complete a task"). Third, *voice behavior* (α = 0.97) was measured by Van Dyne and LePine (1998) 6-item scale, which assesses the extent to which employees challenge the *status quo* by making suggestions for change (e.g., "develops and makes recommendations concerning issues that affect this work group"). Voice items were rated on a 5-point scale ranging from 1 (*never*) to 5 (*very often*).

Control Variables

We controlled for employee age, gender, organizational tenure, and tenure with the manager, for they were found to relate to depression (Eriksen and Kress, 2008) and performance (Wright and Bonett, 2002; Shore et al., 2003). Moreover, we controlled for role ambiguity and role conflict. We measured role ambiguity (α = 0.90) and role conflict (α = 0.90) using Rizzo et al. (1970) 5-item role clarity scale (reverse coded; e.g., "I know exactly what is expected of me") and 8-item role conflict scale (e.g., "I work under incompatible policies and guidelines"), respectively.

STUDY 1 RESULTS

Confirmatory Factor Analyses

We conducted confirmatory factor analyses (CFAs) to assess the distinctness of our variables, using Mplus 8.3 (Muthén and Muthén, (1998-2017)). Because our data were not multivariate normal, we based CFAs on the maximum likelihood estimation method (MLM), for it generates parameter estimates and fit indices that are more robust to multivariate non-normality (Byrne, 2012). Moreover, we used item-parceling method to maintain a favorable indicator-to-sample-size ratio (Little et al., 2013). Specifically, we parceled the nine items of depression into three indicators, using the balancing approach (i.e., adopting the high-to-low loadings procedure) that is suitable for unidimensional constructs (Little et al., 2013). As for LMX, we used facet-representative approach to parcel its twelve items into four indicators, representing affect, loyalty, contribution, and professional respect. We maintained the three original items as indicators for role overload. The hypothesized eight-factor model yielded a good fit to the data [$\chi^2(247) = 353.16$, CFI = 0.99, TLI = 0.97, RMSEA = 0.04, SRMR = 0.05] and outperformed all more parsimonious models ($ps < 0.001$) (**Table 1**), suggesting that our variables were distinct.

Level of Analysis

Descriptive statistics and correlations are reported in **Table 2**. As individual data were nested within departments, it was necessary to ensure the data non-dependency. We computed intra-class correlation coefficients (ICC[1]) for core variables using one-way random effects analysis of variance (ANOVA) (Bliese, 2000). For role stressors, LMX, psychological strain (i.e., depression), job dedication, and voice behavior, the ANOVA result was non-significant. The result, however, was significant ($p < 0.05$) for in-role performance; yet the ICC(1) value was quite small (0.05)—an effect that is often considered negligible (LeBreton and Senter, 2008). Given weak group effects for core variables, we conducted the analyses at the individual level.

Hypothesis Testing

Table 3 reports the results of multiple regression analyses predicting psychological strain and performance. We mean-centered predictors before creating the interaction terms (Aguinis and Gottfredson, 2010). To predict psychological strain, we entered control variables in Step (i.e., Model) 1, role overload and LMX successively in Model 2 and Model 3, the interactions between LMX and role ambiguity and conflict in Model 4, and the LMX × role overload interaction in Model 5. To predict performance, we included controls, role overload, and psychological strain (i.e., depression) in Model 6s, then LMX and its interactions with the three role stressors in Model 7s.

Hypothesis 1a predicted role overload to be positively related to psychological strain. As Model 2 shows, role overload was positively associated with psychological strain (b = 0.19, $p < 0.01$), controlling for demographics and the other two stressors. Hypothesis 1a is thus supported. Further, as Model 6s show, psychological strain was negatively linked to in-role

TABLE 1 | Study 1 and Study 2 Confirmatory Factor Analysis Results: Fit Indices.

	χ^2(df)	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2(\Delta df)^a$
Study 1 (*N* = 218)						
(1) Hypothesized eight-factor model	353.16 (247)	0.99	0.97	0.04	0.05	–
(2) Combining role overload and depressive symptoms	496.22 (254)	0.95	0.94	0.07	0.07	139.35* (7)
(3) Combining depressive symptoms and LMX	698.02 (254)	0.90	0.88	0.09	0.11	332.53* (7)
(4) Combining role overload and LMX	Failed to converge					–
(5) Combining all three role stressors	902.37 (260)	0.86	0.83	0.11	0.11	535.04* (13)
(6) Combining in-role performance, job dedication, and voice behavior	1295.76 (260)	0.77	0.73	0.14	0.08	1031.76* (13)
(7) One-factor model	Failed to converge					–
Study 2 (*N* = 199)						
(1) Hypothesized seven-factor solution	259.55 (188)	0.97	0.96	0.04	0.05	–
(2) Combining role overload and perceived strain	379.11 (194)	0.92	0.91	0.07	0.07	127.78* (6)
(3) Combining perceived strain and LMX	455.29 (194)	0.89	0.87	0.08	0.10	216.67* (6)
(4) Combining role overload and LMX	Failed to converge					–
(5) Combining all three role stressors	660.41 (199)	0.80	0.77	0.11	0.12	405.12* (11)
(6) Combining in-role performance and reward recommendations	533.19 (194)	0.86	0.83	0.09	0.07	278.27* (6)
(7) One-factor model	1705.54 (209)	0.36	0.29	0.19	0.17	1465.98* (21)

CFI, comparative fit index; TLI, Tucker–Lewis fit index; RMSEA, root-mean-square error of approximation; SRMR, standardized root mean square residual.
[a]When model comparison is based on MLM estimation, it is inappropriate to compute $\Delta\chi^2$ in the conventional way by direct subtraction (Byrne, 2012). To calculate the correct $\Delta\chi^2$, we applied Satorra and Bentler (2001) formula, which is also available on the Mplus website (http://www.statmodel.com/chidiff.shtml).
** $p < 0.001$.*

TABLE 2 | Study 1 and Study 2 Descriptive Statistics and Correlations.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
Study 1 (*N*s = 215–218)														
(1) Age	34.73	7.97	–											
(2) Gender	1.55	0.50	0.32**	–										
(3) Organizational tenure	3.84	5.14	0.51**	−0.01	–									
(4) Tenure with manager	2.46	2.98	0.34**	−0.01	0.75**	–								
(5) Role ambiguity	2.17	0.95	0.08	−0.05	0.11	0.05	(0.90)							
(6) Role conflict	2.70	0.92	−0.01	−0.05	0.09	0.08	0.23**	(0.90)						
(7) Role overload	3.11	1.05	−0.13	−0.11	−0.14*	−0.06	0.06	0.36**	(0.75)					
(8) LMX	3.62	0.80	0.08	−0.02	0.12	0.14*	−0.44**	−0.16*	−0.11	(0.92)				
(9) Depression	2.31	1.07	−0.15*	0.07	−0.03	−0.09	0.24**	0.46**	0.33**	−0.27**	(0.92)			
(10) In-role performance	4.18	0.83	0.19**	−0.08	0.42**	0.38**	−0.15*	−0.01	−0.03	0.38**	−0.23**	(0.92)		
(11) Job dedication	2.92	1.25	0.13*	−0.12	0.28**	0.31**	−0.11	−0.04	0.04	0.27**	−0.19**	0.66**	(0.98)	
(12) Voice behavior	2.84	1.09	0.25**	−0.06	0.34**	0.30**	−0.20**	−0.03	−0.04	0.33**	−0.25**	0.55**	0.64**	(0.97)
Study 2 (*N*s = 193-199)														
(1) Age	33.28	7.01	–											
(2) Gender	1.52	0.50	0.31**	–										
(3) Organizational tenure	2.83	2.81	0.17*	0.05	–									
(4) Tenure with manager	1.99	1.78	0.04	−0.10	0.70**	–								
(5) Role ambiguity	2.05	0.87	−0.23**	−0.16*	−0.04	−0.02	(0.87)							
(6) Role conflict	2.53	0.87	−0.19**	0.00	0.09	0.07	0.19**	(0.84)						
(7) Role overload	3.08	1.02	−0.02	0.06	0.06	0.08	0.08	0.32**	(0.73)					
(8) LMX	3.65	0.73	0.04	0.09	−0.05	−0.04	−0.46**	−0.12	−0.05	(0.87)				
(9) Perceived strain	2.43	1.22	−0.10	−0.01	0.03	−0.01	0.16*	0.34**	0.28**	−0.23**	(0.90)			
(10) In-role performance	4.01	0.99	0.22**	0.15*	0.30**	0.23**	−0.25**	−0.17*	−0.05	0.19**	−0.35**	(0.93)		
(11) Reward recommendations	2.03	1.20	0.18*	0.13	0.14	0.22**	−0.23**	−0.22**	−0.04	0.15*	−0.29**	0.57**	(0.90)	

For Gender: 1 = female, 2 = male. LMX, leader–member exchange. Alpha coefficients are reported in parentheses along the diagonal.
**$p < 0.05$, **$p < 0.01$.*

TABLE 3 | Study 1 and Study 2 Moderated Multiple Regression Analysis Results for Psychological Strain and Work Performance.

Variable	Psychological strain					Work performance							
	Depression (Study 1); perceived strain (Study 2)					In-role performance		Job dedication		Voice behavior		Reward recommendations	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 6	Model 7	Model 6	Model 7	Model 6	Model 7
Study 1 (*N* = 212)													
Age	−0.23**	−0.22**	−0.22**	−0.22**	−0.23**	−0.03	−0.03	0.06	0.05	0.11	0.10		
Gender	0.18**	0.20**	0.19**	0.19**	0.20***	−0.07	−0.06	−0.11	−0.10	−0.09	−0.06		
Organizational tenure	0.14	0.18	0.19*	0.18	0.20*	0.36**	0.34***	0.13	0.11	0.24*	0.24*		
Tenure with manager	−0.13	−0.15	−0.15	−0.15	−0.16	0.12	0.12	0.17	0.17	0.04	0.03		
Role ambiguity	0.15*	0.15*	0.09	0.09	0.08	−0.15	−0.04	−0.10	−0.01	−0.22***	−0.14*		
Role conflict	0.42***	0.35***	0.34***	0.34***	0.32***	0.04	0.04	−0.01	−0.01	0.04	0.05		
Role overload		0.19**	0.19**	0.19**	0.22***	0.06	0.07	0.13	0.14	0.09	0.11		
LMX			−0.13*	−0.14*	−0.15*		0.27***		0.19*		0.18*		
Role ambiguity × LMX				0.02	0.04		−0.04		0.04		−0.02		
Role conflict × LMX				0.00	0.06		0.07		0.01		0.03		
Role overload × LMX					−0.21***		−0.03		−0.04		−0.13		
Depression						−0.22**	−0.19*	−0.18*	−0.17*	−0.21**	−0.21**		
R^2	0.27***	0.30***	0.32***	0.32***	0.36***	0.27***	0.34***	0.16***	0.19***	0.21***	0.25***		
ΔR^2		0.03**	0.01*	0.00	0.04***								
Study 2 (*N* = 191)													
Age	−0.03	−0.03	−0.05	−0.05	−0.06	0.07	0.08					0.07	0.08
Gender	0.02	0.01	0.02	0.01	0.02	0.09	0.08					0.12	0.12
Organizational tenure	0.07	0.07	0.07	0.07	0.08	0.26**	0.27**					−0.07	−0.07
Tenure with manager	−0.09	−0.11	−0.11	−0.12	−0.13	0.05	0.05					0.30**	0.29**
Role ambiguity	0.14	0.14	0.05	0.03	0.05	−0.18**	−0.14					−0.17*	−0.15
Role conflict	0.34***	0.27***	0.26***	0.25***	0.22**	−0.06	−0.08					−0.15*	−0.18*
Role overload		0.22**	0.21**	0.22**	0.25***	0.02	0.05					0.03	0.05
LMX			−0.18*	−0.17*	−0.17*		0.05						0.00
Role ambiguity × LMX				−0.09	−0.07		−0.03						0.00
Role conflict × LMX				0.03	0.10		0.16*						0.11
Role overload × LMX					−0.18*		−0.05						−0.08
Perceived strain						−0.31***	−0.31***					−0.17*	−0.18*
R^2	0.16***	0.20***	0.22***	0.23***	0.25***	0.29***	0.32***					0.21***	0.22***
ΔR^2		0.04**	0.02*	0.01	0.02*								

Except for the R^2 and ΔR^2 rows, the values are standardized regression coefficients. LMX = Leader–member exchange.
**p < 0.05, **p < 0.01, ***p < 0.001.*

performance (b = −0.22, $p < 0.01$), job dedication (b = −0.18, $p < 0.05$), and voice behavior (b = −0.21, $p < 0.01$). We used Hayes, 2018) PROCESS macro and the bootstrapping method to test Hypothesis 1b, which stated that role overload would be indirectly, negatively related to work performance through increased psychological strain. Specifically, we bootstrapped 5,000 samples to obtain 95% bias-corrected confidence intervals (CIs) (MacKinnon et al., 2004) for the indirect effects of role overload on performance through psychological strain. Results show that the indirect effects of role overload on in-role performance (−0.03, 95% CI = [−0.08, −0.01]), job dedication (−0.04, 95% CI = [−0.11, −0.01]), and voice behavior (−0.04, 95% CI = [−0.10, −0.01]) through psychological strain were significantly negative. Hypothesis 1b is thus supported.

Hypothesis 2a stated that, controlling for role ambiguity and role conflict, role overload would be less (vs. more) positively related to psychological strain at high (vs. low) LMX levels. As Model 5 shows, whereas LMX interacted with neither role ambiguity (b = 0.04, *ns*) nor role conflict (b = 0.06, *ns*), it did interact with role overload (b = −0.21, $p < 0.001$) in predicting psychological strain (i.e., depression). To illustrate this interaction, we plotted the regression line for depression on role overload at 1 *SD* below and above the mean of LMX (Aiken and West, 1991; **Figure 2**). Role overload was unrelated to depression at high LMX levels, $t(211) = 0.59$, *ns*, but was positively related to it at low LMX levels, $t(211) = 4.38$, $p < 0.001$, and the slope difference was significant: $t(211) = -3.24$, $p < 0.01$. Hypothesis 2a is thus supported.

Finally, Hypothesis 2b asserted that, controlling for role ambiguity and conflict, the indirect relationship between role overload and performance through psychological strain would be less (vs. more) negative at high (vs. low) LMX levels. We assessed these moderated mediation effects using PROCESS (Hayes, 2018), which was based on 5,000 bootstrap samples.

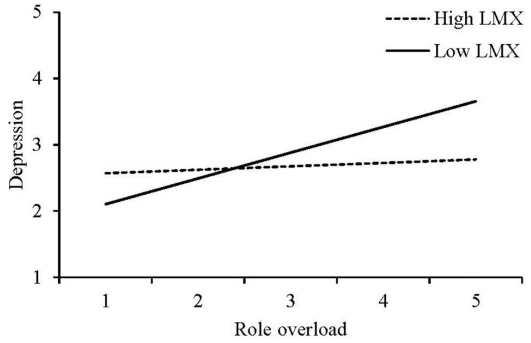

FIGURE 2 | Study 1 Moderating Effect of LMX on the Relationship Between Role Overload and Depression.

Results show that the moderated mediation effect was significant for all performance outcomes: in-role performance (0.04, 95% CI = [0.01, 0.08]), job dedication (0.05, 95% CI = [0.01, 0.12]), and voice behavior (0.05, 95% CI = [0.01, 0.10]). Moreover, the indirect effect of role overload on in-role performance, job dedication, and voice behavior, was non-significant at high-LMX levels (−0.01, 95% CI = [−0.04, 0.02]; −0.01, 95% CI = [−0.06, 0.02]; and −0.01, 95% CI = [−0.06, 0.02], respectively) but significantly negative at low-LMX levels (−0.07, 95% CI = [−0.13, −0.02]; −0.09, 95% CI = [−0.20, −0.01]; and −0.09, 95% CI = [−0.18, −0.02], respectively). Hypothesis 2b is supported.

STUDY 1 DISCUSSION

Study 1 indicates that role overload negatively related to work performance through increased psychological strain, suggesting resource depletion is a central mechanism underlying this relationship. Results also show that LMX is an important relational context that mitigates the threatening potential of role overload, thereby preventing it from triggering the resource depletion process, which is detrimental to performance. This may occur because high LMX constitutes a supportive context ensuring that resources and rewards are available for employees to cope with role demands (Harris and Kacmar, 2005). As expected, role ambiguity and role conflict did not interact with LMX, suggesting that these role stressors may not be liable to the resource-providing influences of LMX. Study 2 aims to extend Study 1. To this end, it introduces another measure of psychological strain (i.e., perceived strain), as well as an alternative, performance-related outcome (i.e., reward recommendations), in addition to in-role performance.

STUDY 2 METHOD

Sample and Procedure

As in Study 1, we approached the customer service departments of Canadian companies that operated in various industries (telecommunications, electricity, and financial services) to participate in a study about leadership and performance. These departments employed between 34 and 60 employees (M = 42.33; SD = 9.52). A cover letter informed managers and employees of the research aim, ensuring that responses would be confidentially treated. During work hours, employees completed questionnaires about, among others, role stressors, LMX, perceived strain, and demographics. Managers separately rated subordinates' performance and reward recommendations. Questionnaires were coded to allow matching employee and manager responses. From 254 prospective participants, we received 199 usable employee responses (for a 78.35% response rate; with response rates ranging from 60.00 to 87.50% across departments). Managers rated the performance of all employees, among whom 48.00% were women, average age was 33.28 years (SD = 7.01), average organizational tenure was 2.83 years (SD = 2.81), and average tenure with the manager was 1.99 years (SD = 1.78).

Measures

We used the same scales as in Study 1 to measure *role overload* (α = 0.73; Schaubroeck et al., 1989), *LMX* (α = 0.87; Liden and Maslyn, 1998), and *in-role performance* (α = 0.93; Williams and Anderson, 1991); and *role ambiguity* (α = 0.87; Rizzo et al., 1970) and *role conflict* (α = 0.84; Rizzo et al., 1970) as control variables; with employee age, gender, organizational tenure, and tenure with manager as additional controls.

Perceived Strain

Following COR theory's central tenet that strain is reflected in a feeling of having lost resources (or anticipating such losses) (Hobfoll, 2001), we developed a 3-item scale to measure such feeling. These items were "I have lost many resources (time, energy, and self-esteem) due to my work," "I am undergoing a decrease of my general well-being due to my work," and "My quality of life has been reduced by my work" (α = 0.90). We pilot tested this measure on a separate sample of employees from various organizations (N = 443), and examined correlations with depression, assessed via the same scale as in Study 1 (Vuori and Vinokur, 2005) (α = 0.95), and the General Health Questionnaire (GHQ-12; α = 0.86)—a well-established 12-item scale of psychological distress (Goldberg et al., 1997). Perceived strain correlated 0.63 with depression, indicating substantial convergence between the two variables. Moreover, perceived strain and depression strongly correlated with the GHQ-12 (r = 0.51, $p < 0.001$, and r = 0.66, $p < 0.001$, respectively), indicating that they both reflect an important distress component. This provides initial evidence for the validity of this newly developed measure of perceived strain.

Reward Recommendations

Managers assessed reward recommendations (α = 0.90) for their employees using Allen and Rush (1998) 5-item scale, which measures five organizational rewards (e.g., salary increase and promotion) on a 5-point scale (1 = *never*; 5 = *completely*).

STUDY 2 RESULTS

Confirmatory Factor Analyses

As in Study 1, we first conducted CFAs with Mplus 8.3 (Muthén and Muthén, (1998-2017)) to assess the distinctness of study variables, by using the same item-parceling approach (Little et al., 2013). As **Table 1** shows, the seven-factor model yielded a good fit to the data, $\chi^2(188) = 259.55$, CFI = 0.97, TLI = 0.96, RMSEA = 0.04, SRMR = 0.05. Moreover, it outperformed all alternative models (*p*s < 0.001). Thus, the constructs were distinct.

Level of Analysis

Descriptive statistics and intercorrelations for the study variables are reported in **Table 2**. Like Study 1, Study 2 had nested data (individuals being nested within departments), raising a non-independency concern. We followed Bliese (2000) procedure. The ANOVA results were non-significant for all variables (i.e., role stressors, LMX, perceived strain, in-role performance, and reward recommendations) and the ICC(1) values did not exceed 0.02 in any case, suggesting that analyses should be conducted at the individual level (LeBreton and Senter, 2008).

Hypothesis Testing

Table 3 shows the results of multiple regression analyses predicting perceived strain, in-role performance, and reward recommendations, respectively. We first mean-centered predictors before creating the interaction terms (Aguinis and Gottfredson, 2010), then entered all study variables following the same 5-step procedure as in Study 1. As Model 2 shows, controlling for demographics and the other two role stressors, role overload was positively related to perceived strain ($b = 0.22$, $p < 0.01$), thus supporting Hypothesis 1a. Moreover, as Model 6s show, perceived strain was negatively related to in-role performance ($b = -0.31$, $p < 0.001$) and reward recommendations ($b = -0.17$, $p < 0.05$). Hypothesis 1b stated that role overload would be indirectly related to performance (i.e., in-role performance and reward recommendations) through increased strain. This hypothesis was tested using PROCESS (Hayes, 2018). Based on 5,000 bootstrap samples, we found the indirect effect of role overload on in-role performance and reward recommendations through perceived strain to be significantly negative (−0.07, 95% CI = [−0.13, −0.02]; and −0.04, 95% CI = [−0.11, −0.01]; respectively). Hypothesis 1b is thus supported.

Hypothesis 2a predicted that, controlling for role ambiguity and role conflict, LMX would moderate the positive relationship between role overload and psychological strain, such that this relationship would be less (vs. more) positive at high (vs. low) LMX levels. As Model 5 shows, whereas role ambiguity (b = −0.07, *ns*) and role conflict (b = 0.10, *ns*) did not interact with LMX in predicting perceived strain, role overload did (b = −0.18, $p < 0.05$). To illustrate this interaction, we plotted the regression line for perceived strain on role overload at 1 *SD* below and above the mean of LMX (**Figure 3**). Role overload was unrelated to perceived strain at high LMX, $t(190) = 1.06$, *ns*, but positively related to it at low LMX, $t(190) = 3.77$, $p < 0.001$, and the slope difference was significant, $t(190) = -2.33$, $p < 0.05$. Hypothesis 2a is thus supported.

Finally, Hypothesis 2b stated that the indirect relationship between role overload and performance through perceived strain would be less (vs. more) negative at high (vs. low) levels of LMX. Using PROCESS on 5,000 bootstrap samples, we found moderated mediation to be significant for in-role performance (0.06, 95% CI = [0.00, 0.15]) and marginally significant for reward recommendations (0.04, 90% CI = [0.00, 0.12]). Moreover, the indirect effect of role overload on in-role performance and reward recommendations through perceived strain was non-significant at high LMX levels (−0.03, 95% CI = [−0.10, 0.04]; and −0.02, 90% CI = [−0.07, 0.01]; respectively) but significantly negative at low LMX levels (−0.12, 95% CI = [−0.22, −0.05]; and −0.08, 90% CI = [−0.17, −0.02]; respectively). These results support Hypothesis 2b.[2]

STUDY 2 DISCUSSION

Study 2's results confirm and extend the findings of Study 1. Using a different measure of psychological strain, we found that role overload was indirectly related to in-role performance and reward recommendations through increased perceived strain. This indicates that psychological strain is a crucial resource-depletion mechanism through which role overload may undermine performance. LMX also buffered the straining effect of role overload, thereby mitigating its detrimental influence on in-role performance and reward recommendations. As expected,

[2]To examine the temporal relation between role overload and psychological strain, we conducted a separate panel study among 99 business alumni (response rate = 81.42%). Average age was 37.95 years (*SD* = 8.35), average organizational tenure was 6.93 years (*SD* = 6.10), average tenure with the supervisor was 2.67 years (*SD* = 2.15), and 50.51% were men. We measured role overload, depression, and perceived strain twice at a 4-month interval (LMX was measured once at Time 1 [T1]), using the same scales as in the primary studies. As depression and perceived strain are thought to reflect the same overall construct of psychological strain, we conducted an exploratory factor analysis to examine the structure of these items using Mplus 8.3. The results suggested that these two variables indicated one construct (explained variance = $55\%^{T1}$ and $58\%^{T2}$; range of item loadings = $[0.64 \text{ to } 0.83]^{T1}$, and $[0.66 \text{ to } 0.88]^{T2}$). We thus parceled the 12 items (9 for depression and 3 for perceived strain) into 3 indicators of psychological strain (Little et al., 2013). A closer examination showed that role overload and psychological strain were distinguishable [$\Delta\chi^2(1)$s = 214.45^{T1} and 3299.37^{T2} *p*s < 0.001], and displayed good reliability ($\alpha s^{T1} = 0.93$ and 0.94, and $\alpha s^{T2} = 0.95$ and 0.95, respectively) and strict measurement invariance across time (Vandenberg and Lance, 2000). We then built a cross-lagged structural equation model (SEM) to examine the temporal relationship between role overload and strain. We specified four alternative structural models (SM) to examine the cross-lagged relationships (Cole and Maxwell, 2003): SM1 was the stability model with no cross-lagged effects; SM2 was the normal causation model relating T1 role overload to T2 strain; SM3 was the reversed causation model relating T1 strain to T2 role overload; and SM4 was the reciprocal causation model combining SM1, SM2, and SM3. SM2 best described the data, $\chi^2(99) = 119.07$, CFI = 0.98, TLI = 0.98, RMSEA = 0.05, SRMR = 0.09, and improved over SM1 [$\Delta\chi^2(1) = 4.27$, $p < 0.05$], which in turn outperformed SM3 [$\Delta\chi^2(1) = 2.92$, *ns*]. Moreover, the fit of SM2 did not differ from the fit of SM4 [$\Delta\chi^2(2) = 2.88$, *ns*]. In the retained SM2, T1 role overload was positively related to T2 strain ($\beta = 0.18$, $p < 0.05$), controlling for T1 strain ($\beta = 0.56$, $p < 0.001$), while T1 strain was unrelated to T2 role overload ($\beta = 0.19$, *ns*), controlling for T1 role overload ($\beta = 0.65$, $p < 0.001$). These results suggest that role overload temporally preceded psychological strain, which is consistent with the ordering of the variables in **Figure 1**.

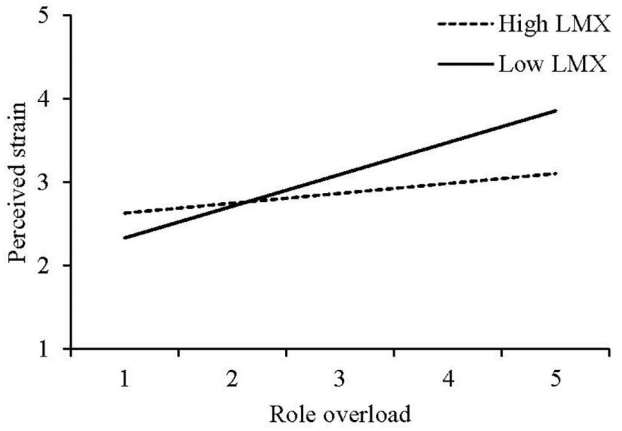

FIGURE 3 | Study 2 Moderating Effect of LMX on the Relationship Between Role Overload and Perceived Strain.

the buffering effect of LMX did not apply to role ambiguity and role conflict.

GENERAL DISCUSSION

Using COR theory (Hobfoll, 1989, 2001) as an overarching framework, we conducted two studies that identified psychological strain as a mechanism that explains how role overload leads to reduced performance. Moreover, LMX, as a resource-providing context (Harris et al., 2008), was found to buffer the hindering effect of role overload on strain and performance. These results were obtained while controlling for role ambiguity and conflict and their interactions with LMX. Results from a supplementary study supported our assumption that role overload leads to psychological strain but not vice versa. Combined, findings of our studies help advance the knowledge of how and when role overload is related to work performance.

Theoretical Implications

Our research contributes to the literature on the trilogy of role stressors in important ways. First, prior research has scarcely examined psychological strain as a mechanism between role overload and reduced performance (for an exception using a work simulation procedure, see Glaser et al., 1999). Rather, research has generally considered job stressors in a broad way, as either challenging or hindering (e.g., Podsakoff et al., 2007), with challenge stressors activating a motivation mechanism and thereby enhancing performance, and hindrance stressors catalyzing a strain mechanism and thus reducing performance (LePine et al., 2005). However, meta-analytic findings indicate that job stressors, whether hindrance or challenge, relate to increased psychological strain (Podsakoff et al., 2007; Mazzola and Disselhorst, 2019). Moving beyond prior research that examined job stressors in a shotgun approach, our research, through the COR lens (Hobfoll, 1989, 2001), zooms in on the trilogy of role stressors—particularly focusing on role overload as a stressor that has presumably challenging and threatening potentials (Eatough et al., 2011). Our primary studies reveal that the threatening component dominates, as shown by role overload triggering psychological strain—ranging from general perceived strain to depression—ultimately undermining performance. This may happen because role overload reflects the perception that role demands exceed personal resources, creating an imbalance featuring more threatening than challenging potentials. This gives rise to a depletion process that drains employees' resources, which could have been devoted to performance. Our research enriches the understanding of the strain mechanism by considering depression a severe type of strain, which may emerge when role demands greatly exceed personal resources, and further penalizes performance.

Second, our research accentuates the scope of consequences of role overload by examining various aspects of performance (i.e., in-role performance, job dedication, voice behavior, and reward recommendations). In doing so, we demonstrate that if left to their own devices, role overload through triggering a depletion process can inflict detrimental effects on wider performance outcomes than previously thought (Örtqvist and Wincent, 2006; Gilboa et al., 2008; Eatough et al., 2011). Prior research largely examined isolated performance outcomes one at a time like innovation (Montani et al., 2020) and OCBs (Eatough et al., 2011). By assessing multiple performance outcomes, our research confirms that role overload involves many stakes concerning employees' in-role and extra-role behaviors that may determine their welfare like income and promotion, and as such constitutes a specific role stressor with an array of practical implications.

Third, a worthwhile contribution of this research lies in demonstrating LMX as a potent relational buffer. LMX—by ensuring employees of various resources (e.g., social, psychological, and instrumental) that are readily available—can reduce and even suppress the depleting effects of role overload. Indeed, LMX offers "affective and resource-based support" to employees (Erdogan et al., 2004, p. 311). High LMX may also result in more informal rewards from supervisors (Harris and Kacmar, 2005), hence reduce the depleting effects of role overload. These findings add to prior research that has also addressed LMX's moderating role, such as in the relationship from perceived politics to depression (Harris and Kacmar, 2005), from general job demands to strain (Hesselgreaves and Scholarios, 2014), from hindrance and challenge stressors to OCBs (Ozer et al., 2014), and from strain to turnover intention (Harris et al., 2008).

While psychological strain likely explains how role overload is associated with reduced performance, LMX describes when such relationship materializes. An essential point is that high-quality LMX was found to reduce, and even suppress, the hindering effects of role overload. Indeed, moderated mediation analyses revealed that the indirect relationship from role overload to performance through strain dropped to non-significance when LMX was high. Given the controversy as to whether role overload comprises both hindrance and challenge components (Gilboa et al., 2008; Eatough et al., 2011), and the meta-analytic finding that all work stressors more strongly relate to increased psychological strain than to enhanced motivation (Mazzola and Disselhorst, 2019), our research suggests that role overload's

hindering potential is not inevitable and can be counteracted by a relational context like LMX.

Finally, the present research indicates differential sensitivity of role stressors to LMX in affecting employee strain and downstream performance. Prior research, by classifying job stressors as either hindrance or challenge factors, examined their global effects on strain and performance (e.g., LePine et al., 2005). This may hide the unique effects associated with each of these stressors. In our research, we accentuate role overload's effects on psychological strain and subsequently on work performance by controlling for role ambiguity and role conflict. We thus emphasize psychological strain as a unique mechanism linking role overload to work performance. The hindering potential of role overload is further highlighted by its significant interaction with LMX in predicting strain and performance, as opposed to the non-significant parallel interactions between the other two role stressors and LMX. From a COR perspective, LMX acts upon the resource (vs. demand) end of role overload, thereby reducing the resource-demand imbalance and thus preventing role overload from triggering strain and subsequently undermining performance. This may not apply to role ambiguity and role conflict, which represent pure stressors that represent the hindering action of unclear expectations and conflicting demands, respectively (Gilboa et al., 2008, p. 231).

Practical Implications

Our research confirms that role overload not only harms the individual since it may engender such severe psychological strain as depression, but it can also threaten the organization for it may indirectly undermine work performance—particularly when LMX is low. Therefore, organizations would be well advised to ensure that workload does not exceed individuals' resources (time, competencies, etc.). Organizations must also be aware that even though some part of an overwhelming workload may come from individuals voluntarily engaging in OCB (Eatough et al., 2011), the net effect of overload is a resource depletion process, which is characterized by lack of energy, lack of pleasure, and reduced quality of life. Nonetheless, our research illustrates that high-quality relationships with one's supervisor can act as an antidote to the detrimental effects of role overload. Therefore, managers should be aware of their essential role, that is, by establishing a positive relationship with their subordinates, they could reduce and even remove the hindering effect of role overload on work performance, upon which hinges the success of the organization.

Liden and Maslyn (1998) LMX-MDM instrument comprises four dimensions, namely affect, loyalty, contribution, and professional respect, all of which are potential resources that can enable employees to better cope with overwhelming tasks. Affect (i.e., mutual affection between supervisor and employee) strengthens communication; contribution (i.e., the intensity of work-related efforts put into meeting the shared goals) shows that the supervisor is investing resources to develop the subordinate; loyalty (e.g., the public support to the other's action) provides assurances that the supervisor will support the subordinate; and respect (i.e., a reputation of excellence in one's work) offers learning opportunities to the subordinate (Dienesch and Liden, 1986; Harris et al., 2008). Managers who take the initiative to turn LMX into a tangible and supportive environment for their subordinates will likely reduce the detrimental effects of role overload.

Limitations and Directions for Future Research

Our research has limitations. First, we did not address the potential challenge path that might link role overload to performance. Gilboa et al. (2008) and Eatough et al. (2011) suggested that the non-significant association between role overload and work performance, as reported in meta-analytic reviews (Örtqvist and Wincent, 2006; Gilboa et al., 2008; Eatough et al., 2011), possibly hides opposite (indirect) effects on performance. On one hand, role overload might engender negative affective reactions (Fisher, 2014) such as anxiety (Glazer and Beehr, 2005; Perrewé et al., 2005) and lower job satisfaction (Eatough et al., 2011); in this case, role overload is considered a hindrance and as such can harm work performance. On the other hand, employees "may also respond to role overload by increasing their motivation and efforts in order to meet all the demands" (Eatough et al., 2011, p. 626); in this case, role overload is considered a challenge and as such can boost work performance. Thus, the non-significant correlations between role overload and performance in our studies may hide the fact that "competitive mediators" (Zhao et al., 2010) are operating, such as felt job challenge (e.g., Boswell et al., 2004) and motivation (LePine et al., 2005) that can enhance performance while psychological strain exerts the reverse effect. Our study addressed only a straining pathway. A motivating pathway has recently been identified by Montani et al. (2020), who found work engagement to be a resource-based mediator that links workload to innovative behavior.

Second, juxtaposing Montani et al. (2020) study with ours, it seems plausible for future research to test a richer model, in which role overload may bifurcate into two pathways, one straining and the other motivating; in doing so, future research can compare the relative importance of these two pathways (i.e., straining vs. motivating). Third, should motivational mediators be identified, it would be then interesting to determine if LMX moderates the indirect relationship from role overload to performance through these mediators. For example, Ozer et al. (2014) found LMX to amplify the effects of challenge stressors on OCB directed toward the organization. Similarly, if role overload has a challenge component, it would make sense to expect LMX to amplify its indirect effect on performance through increased motivation.

Fourth, other moderators of role overload could be examined. For example, social support from different sources (e.g., co-workers, supervisors, and family and friends) may buffer the effect of role demands on strain (Viswesvaran et al., 1999). Yet, as we studied stressor-strain relations in the work context, work-related sources of support seem more relevant. Moreover, it is unclear whether support from co-workers or family and friends would be as effective as resources provided by supervisors. Indeed, supervisors have the authority to reward employees (which co-workers cannot do) thereby offering employees

valuable resources. Notably, Montani et al. (2020) have identified mindfulness as an essential personal resource that can moderate workload's effects, such that being mindful can not only sustain the motivating pathway but also suppress the straining pathway.

Finally, although the supplementary study used cross-lagged design to examine the longitudinal relationship between role overload and psychological strain, our two-wave panel data did not allow us to holistically test the conditional process model as hypothesized. Future research could use longitudinal designs to track the relationship from role overload to psychological strain and then to work performance over time at different levels of LMX. Such complex longitudinal designs should allow a closer look into how the resource depletion process, once triggered by role overload, unfolds. For example, anxiety can possibly arise as a short-term reaction reflecting high vigilance and activation (e.g., Glazer and Beehr, 2005) and depression may follow as long-term reactions reflecting low vigilance and activation.

CONCLUSION

Role overload has a special status in the role-stress literature because the processes and conditions through and under which it relates to work performance remain poorly understood. The present research not only examined a key process, psychological strain, that explains how role overload undermines performance, but also investigated the buffering role of LMX. Combining results from two primary studies, we found psychological strain to be the linchpin linking role overload to underperformance; furthermore, we also found that LMX, a resource-providing context, mitigates the strain pathway through which role overload undermines performance. We hope these results will generate other research endeavors delving into the mechanisms by which role overload relates to work performance.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation, to any qualified researcher.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Research Ethics Board at HEC Montreal. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

W-GT and CV contributed to conception and design of the study. W-GT performed the statistical analysis and wrote the first draft of the manuscript. W-GT and CV contributed to manuscript revision, read, and approved the submitted version. Both authors contributed to the article and approved the submitted version.

FUNDING

This research was funded by the Social Sciences and Humanities Research Council of Canada (SSHRC, grant # 435-2014-1474) awarded to CV.

REFERENCES

Aguinis, H., and Gottfredson, R. K. (2010). Best-practice recommendations for estimating interaction effects using moderated multiple regression. *J. Organ. Behav.* 31, 776–786. doi: 10.1002/job.686

Aiken, L. S., and West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.

Alfes, K., Shantz, A. D., and Ritz, A. (2018). A multilevel examination of the relationship between role overload and employee subjective health: the buffering effect of support climates. *Hum. Resou. Manage.* 57, 659–673. doi: 10.1002/hrm.21859

Allen, T. D., and Rush, M. C. (1998). The effects of organizational citizenship behavior on performance judgments: a field study and a laboratory experiment. *J. Appl. Psychol.* 83, 247–260. doi: 10.1037/0021-9010.83.2.247

Beehr, T. A., Jex, S. M., Stacy, B. A., and Murray, M. A. (2000). Work stressors and coworker support as predictors of individual strain and job performance. *J. Organ. Behav.* 21, 391–405.

Beehr, T. A., King, L. A., and King, D. W. (1990). Social support and occupational stress: talking to supervisors. *J. Vocat. Behav.* 36, 61–81. doi: 10.1016/0001-8791(90)90015-T

Bliese, P. D. (2000). "Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis," in *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*, eds K. J. Klein, and S. W. J. Kozlowski, (San Francisco, CA: Jossey-Bass), 349–381.

Bolino, M. C., and Turnley, W. H. (2005). The personal costs of citizenship behavior: the relationship between individual initiative and role overload, job stress, and work-family conflict. *J. Appl. Psychol.* 90, 740–748. doi: 10.1037/0021-9010.90.4.740

Boswell, W. R., Olson-Buchanan, J. B., and LePine, M. A. (2004). Relations between stress and work outcomes: the role of felt challenge, job control, and psychological strain. *J. Vocat. Behav.* 64, 165–181. doi: 10.1016/S0001-8791(03)00049-6

Bowling, N. A., Alarcon, G. M., Bragg, C. B., and Hartman, M. J. (2015). A meta-analytic examination of the potential correlates and consequences of workload. *Work Stress* 29, 95–113. doi: 10.1080/02678373.2015.1033037

Byrne, B. M. (2012). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. New York: Routledge.

Cole, D. A., and Maxwell, S. E. (2003). Testing mediational models with longitudinal data: questions and tips in the use of structural equation modeling. *J. Abnormal Psychol.* 112, 558–577. doi: 10.1037/0021-843X.112.4.558

Crawford, E. R., LePine, J. A., and Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test. *J. Appl. Psychol.* 95, 834–848. doi: 10.1037/a0019364

de Croon, E. M., Sluiter, J. K., Blonk, R. W. B., Broersen, J. P. J., and Frings-Dresen, M. H. W. (2004). Stressful work, psychological job strain, and turnover: A 2-year prospective cohort study of truck drivers. *J. Appl. Psychol.* 89, 442–454. doi: 10.1037/0021-9010.89.3.442

Dienesch, R. M., and Liden, R. C. (1986). Leader-member exchange model of leadership: a critique and further development. *Acad. Manage. Rev.* 11, 618–634. doi: 10.2307/258314

Diestel, S., and Schmidt, K.-H. (2011). Costs of simultaneous coping with emotional dissonance and self-control demands at work: results from two german samples. *J. Appl. Psychol.* 96, 643–653. doi: 10.1037/a0022134

Dormann, C., and Zapf, D. (1999). Social support, social stressors at work, and depressive symptoms: testing for main and moderating effects with structural equations in a three-wave longitudinal study. *J. Appl. Psychol.* 84, 874–884. doi: 10.1037/0021-9010.84.6.874

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., and Ferris, G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: integrating the past with an eye toward the future. *J. Manage.* 38, 1715–1759. doi: 10.1177/0149206311415280

Eatough, E. M., Chang, C.-H., Miloslavic, S. A., and Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: a meta-analysis. *J. Appl. Psychol.* 96, 619–632. doi: 10.1037/a0021887

Eisenberger, R., Shoss, M. R., Karagonlar, G., Gonzalez-Morales, M. G., Wickham, R. E., and Buffardi, L. C. (2014). The supervisor POS-LMX-subordinate POS chain: moderation by reciprocation wariness and supervisor's organizational embodiment. *J. Organ. Behav.* 35, 635–656. doi: 10.1002/job.1877

Erdogan, B., Kraimer, M. L., and Liden, R. C. (2004). Work value congruence and intrinsic career success: the compensatory roles of leader-member exchange and perceived organizational support. *Person. Psychol.* 57, 305–332. doi: 10.1111/j.1744-6570.2004.tb02493.x

Eriksen, K., and Kress, V. E. (2008). Gender and diagnosis: struggles and suggestions for counselors. *J. Counsel. Dev.* 86, 152–162. doi: 10.1002/j.1556-6678.2008.tb00492.x

Fisher, D. M. (2014). A multilevel cross-cultural examination of role overload and organizational commitment: investigating the interactive effects of context. *J. Appl. Psychol.* 99, 723–736. doi: 10.1037/a0035861

Ford, M. T., Cerasoli, C. P., Higgins, J. A., and Decesare, A. L. (2011). Relationships between psychological, physical, and behavioral health and work performance: a review and meta-analysis. *Work Stress* 25, 185–204. doi: 10.1080/02678373.2011.609035

Ford, M. T., Matthews, R. A., Wooldridge, J. D., Mishra, V., Kakar, U. M., and Strahan, S. R. (2014). How do occupational stressor-strain effects vary with time? a review and meta-analysis of the relevance of time lags in longitudinal studies. *Work Stress* 28, 9–30. doi: 10.1080/02678373.2013.877096

Gilboa, S., Shirom, A., Fried, Y., and Cooper, C. (2008). A meta-analysis of work demand stressors and job performance: examining main and moderating effects. *Person. Psychol.* 61, 227–271. doi: 10.1111/j.1744-6570.2008.00113.x

Glaser, D. N., Tatum, B. C., Nebeker, D. M., Sorenson, R. C., and Aiello, J. R. (1999). Workload and social support: effects on performance and stress. *Hum. Perform.* 12, 155–176. doi: 10.1207/s15327043hup1202_4

Glazer, S., and Beehr, T. A. (2005). Consistency of implications of three role stressors across four countries. *J. Organ. Behav.* 26, 467–487. doi: 10.1002/job.326

Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., et al. (1997). The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychol. Med.* 27, 191–197. doi: 10.1017/S0033291796004242

Graen, G. B., and Uhl-Bien, M. (1995). Development of leader–member exchange (LMX) theory of leadership over 25 years: applying a multilevel multi-domain perspective. *Leadership Q.* 6, 219–247. doi: 10.1016/1048-9843(95)90036-5

Grandey, A., Foo, S. C., Groth, M., and Goodwin, R. E. (2012). Free to be you and me: a climate of authenticity alleviates burnout from emotional labor. *J. Occup. Health Psychol.* 17, 1–14. doi: 10.1037/a0025102

Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., and Westman, M. (2014). Getting to the "COR": understanding the role of resources in conservation of resources theory. *J. Manage.* 40, 1334–1364. doi: 10.1177/0149206314527130

Harris, K. J., and Kacmar, K. M. (2005). Easing the strain: the buffer role of supervisors in the perceptions of politics–strain relationship. *J. Occup. Organ. Psychol.* 78, 337–354. doi: 10.1348/096317905X26110

Harris, R. B., Harris, K. J., and Harvey, P. (2008). An examination of the impact of supervisor on the relationship between job strains and turnover intention for computer workers. *J. Appl. Soc. Psychol.* 38, 2108–2131. doi: 10.1111/j.1559-1816.2008.00383.x

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, 2nd Edn. New York: The Guilford Press.

Hesselgreaves, H., and Scholarios, D. (2014). Leader-member exchange and strain: a study of job demands and role status. *Hum. Resour. Manage. J.* 24, 459–478. doi: 10.1111/1748-8583.12042

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *Am. Psychol.* 44, 513–524. doi: 10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001). The influence of culture, community, and the nested self in the stress process: advancing conservation of resources theory. *Appl. Psychol. Int. Rev.* 50, 337–370. doi: 10.1111/1464-0597.00062

Jensen, J. M., Patel, P. C., and Messersmith, J. G. (2013). High-performance work systems and job control: consequences for anxiety, role overload, and turnover intentions. *J. Manage.* 39, 1699–1724. doi: 10.1177/0149206311419663

Jex, S. M., Bliese, P. D., Buzzell, S., and Primeau, J. (2001). The impact of self-efficacy on stressor-strain relations: coping style as an explanatory mechanism. *J. Appl. Psychol.* 86, 401–409. doi: 10.1037/0021-9010.86.3.401

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., and Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and role ambiguity*. New York: Wiley.

Katz, D., and Kahn, R. (1978). *The social psychology of organizations*, 2nd Edn. New York: John Wiley.

Lazarus, R. S., and Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

LeBreton, J. M., and Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organ. Res. Method* 11, 815–852. doi: 10.1177/1094428106296642

LePine, J. A., LePine, M. A., and Jackson, C. L. (2004). Challenge and hindrance stress: relationships with exhaustion, motivation to learn, and learning performance. *J. Appl. Psychol.* 89, 883–891. doi: 10.1037/0021-9010.89.5.883

LePine, J. A., Podsakoff, N. P., and LePine, M. A. (2005). A meta-analytic test of the challenge stressor–hindrance stressor framework: an explanation for inconsistent relationships among stressors and performance. *Acad. Manage. J.* 48, 764–775. doi: 10.5465/AMJ.2005.18803921

Liden, R. C., and Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *J. Manage.* 24, 43–72. doi: 10.1016/S0149-2063(99)80053-1

Liden, R. C., Wayne, S. J., and Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *J. Appl. Psychol.* 78, 662–674. doi: 10.1037/0021-9010.78.4.662

Little, T. D., Rhemtulla, M., Gibson, K., and Schoemann, A. M. (2013). Why the items versus parcels controversy needn't be one. *Psychol. Methods* 18, 285–300. doi: 10.1037/a0033266

MacKinnon, D. P., Lockwood, C. M., and Williams, J. (2004). Confidence limits for the indirect effect: distribution of the product and resampling methods. *Multivariate Behav. Res.* 39, 99–128. doi: 10.1207/s15327906mbr3901_4

Mazzola, J. J., and Disselhorst, R. (2019). Should we be "challenging" employees? a critical review and meta-analysis of the challenge-hindrance model of stress. *J. Organ. Behav.* 40, 949–961. doi: 10.1002/job.2412

McCarthy, J. M., Trougakos, J. P., and Cheng, B. H. (2016). Are anxious workers less productive workers? it depends on the quality of social exchange. *J. Appl. Psychol.* 101, 279–291. doi: 10.1037/apl0000044

Montani, F., Vandenberghe, C., Khedhaouria, A., and Courcy, F. (2020). Examining the inverted U-shaped relationship between workload and innovative work behavior: the role of work engagement and mindfulness. *Hum. Relat.* 73, 59–93. doi: 10.1177/0018726718819055

Muthén, L. K., and Muthén, B. O. (1998-2017). *Mplus user's guide*, 8th Edn. Los Angeles, CA: Muthén & Muthén.

Netemeyer, R. G., Maxham, J. G. III, and Pullig, C. (2005). Conflicts in the work-family interface: links to job stress, customer service employee performance, and customer purchase intent. *J. Market.* 69, 130–143. doi: 10.1509/jmkg.69.2.130.60758

Örtqvist, D., and Wincent, J. (2006). Prominent consequences of role stress: a meta-analytic review. *Int. J. Stress Manage.* 13, 399–422. doi: 10.1037/1072-5245.13.4.399

Ozer, M., Chang, C.-H., and Schaubroeck, J. M. (2014). Contextual moderators of the relationship between organizational citizenship behaviors and challenge and hindrance stress. *J. Occup. Organ. Psychol.* 87, 557–578. doi: 10.1111/joop.12063

Perrewé, P. L., Zellars, K. L., Rossi, A. M., Ferris, G. R., Kacmar, C. J., Liu, Y. M., et al. (2005). Political skill: an antidote in the role overload-strain relationship. *J. Occup. Health Psychol.* 10, 239–250. doi: 10.1037/1076-8998.10.3.239

Podsakoff, N. P., LePine, J. A., and LePine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis. *J. Appl. Psychol.* 92, 438–454. doi: 10.1037/0021-9010.92.2.438

Rafferty, A. E., and Jimmieson, N. L. (2010). Team change climate: a group-level analysis of the relationships among change information and change participation, role stressors, and well-being. *Eur. J. Work Organ. Psychol.* 19, 551–586. doi: 10.1080/13594320903007869

Rizzo, J. R., House, R. J., and Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Admin. Sci. Q.* 15, 150–163. doi: 10.2307/2391486

Salokangas, R. K., Stengard, E., and Poutanen, O. (1994). DEPS: a new screening test for depressive symptoms. *Duodecim* 110, 1141–1148.

Satorra, A., and Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika* 66, 507–514. doi: 10.1007/BF02296192

Schaffer, B. S., and Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: a best-practices approach. *Organ. Res. Method* 6, 169–215. doi: 10.1177/1094428103251542

Schaubroeck, J., Cotton, J. L., and Jennings, K. R. (1989). Antecedents and consequences of role stress: a covariance structure. *J. Organ. Behav.* 10, 35–58. doi: 10.1002/job.4030100104

Shore, L. M., Cleveland, J. N., and Goldberg, C. B. (2003). Work attitudes and decisions as a function of manager age and employee age. *J. Appl. Psychol.* 88, 529–537. doi: 10.1037/0021-9010.88.3.529

Shultz, K. S., Wang, M., and Olson, D. A. (2010). Role overload and underload in relation to occupational stress and health. *Stress Health* 26, 99–111. doi: 10.1002/smi.1268

Spector, P. E., Chen, P. Y., and O'Connell, B. J. (2000). A longitudinal study of relations between job stressors and job strains while controlling for prior negative affectivity and strains. *J. Appl. Psychol.* 85, 211–218. doi: 10.1037/0021-9010.85.2.211

Tsui, A. S. (2007). From homogenization to pluralism: international management research in the academy and beyond. *Acad. Manage. J.* 50, 1353–1364. doi: 10.5465/AMJ.2007.28166121

Tucker, J. S., Sinclair, R. R., and Thomas, J. L. (2005). The multilevel effects of occupational stressors on soldiers' well-being, organizational attachment, and readiness. *J. Occup. Health Psychol.* 10, 276–299. doi: 10.1037/1076-8998.10.3.276

Van Dyne, L., and LePine, J. A. (1998). Helping and voice extra-role behavior: evidence of construct and predictive validity. *Acad. Manage. J.* 41, 108–119. doi: 10.2307/256902

Van Scotter, J. R., Motowidlo, S. J., and Cross, T. C. (2000). Effects of task performance and contextual performance on systemic rewards. *J. Appl. Psychol.* 85, 526–535. doi: 10.1037/0021-9010.85.4.526

Vandenberg, R. J., and Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: suggestions, practices, and recommendations for organizational research. *Organ. Res. Method* 3, 4–70. doi: 10.1177/109442810031002

Viswesvaran, C., Sanchez, J. I., and Fisher, J. (1999). The role of social support in the process of work stress: a meta-analysis. *J. Vocat. Behav.* 54, 314–334. doi: 10.1006/jvbe.1998.1661

Vuori, J., Toppinen-Tanner, S., and Mutanen, P. (2012). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *J. Appl. Psychol.* 97, 273–286. doi: 10.1037/a0025584

Vuori, J., and Vinokur, A. D. (2005). Job-search preparedness as a mediator of the effects of the Työhön job search intervention on re-employment and mental health. *J. Organ. Behav.* 26, 275–291. doi: 10.1002/job.308

Webster, J. R., Beehr, T. A., and Love, K. (2011). Extending the challenge-hindrance model of occupational stress: the role of appraisal. *J. Vocat. Behav.* 79, 505–516. doi: 10.1016/j.jvb.2011.02.001

Williams, L. J., and Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *J. Manage.* 17, 601–617. doi: 10.1177/014920639101700305

Wright, T. A., and Bonett, D. G. (2002). The moderating effects of employee tenure on the relation between organizational commitment and job performance: a meta-analysis. *J. Appl. Psychol.* 87, 1183–1190. doi: 10.1037/0021-9010.87.6.1183

Zhao, X., Lynch, J. G. Jr., and Chen, Q. (2010). Reconsidering baron and kenny: myths and truths about mediation analysis. *J. Consumer Res.* 37, 197–206. doi: 10.1086/651257

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 23 June 2021
doi: 10.3389/fpsyg.2021.702648

Can Leaders Prevent Technology From Backfiring? Empowering Leadership as a Double-Edged Sword for Technostress in Care

Robin Bauwens[1]*, *Marith Denissen*[1], *Jeske Van Beurden*[1] and *Martine Coun*[2]

[1] Department of Human Resource Studies, Tilburg University, Tilburg, Netherlands, [2] Faculty of Management Sciences, Open University, Heerlen, Netherlands

Purpose: Recent studies have called for more contextual studies of technostress and the role leaders can have in this experience. While technostress is an increasingly prevalent and severe phenomenon in care professions, limited studies have addressed its potential negative consequences for employee well-being and quality of care delivered in this sector or, more importantly, examined how the adverse consequences of technostress could be mitigated. Therefore, the present study addresses this gap by investigating how technostress in childcare affects quality of care delivered via emotional exhaustion and what influence empowering leadership plays in this relationship.

Design/methodology approach: Incorporating the views of 339 Dutch childcare workers, this study tests a model in which technostress influences quality of care delivered, mediated by emotional exhaustion and moderated by empowering leadership.

Findings: Results confirm that techno-invasion and techno-overload predict higher emotional exhaustion and lower quality of care delivered among childcare workers. Empowering leadership reduced the influence of techno-invasion on emotional exhaustion but strengthened the influence of techno-overload.

Originality/value: Our results provide childcare organizations with relevant information on the increasing use of ICT that influences both childcare workers' well-being and quality of care they deliver. Important implications are suggested for leadership geared at stimulating employees' responsibility and accountability for different dimensions of technostress.

Keywords: technostress, emotional exhaustion, quality of care delivered, conservation of resources theory, empowering leadership, techno-overload, techno-complexity, techno-invasion

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
María Buenadicha-Mateos, University of Extremadura, Spain
José Luis Vázquez-Burguete, Universidad de León, Spain

***Correspondence:**
Robin Bauwens
r.bauwens@tilburguniversity.edu

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *29 April 2021*
Accepted: *19 May 2021*
Published: *23 June 2021*

Citation:
Bauwens R, Denissen M, Van Beurden J and Coun M (2021) Can Leaders Prevent Technology From Backfiring? Empowering Leadership as a Double-Edged Sword for Technostress in Care. Front. Psychol. 12:702648. doi: 10.3389/fpsyg.2021.702648

INTRODUCTION

In recent years, childcare organizations have made significant investments in information and communication technology (ICT) to improve their professional services (Denissen, 2020). A survey from 2018 demonstrates that the majority of Dutch childcare organizations engaged in some kind of ICT innovation in the last 12 months. Most popular were the digitalization of internal work processes (52%), like personnel planning, invoicing and logistics services,

followed by contact with clients (45%), for example through social media or "digital parent environments" and the use of e-learning for staff (33%) (FCB, 2018). On the one hand, ICT provides substantial benefits to childcare organizations, such as quality monitoring and enhanced service to clients (Yost and Fan, 2014). On the other hand, ICT can also make work more complex, intensive and could even induce technostress, which could prevent ICT's benefits from materializing (Bauwens et al., 2020; Molino et al., 2020). Technostress refers to stress resulting from individuals' inability to cope with technology, like ICT, and its associated changes (Brod, 1982; Ragu-Nathan et al., 2008). This is problematic, as it yields a variety of negative consequences for individual job outcomes (Tarafdar et al., 2015; La Torre et al., 2019).

To date, technostress research has been mostly restricted to contexts like government, industry (Ayyagari et al., 2011) and education (Wang W. et al., 2020; Penado Abilleira et al., 2021). However, technostress is an increasingly prevalent and severe phenomenon in care professions (Califf et al., 2015; Fagerström et al., 2017). Childcare workers in particular constitute a group whose work-related well-being is continuously challenged, since they are regularly confronted with physical complaints (e.g., noise, musculoskeletal complaints), emotional demands (e.g., emotional responses from children and parents), and operate in a highly regulated environment (Decker et al., 2002; Løvgren, 2016; Koch et al., 2017). This situation has potentially been exacerbated by recent technological developments (Denissen, 2020), but also by the current COVID-19 pandemic, as childcare workers found themselves at the frontline (Bradley and Chahar, 2020). To resolve the challenges of technostress for employees, scholars inspired by e-leadership literature point to the role of leaders (Cortellazzo et al., 2019; Bartsch et al., 2020; Iannotta et al., 2020). Leaders play an important part in regulating how employees' stress experiences affect individual job outcomes (Zhang et al., 2014; Wang X. et al., 2020). However, with a few notable exceptions, technostress research has seldomly addressed leaders' influence in mitigating the adverse consequences of technology (Salanova et al., 2013; Turel and Gaudioso, 2018; Spagnoli et al., 2020). In addition, limited studies have examined the potential negative consequences of technostress in childcare. Let alone, how such potential adverse consequences could be mitigated by leaders.

The present study addresses this hiatus examining how technostress, more specifically stressors like techno-overload, techno-invasion and techno-complexity, affect the quality of care delivered among childcare workers, by focusing on the mediating role of emotional exhaustion. In addition, we investigate how these relations are affected by leadership. Emotional exhaustion is a key predictor of burnout and describes employees' feeling of being emotionally drained by work (Maslach et al., 1986; Wright and Cropanzano, 1998). Furthermore, quality of care delivered, in absence of a generally accepted definition, refers to the extent that effective care is provided to those who require it (Humphries et al., 2014). Not only is quality of care the main "output" of childcare organization, its importance is also underscored by several laws and regulations, like the Innovation and Quality Act in the Netherlands[1] (i.e., *Wet Innovatie en Kwaliteit Kinderopvang*). In linking technostress to quality of care delivered via emotional exhaustion, the present study taps into Conservation of Resources theory (COR; Hobfoll, 2001). COR theory advances that employees have limited resources (e.g., social support, time, technological literacy). Resources can help employees in coping with stressful experiences but are typically also depleted by confrontations with (techno)stress. Conversely, facilitating factors like leadership can also help to replenish such resources and let employees overcome stressful experiences (Turel and Gaudioso, 2018; Lutz et al., 2020).

A particular leadership approach that is concerned with employees' resources and aligns well with the logic of COR-theory is empowering leadership (Kim and Beehr, 2021). Empowering leadership encompasses leader behaviors that encourage and support employees' autonomy, participative decision-making, and meaning of work (Arnold et al., 2000; Ahearne et al., 2005; Audenaert and Decramer, 2016). As technologies like ICT limit leaders' direct opportunities for control and make work more complex and unpredictable, employees are increasingly required to demonstrate more responsibility, self-leadership, and own solutions for work-related problems. Therefore, empowering leadership, which reinforces such proactive employee behaviors, presents itself as a promising leadership style to help employees overcome challenges in ICT contexts (Hill and Bartol, 2016; Coun et al., 2021). Furthermore, past research underscores the merits of empowering leadership in care settings, where employees typically have to balance multiple job demands and resource constraints (Audenaert et al., 2020; Bauwens et al., 2021). Based on this reasoning, we expect empowering leadership to moderate the relationships between technostress, emotional exhaustion and quality of care delivered.

In testing these relationships, we make a two-fold contribution. Our first contribution is to technostress literature. Like general stress, technostress is context specific La Torre et al. (2019). By expanding the knowledge on technostress in care professions (Califf et al., 2015; Fagerström et al., 2017), this study furthers the work of Tarafdar et al. (2015) on the contextualization of technostress, demonstrating that this phenomenon is not limited to high-tech or business environments (Wang W. et al., 2020), but also affect employees in sectors that are currently making significant ICT investments to improve their professional services (Yost and Fan, 2014) and have traditionally received less attention in this regard. Second, by accounting for empowering leadership we contribute to the growing literature on this leadership approach (Dinh et al., 2014; Cheong et al., 2019) and extend the emergent body of research on the importance of leadership in the contemporary ICT-infused workplace (Cortellazzo et al., 2019; Gardner et al., 2020; Iannotta et al., 2020). By not only focusing on the adverse consequences of technostress, but also on how these can be mitigated by leadership, this study contributes to calls for more "proactive" studies on technostress, which could inspire more effective

[1] https://www.rijksoverheid.nl/onderwerpen/kwaliteit-van-de-zorg/kwaliteitseisen-zorginstellingen

interventions for reducing technostress within organizations (Parker and Grote, 2020).

Technostress

Technostress was first coined by Brod (1982), defining it as an adaptation problem "caused by an inability to cope with the new computer technologies in a healthy manner" (p. 16). While many authors have sought to broaden or adjust this definition (e.g., Weil and Rosen, 1997; Ragu-Nathan et al., 2008; Salanova et al., 2013), there seems to be an agreement that technostress is essentially a negative, technology-induced psychological state that has an adverse impact on people's attitudes and behaviors (cf. La Torre et al., 2019). Technostress seems increasingly prevalent and severe among care professionals. While several sectors have witnessed increases in the adoption and intensity of ICT in their work over the past few years, such transformations have been relatively abrupt in professional care, compared to government and business environments, where such transformations have occurred more gradually (Califf et al., 2015; Fagerström et al., 2017). In particular, many childcare organizations in recent years saw the introduction of digital parent environments (i.e., web-based page or app to share information about the child with their parents), the emergence of social media pages, and the digitization of administrative rules and procedures among other technological developments (Yost and Fan, 2014; Bauwens and Meyfroodt, 2021). Consequentially, childcare workers are exposed to ICT-induced stressors, i.e., techno-stressors. Examples of such techno-stressors include stress due to information overload (techno-overload), the invasion of technology to the private sphere (techno-invasion), the sheer complexity of technology (techno-complexity), constant changes in hardware and software (techno-uncertainty) and/or concerns over future employment (techno-insecurity; Tarafdar et al., 2010). While some have sought to broaden (Fischer et al., 2021) or challenge (Hu et al., 2021) this conceptualization of techno-stressors, scholars like Molino et al. (2020) and Spagnoli et al. (2020) recently made a convincing case for a more parsimonious approach, which focuses on techno-overload, techno-invasion and techno-complexity as three predominant stressors in contemporary jobs. For example, childcare workers might struggle with the techno-complexity and techno-overload of information (cf. Shu et al., 2011; Harris et al., 2015) that administrative systems, parent environments or even simple WhatsApp groups generate. Alternatively, work-related ICT use might find its way into the private sphere (cf. Schlachter et al., 2018; Bauwens et al., 2020) in the form of texts and notifications from colleagues, parents or bosses and thereby prevent mental recovery from work.

The Mediating Role of Emotional Exhaustion

Childcare workers are an employee group whose health-related well-being is continuously at risk, a situation that is potentially exacerbated by recent technological developments. Being subjected to high physical demands, rule demands and emotional labor, childcare workers are susceptible to episodes of emotional exhaustion (Decker et al., 2002; Løvgren, 2016; Koch et al., 2017). Emotional exhaustion is a key facet of burnout and refers to a chronic state of emotional and physical fatigue (Maslach et al., 2001). Past research has linked emotional exhaustion to stress at work by adopting the theoretical lens of COR theory. This theory advances that a lack of resources will lead to defensive attempts to preserve the remaining resources (Hobfoll, 2001). According to Hobfoll (2001), resources are characteristics, conditions or objects that are valued by employees and help them to achieve or protect other valued resources. COR theory states that when valued resources are threatened or are not adequately replenished, this incites negative job outcomes, like emotional exhaustion (Srivastava et al., 2015; Kilroy et al., 2020). Applied to the present context, childcare workers consume valuable resources when dealing with techno-stressors. Therefore, childcare workers that are confronted with such stressful situations, see their emotional and physical resources depleted. This leaves them with insufficient resources to deal with their other job demands (Ghislieri et al., 2017) and ultimately renders them more vulnerable to develop burnout-related symptoms, like emotional exhaustion (Wright and Cropanzano, 1998; Hobfoll and Freedy, 2017). Empirical studies on technostress and emotional exhaustion seem to confirm this line of reasoning (Brown et al., 2014; Srivastava et al., 2015; Gaudioso et al., 2017; Califf and Brooks, 2020). We therefore predict that:

H1: Technostress, in terms of techno-overload, -invasion, and -complexity, is positively related to emotional exhaustion.

COR theory asserts that employees' initial loss of resources will lead to future losses, resulting in so-called "downwards loss spirals" (Hobfoll, 2001). Accordingly, experiencing technostress might deplete employees' resources, culminating in emotional exhaustion and further eroding employees' resources in a vicious cycle. COR theory predicts that employees who experience such continued resource losses will prioritize how they use their remaining resources. Confronted with technostress, employees might experience emotional exhaustion due to depleted resources. Consequentially, those employees might shift their priories to coping with this exhaustion, rather than spending such resources to their job performance (Hobfoll, 2001; Hobfoll and Freedy, 2017).

In childcare organizations, one of the main aspects of performance is quality of care delivered, or the extent to which effective care is provided to those who require it (Humphries et al., 2014). In person care environments, there are typically limits to the extent to which ICT tasks and care duties are compatible with one another (Califf et al., 2015). For example, changing diapers or feeding and playing with children is often difficult to combine with ICT tasks like handling administration and communicating with parent through social media. In other words, COR theory and its "loss spirals" lead to suggests that emotional exhaustion could act as a mechanism through which technostress affects quality of care delivered. This in line with the work of Karatepe and Uludag (2008), who previously demonstrated a mediation of emotional exhaustion between general stress and job performance. In addition, there is empirical support for linking technostress to both emotional exhaustion

(Brown et al., 2014; Srivastava et al., 2015; Gaudioso et al., 2017) and job performance (Tarafdar et al., 2010, 2015; Brooks and Califf, 2017; Wang X. et al., 2020). The latter also show close relations in prior studies (Wright and Cropanzano, 1998; Humphries et al., 2014; Alves and Guirardello, 2016). Therefore, the following hypotheses are proposed:

H2a: Emotional exhaustion is negatively related to quality of care delivered.

H2b: The negative relationship between technostress and quality of care delivered is mediated by emotional exhaustion.

The Moderating Role of Empowering Leadership

COR theory is not only concerned with how employees' resources are depleted, but also with how such resources can be replenished by certain facilitating factors (Hobfoll, 2001). Leadership constitutes an important facilitating factor for replenishing employees' resources. While traditionally regarded as a resource in itself, contemporary scholars progressively draw attention to leaders' influence on the allocation and impact of resources among employees (Schaufeli, 2015). Therefore, the influence of leadership on employees' experiences at work—and its integration in COR theory—is increasingly regarded as important in its own right (Hobfoll et al., 2018). A particular leadership approach that is concerned with strengthening employees' resources is empowering leadership. Empowering leaders display non-directive leader behaviors that foster employees' autonomy, participative decision making and problem-solving behavior (Arnold et al., 2000; Ahearne et al., 2005; Audenaert and Decramer, 2016). Consistent with the logic of resource replenishment in COR theory, empowering leaders strengthen employees' resource base through coaching, promoting their self-development, expressing confidence in their abilities, and stimulating them to broaden their scope of potential solutions for given problems by exploring opportunities and alternatives (Windeler et al., 2017; Kim and Beehr, 2021). Therefore, empowering leadership presents a suitable leadership style for challenging work environments, like person care (Audenaert et al., 2020; Liu et al., 2021) and those characterized by ICT (Hill and Bartol, 2016; Windeler et al., 2017; Coun et al., 2021). When empowering leadership is relatively high, childcare workers might be stimulated to look for potential solutions that limit the impact of techno-stressors on emotional exhaustion and preserve the quality of care delivered (cf. Turel and Gaudioso, 2018). For example, empowering leaders can prompt childcare workers to set more strict work-home boundaries for themselves and/or to make shared decisions on whether and to what extent ICT is used in the childcare facility (e.g., limiting answering mails or updating parent environments to certain slots of the day or designating such responsibilities to certain colleagues), thereby reducing the influence of techno-invasion. Alternatively, empowering leaders might encourage employees to proactively help colleagues who struggle with ICT usage or with managing the ongoing information overload (e.g., teaching peer-to-peer, coming up with a role division and clear workflow), thereby reducing techno-complexity and techno-overload. However, when empowering leadership is relatively low, employees might lack the incentives to seek solutions and engage in shared decision making to address ICT issues, rendering the impact of technostress on their well-being and performance more severe. This logic is supported by studies suggesting that empowering leadership reduces the influence of specific (techno)stressors on employee outcomes. For example, Windeler et al. (2017) reported that empowering leaders reduce the influence of techno-complexity, while Kim and Beehr (2020) observed such leaders to mitigate negative technological spillovers from work to home. Additional empirical support underpins that leaders that build employees' resource base (Harris et al., 2015) and stimulate their participative decision making (Turel and Gaudioso, 2018) significantly reduce the influence of technostress(ors) on employee outcomes, like emotional exhaustion and job performance. Therefore, we hypothesize:

H3: The indirect negative effect of technostress on quality of care delivered via emotional exhaustion is weaker for employees with an empowering leader.

MATERIALS AND METHODS

Participants and Procedure

Data were collected in September and October 2020 through an online self-reported questionnaire (Qualtrics). The questionnaire was sent to the directors of the 9,056 childcare facilities registered in the National Childcare Registry[2] (i.e., Landelijk Register Kinderopvang), which jointly employ about 95,000 childcare workers. While the COVID-19 pandemic was ongoing at the time, childcare workers in the Netherlands continued to work onsite during the period of the data collection.[3] The nature of their job also did not allow for telework. Since data collection through survey is susceptible to common method bias (CMB), we followed earlier recommendations to mitigate such bias. For example, separating variables in the questionnaire to create a psychological lag time and stressing voluntary and anonymous participation (George and Pandey, 2017). Accompanying the survey was a mail and cover page that gave more information about the study, stressing anonymity and that the data would only be used for study purposes. Informed consent was obtained from the respondents through a digital form in the questionnaire, in which they acknowledged their voluntary participation in the study, their right to redraw and agreed with the digital processing and storage of their answers for scientific purposes. The Ethics Review Board of the first author's institution gave permission for this study and confirmed that the rights and privacy of study participants were sufficiently accounted for (nr. EC-2019.76). In total, 339 childcare workers completed the questionnaire. In terms of age and gender, the characteristics of childcare workers in our sample resembled the characteristics of the Dutch childcare workforce (CBS, 2020). Respondents' age ranged from 19 to 64 (on average 40.66 years). Most of the respondents were female (96.7%) and worked part-time (68.4%)

[2]https://www.landelijkregisterkinderopvang.nl/

[3]https://www.rijksoverheid.nl/onderwerpen/coronavirus-covid-19/onderwijs-en-kinderopvang/ouders

on a fixed contract (85.8%). Concerning the professional use of ICT, most respondents indicated its use for contact with parents (91.2%), followed by administration (82.0%) and monitoring childcare capacity and personnel planning (80.5%). To a lesser extent, childcare workers also reported the professional use of ICT to communicate with their supervisor (71.7%) or colleagues (80.5%). In addition, some respondents indicated to use ICT for other purposes, for example to access child-monitoring systems, set-up learning activities for children or engage with official authorities (e.g., GGD or Municipal Health Services).

Measures

All measures were derived from prior-validated scales and administered in Dutch after a forth-back translation procedure. Answers were scored on a 7-point scale (1 = not at all; 7 = to a very large extent).

Technostress was measured using the eleven-item scale by Molino et al. (2020). This scale presents a validated, parsimonious alternative to original scale by Ragu-Nathan et al. (2008) and focusses on the three main techno stressors in contemporary jobs: techno-overload (four items including "I am forced by technology to work much faster"), techno-invasion (three items including "I feel my personal life is invaded by this technology") and techno-complexity (four items including "I do not find enough time to study and upgrade my technology skills"). Cronbach's alpha was 0.882 for the overall scale and 0.919, 0.813 and 0.866 for the respective subdimensions.

Empowering Leadership was measured using the six-item scale by Pearce and Sims (2002). A sample item is "My supervisor encourages me to seek solutions without his/her direct input." Cronbach's alpha was 0.858. *Emotional exhaustion* was measured using the five-item scale by Schaufeli et al. (1996). An example item is "I feel tired when I get up in the morning and have another working day ahead of me." Cronbach's alpha was 0.908.

Quality of care delivered was assessed by the three-scale from (Aiken et al., 2002). Respondents were asked to indicate the extent to which they agreed with each statement in the scale, reflecting practices that relate to their job performance within their organization. An example item is "During my last shift high quality care was provided to the children" Cronbach's alpha was 0.687.

Control variables were included for gender (0 = female, 1 = male), age (in years) and job status (i.e., fulltime vs. parttime employment and fixed vs. temporary employment), since past research suggests that younger workers are more susceptible to burnout, but also points to mixed effects of gender and job status for burnout, controlling for these variables is necessary (Kroon et al., 2009; Kilroy et al., 2020).

Data Analysis

Analyses were conducted in R with the auxiliary packages Lavaan (Rosseel, 2012) and semTools (Jorgensen et al., 2018). We employed structural equation modeling (SEM) following the recommended two-step procedure (Kline, 2011). We first tested the measurement model with confirmatory factor analysis, followed by the paths between the latent variables in the structural model. Latent moderated structural equation modeling (LMS) was used to assess the interactions and conditional (indirect) effects, which better accounts for measurement errors compared to product indicators (Feng et al., 2020).

RESULTS

Preliminary Analyses

CFA was performed to test the measurement model. An overview of the models and fit indices can be consulted in **Table 1**. We started from a four-factor model (i.e., technostress as one dimension, empowering leadership, emotional exhaustion, quality of care delivered), which we contrasted with a one-factor model to detect potential CMB, as well as a six-factor model (i.e., technostress as three dimensions, empowering leadership, emotional exhaustion, quality of care delivered). The four-factor model showed good fit with the data (χ^2 = 549.720, df = 266, CFI = 0.936, RMSEA = 0.058, SRMR = 0.056). The one-factor model fitted the data significantly worse, suggesting CMB is no considerable concern ($\Delta\chi^2$ = 1736.082, Δdf = 6, $p < 0.001$). However, the six-factor model with three-dimensional technostress presented a significant improvement over the four-factor model and better representation of the collected data ($\Delta\chi^2$ = 665.132, Δdf = 9, $p < 0.001$). Average variance extracted (AVE) surpassed 0.50, except for quality of care delivered (AVE = 0.430), which was not deemed problematic as its composite reliability was satisfactory (CR = 0.694). Furthermore, all items loaded significantly on their hypothesized factors (range 0.493–0.920). Therefore, the six-factor model was used as a basis to test the subsequent structural models. In line with COR theory, we started from a full mediation model, which we contrasted with a partial mediation model including both direct and indirect paths from technostress dimensions to quality of care delivered, each of them moderated by empowering leadership. Note that these models have much larger degrees of freedom due to the use of LMS (Feng et al., 2020). The full mediation model demonstrated a good fit (χ^2 = 3453.429, df = 3,363, CFI = 0.996, RMSEA = 0.009, SRMR = 0.083), while the partial mediation model fitted the data significantly worse ($\Delta\chi^2$ = 1063.885, Δdf = 964, $p < 0.050$). Therefore, the full mediation model was retained for hypothesis testing.

Descriptive Statistics and Correlations

Table 2 presents the descriptive statistics and correlations. In line with the hypotheses, the correlations show that techno-overload, techno-invasion and techno-complexity are associated with higher emotional exhaustion (respectively $r = 0.353$, $p \leq 0.010$; $r = 0.361$, $p \leq 0.010$; $r = 0.217$, $p \leq 0.010$) and lower quality of care delivered (respectively, $r = -0.229$, $p \leq 0.010$; $r = -0.181$, $p \leq 0.010$; $r = -0.223$, $p \leq 0.010$). Empowering leadership was negatively related to emotional exhaustion ($r = -0.194$, $p \leq 0.010$) and positively to quality of care delivered ($r = 0.248$, $p \leq 0.010$), while the latter two variables were also related ($r = -0.300$, $p \leq 0.010$). In addition, gender (female) was positively related to techno-complexity ($r = 0.184$, $p \leq 0.010$), while age positively correlated with reports of techno-complexity ($r = 0.397$, $p \leq 0.010$) and empowering leadership ($r = 0.160$, $p \leq 0.010$). Furthermore, fulltime employment negatively correlated with techno-overload

TABLE 1 | Models and fit indices.

	χ^2	df	CFI	RMSEA	SRMR
Measurement models					
One-factor model (common method bias)	2942.108	275	0.397	0.176	0.161
Four-factor model (hypothesized, onedimensional technostress)	1206.026	269	0.788	0.106	0.089
Six-factor model (three-dimensional technostress)	540.894	260	0.936	0.059	0.053
Structural models					
Full moderated mediation	3453.429	3363	0.996	0.009	0.083
Partial moderated mediation	4517.314	4327	0.993	0.012	0.089

CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

TABLE 2 | Descriptive statistics and correlations ($N = 339$).

		Mean	SD	1	2	3	4	5	6	7	8	9	10
1	Gender	0.967	0.179										
2	Age	40.660	11.929	−0.046									
3	Fulltime employment	0.316	0.465	−0.09	−0.198**								
4	Temporary employment	0.142	0.350	0.028	−0.328**	−0.112*							
5	Overload	4.854	1.700	0.095	0.016	−0.146**	−0.011						
6	Invasion	3.948	1.931	0.041	−0.032	−0.087	−0.025	0.608**					
7	Complexity	2.969	1.308	0.184**	0.397**	−0.139*	−0.168**	0.362**	0.285**				
8	Empowering leadership	5.287	0.939	0.012	0.160**	0.021	−0.046	−0.191**	−0.218**	−0.037			
9	Emotional exhaustion	2.402	1.274	0.033	−0.09	0.029	−0.077	0.353**	0.361**	0.217**	−0.194**		
10	Quality of Care Delivered	5.892	0.842	−0.072	−0.001	0.134*	−0.072	−0.229**	−0.181**	−0.223**	0.248**	−0.300**	

*$p < 0.05$, **$p < 0.01$.

and techno-complexity (respectively, $r = -0.146$, $p \leq 0.010$; $r = -0.139$, $p \leq 0.010$) while temporary employment was negatively correlated with techno-complexity ($r = -0.168$, $p \leq 0.010$).

Hypothesis Testing

Table 3 reports the paths from the structural model, which are also graphically depicted in **Figure 1**. The results show that techno-overload and techno-invasion predict emotional exhaustion (respectively $B = 0.175$, $p \leq 0.001$; $B = 0.218$, $p \leq 0.001$), but not techno-complexity ($B = 0.062$, $p = 0.051$). This partially supports our first hypothesis (H1). In accordance with the second set of hypotheses (H2a, H2b), emotional exhaustion also predicted quality of care delivered ($B = -0.837$, $p \leq 0.001$). Furthermore, in line with H3a, the interaction between techno-invasion and empowering leadership was significantly related to emotional exhaustion ($B = -0.129$, $p \leq 0.001$). This was also the case for the interaction between techno-overload and empowering leadership, but not in the hypothesized direction ($B = 0.065$, $p \leq 0.050$).

Figure 2 displays the interaction plot for the association between techno-invasion and emotional exhaustion under the condition of relatively low (−1SD) and relatively high (+1SD) empowering leadership. The gradient slope for high empowering leadership is −0.345 ($p < 0.050$), which is steeper than the gradient slope for low empowering leadership (gradient slope −0.203, $p > 0.050$). As can be seen from **Figure 2**, the association between techno-invasion and emotional exhaustion is lower when empowering leadership is relatively high. **Figure 3** shows a similar interaction plot for the association between techno-overload, moderated by empowering leadership. The gradient slope for low empowering leadership is 0.324 ($p < 0.010$), which is less steep compared to the gradient slope for high empowering leadership (gradient slope 0.409, $p < 0.010$). Accordingly, **Figure 3** demonstrates that the association between techno-overload and emotional exhaustion is stronger when empowering leadership is relatively high. Contrary to H3, the interaction between techno-complexity and empowering leadership was not significant ($B = 0.062$, $p = 0.051$). The bootstrapped results indicated significant conditional indirect effects for techno-overload (−0.052 with 95% CI[−0.086, −0.019], $p < 0.010$) and techno-invasion (−0.072 with 95% CI[−0.118, −0.032], $p < 0.001$) on quality of care delivered, mediated by emotional exhaustion and moderated by empowering leadership. In line with the above results, a significant conditional indirect effect was not observed for techno-complexity (−0.029 with 95% CI[−0.061, 0.002], $p > 0.050$). Therefore, the final hypothesis (H3) was only partially confirmed.

DISCUSSION

This study examined how technostress (i.e., techno-overload, techno-invasion, techno-complexity) affected the quality of care delivered among childcare workers in the Netherlands, by focusing on the mediating role of emotional exhaustion.

TABLE 3 | Structural paths ($N = 301$).

Path	B	SE	95% CI	*p*
Direct effects				
Gender → Emotional exhaustion	−0.103	1035	[−2.721; 1.337]	0.504
Age → Emotional exhaustion	−1.466	0.049	[−0.241; −0.048]	0.003**
Fulltime employment → Emotional exhaustion	−0.750	0.781	[−3.366; −0.304]	0.019*
Temporary employment → Emotional exhaustion	−1.418	2.344	[−11.177; −1.988]	0.005**
Techno-overload → Emotional exhaustion	0.175	0.039	[0.051; 0.202]	<0.001***
Techno-invasion → Emotional exhaustion	0.218	0.039	[0.064; 0.218]	<0.001***
Techno-complexity → Emotional exhaustion	0.062	0.035	[−0.000; 0.138]	0.051
Empowering leadership → Emotional exhaustion	−0.159	0.030	[−0.247; −0.130]	<0.001***
Empowering leadership × Techno-overload → Emotional exhaustion	0.065	0.022	[0.001; 0.089]	0.043*
Empowering leadership × Techno-invasion → Emotional exhaustion	−0.129	0.021	[−0.117; −0.034]	<0.001***
Empowering leadership × Techno-complexity → Emotional exhaustion	0.030	0.022	[−0.011; 0.075]	0.144
Gender → Quality of Care Delivered	−0.174	0.684	[−1.975; 0.704]	0.353
Age → Quality of Care Delivered	−1.694	0.023	[−0.137; −0.045]	<0.001***
Fulltime employment → Quality of Care Delivered	−0.791	0.394	[−1.827; −0.284]	0.007**
Temporary employment → Quality of Care Delivered	−1.723	1.157	[−6.632; −2.095]	<0.001***
Emotional Exhaustion → Quality of Care Delivered	−0.837	0.040	[−0.535; −0.378]	<0.001***
(Conditional) indirect effects				
Techno-overload → Emotional exhaustion → Quality of Care Delivered	−0.052	0.017	[−0.086; −0.019]	0.002**
Techno-invasion → Emotional exhaustion → Quality of Care Delivered	−0.075	0.022	[−0.118; −0.032]	<0.001***
Techno-complexity → Emotional exhaustion → Quality of Care Delivered	−0.029	0.016	[−0.061; 0.002]	0.070

*$p < 0.05$, ** $p < 0.01$, *** $p < 0.0001$.

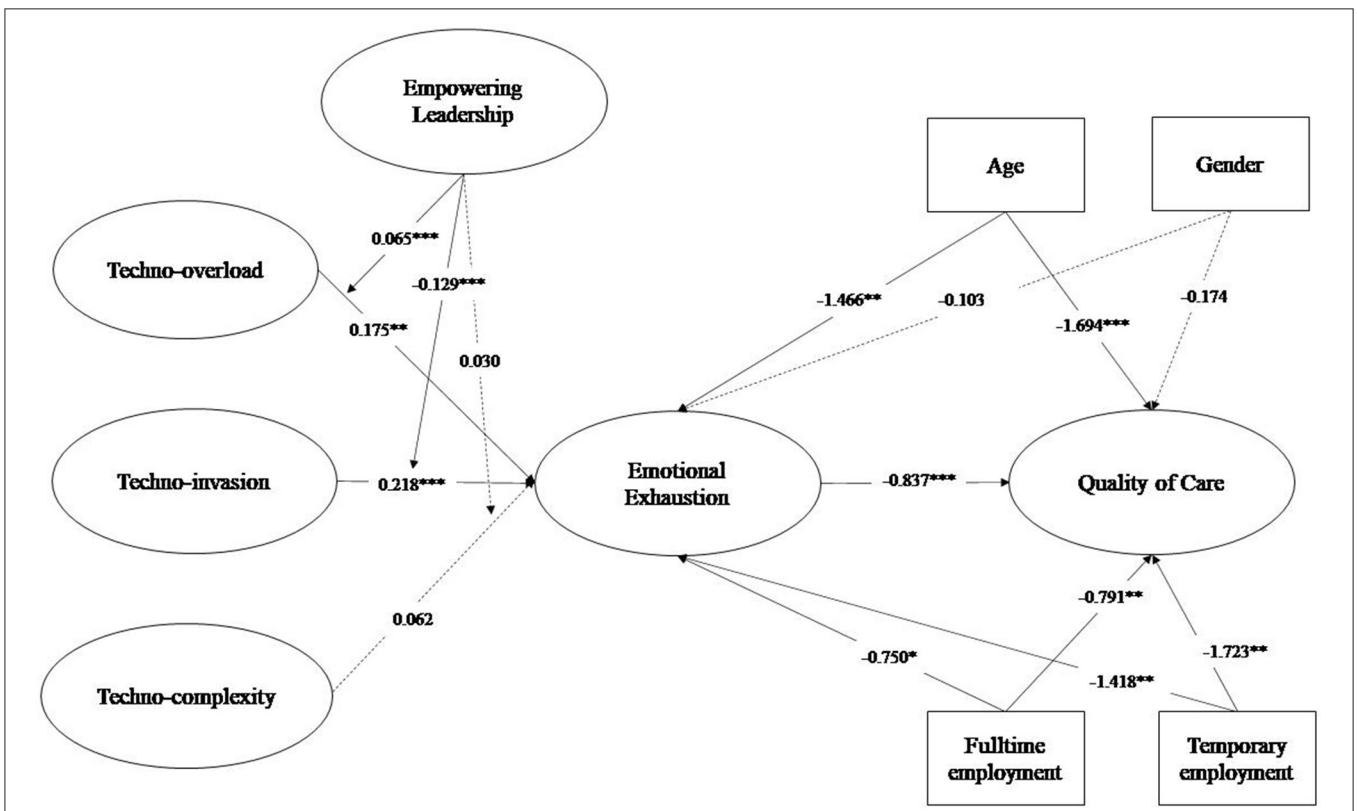

FIGURE 1 | Path model.

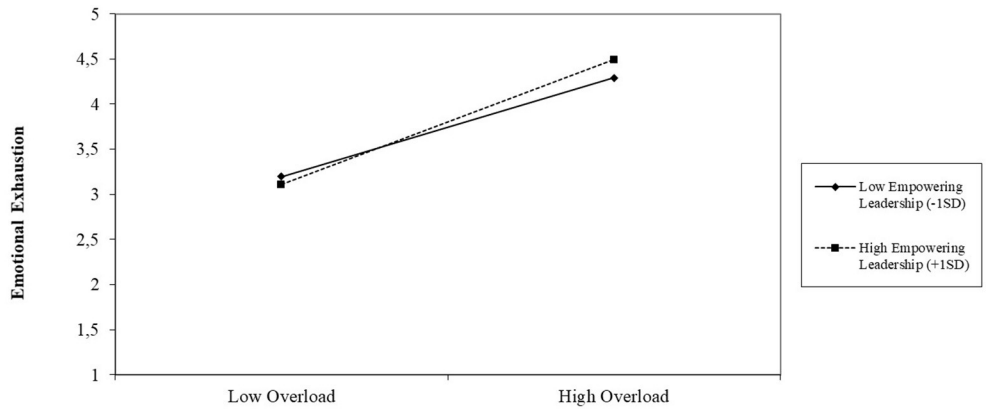

FIGURE 2 | Interaction plot for the relation between techno-invasion and emotional exhaustion under high (+1SD) and low (−1SD) empowering leadership.

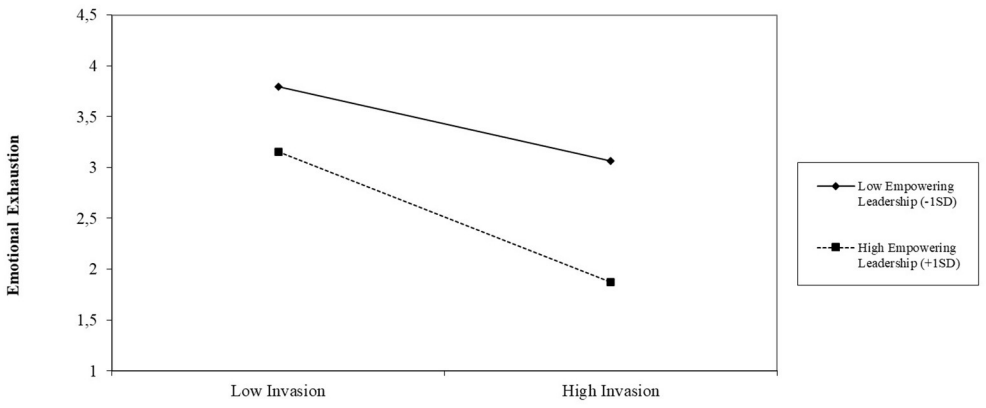

FIGURE 3 | Interaction plot for the relation between techno-complexity and emotional exhaustion under high (+1SD) and low (−1SD) empowering leadership.

In addition, we investigate how these relations were affected by empowering leadership. In line with our hypotheses, our results revealed that two techno-stressors, techno-overload and techno-invasion, stimulate emotional exhaustion among child workers, ultimately reducing the quality of care delivered. However, for techno-complexity, such a relation could not be established. In addition, empowering leadership mitigated the relation between techno-invasion and emotional exhaustion, but modestly strengthened the relation between techno-complexity and emotional exhaustion.

Theoretical Implications

We make three theoretical contributions. First, this study is an answer to the call of Tarafdar et al. (2015) for more contextual technostress research. By showing that childcare workers are affected by technostress due to the emergent digital transformation of childcare (Yost and Fan, 2014), our study demonstrated that technostress also impacts individual job outcomes beyond the "usual suspects" in high-tech and/or business environments. In care professions, like childcare, ICT has been introduced more sudden compared to, for example, office jobs and blue-collar jobs, where such transformations have occurred more gradually (Califf et al., 2015; Fagerström et al., 2017). Another contribution to the contextualization of technostress is the empirical link with quality of care delivered. While indirect, this link highlights that technostress not only has an impact on general work attitudes, but also affects more complex and context-specific outcomes, like quality of care delivered (Humphries et al., 2014; Alves and Guirardello, 2016). Following Califf and Brooks (2020), context can also help to explain why we found no significant relationship for techno-complexity. In a childcare context, the extent to which childcare workers deal with complex ICT might be more limited as compared to other sectors. The lower mean for techno-complexity compared to the other two stressors seems to confirm that image.

A second contribution of this study is to COR theory by furthering and extending past efforts to integrate this theory, with

its origins in the psychological stress literature, with technostress literature (Harris et al., 2015; Goetz and Boehm, 2020). In line with COR theory's idea that technostress imposes a treat to employees' resources at work, we observed that specific techno-stressors depleted childcare workers' job resources, resulting in emotional exhaustion and limiting the efforts childcare workers are able to invest in delivering high-quality care. Furthermore, the discovery of a full mediation also strengthens the idea of a "loss cycle," central to COR theory. In other words, childcare workers, as committed professionals, do not immediately stop investing in quality of care delivered, but only do so when experiencing emotional exhaustion further depletes their resources, prompting them to save and prioritize their remaining resources. This interpretation is consistent with and extends research demonstrating a mediation of emotional exhaustion between stress and job performance (e.g., Karatepe and Uludag, 2008). It is also in line with empirical studies linking techno-stressors to emotional exhaustion (Brown et al., 2014; Srivastava et al., 2015; Gaudioso et al., 2017) and emotional exhaustion to job performance (Wright and Cropanzano, 1998).

Finally, by examining the role of empowering leadership, this study contributes to the emergent line of research on leadership in the contemporary ICT-infused workplace (Cortellazzo et al., 2019; Bartsch et al., 2020; Iannotta et al., 2020). Indeed, our analyses demonstrate that an empowering leadership style, which encourages autonomy and self-management, can stimulate employees to reduce technostress by engaging in problem solving, making shared decisions and setting boundaries for themselves, hereby replenishing their resource base consistent with the logic of COR theory. In this sense our empirical observations fit calls to integrate COR theory with leadership (Hobfoll et al., 2018; Kim and Beehr, 2021) and resonates with prior empirical studies on technostress(ors) and leadership (e.g., Harris et al., 2015; Windeler et al., 2017; Turel and Gaudioso, 2018). On a more critical note, empowering leadership reduced but did not reverse the effect of techno-invasion on quality of care delivered, mediated by emotional exhaustion. This is in line with the so-called "primacy of loss-hypothesis," suggesting that employees are more susceptible to stressors than to resources (Hobfoll, 2001). Also, one unexpected finding in our study was that empowering leadership strengthened, rather than reduced the effect of techno-overload on quality of care delivered, mediated by emotional exhaustion. This is in line with Kim et al. (2018), who argued that overwhelmed employees may prefer fewer engaging behaviors by their supervisors. In addition, empowering leaders' emphasis on employee autonomy and responsibility might also create an additional burden and add to existing stressors. Indeed, Sharma and Kirkman (2015) have posited that the combination of workplace stressors and an empowering leadership style might overwhelm employees, thereby weakening the typically positive effects of empowering leadership on employee outcomes. Moreover, higher levels of stress or pressure related to such additional responsibilities might also reduce the empowering initiatives of the leader. Since only a few studies have examined the potential negative effects of empowering leadership (Cheong et al., 2016), future research could further delve into the potential drawbacks such leaders have for technology-related attitudes and behaviors.

Limitations

Despite the study's strengths, we also wish to point a couple of limitations. First, the cross-sectional nature of the study implies that causal relationships between the variables could not be demonstrated. More importantly, technostress and its coping by employees are suggested to be more dynamic and temporal in nature than reflected in cross-sectional studies (Nimrod, 2018). To better understand fluctuations in technostress and coping among employees, future research could draw on techniques like the experience sampling method (ESM) in which participants react to repeated assessments at different points in time. A recent example is Benlian (2020), but aside from this study, it seems there are limited ESM approaches to technostress. A second limitation is that this that we employed perceptual data from a single source, which might be prone to CMB (George and Pandey, 2017). Nevertheless, the use of single-source perceptual data is warranted when assessing employees' feelings and attitudes, which strongly rely on people's perceptions. Furthermore, the presence of an interaction effect significantly the probability of CMB (Siemsen et al., 2010) and a single factor test showed that CMB presented no major concern to the data and model (Kline, 2011). Third, in this research the focus was on linear relationships. However, recent research also hints at the existence of techno "eustress" (Tarafdar et al., 2019) and non-linear relations of technostress (Srivastava et al., 2015). Finally, there might be limits to the generalizations of the results. While our sample resembled the population of Dutch childcare workers in terms of age and gender (FCB, 2018), our sample might still lack representation on other, non-measured criteria that also affect technostress experiences (e.g., migratory and socio-economic background). Furthermore, our focus on Dutch childcare workers might limit the generalization to countries where the introduction of ICT in childcare and other care professions has been more modest.

Future Research

Next to addressing the above limitations and continuing the contextualization of technostress within care professions (Califf et al., 2015; Fagerström et al., 2017), future research could address a couple of additional issues. First, scholars suggest that apart from empowering and participative leadership approaches also networked, open and agile leadership present promising leadership approaches through which leaders could replenish ICT-relevant employee resources (Petry, 2018). Second, future research endeavors could investigate which individual and contextual factors foster and/or constrain leaders as technostress buffers. On the one hand, past research that there are significant individual discrepancies in (techno)stress perceptions, associated with differences in age (Nimrod, 2018; Estrada-Muñoz et al., 2020), psychological and personality traits (Lee et al., 2014; Srivastava et al., 2015), as well as behavioral archetypes (González-López et al., 2021) and boundary preferences (Gadeyne et al., 2018; Bauwens et al., 2020), which could determine the effectiveness of leaders as

resource replenishers for technostress. Therefore, we suggest future research to account for these variables in their design. On the other hand, leaders' supporting role could also be hindered or fast-tracked by organizational climates (Turel and Gaudioso, 2018) or the presence of other leaders within the organizational hierarchy (Batistič et al., 2017). For example, in larger organizations, decisions concerning technology are often taken not by the direct supervisor, but at higher leadership levels. Consequentially, the leader behaviors supervisors undertake to address technological challenges might also be contingent or shaped by the leader behaviors of those in the higher echelons of the organization. Beyond the scope of leaders, studies could also adopt a different range of techno-stressors. For example, Fischer et al. (2021) very recently developed a scale which distinguishes between 15 ICT-related stressors. Conversely, Hu et al. (2021) a little while ago challenged our thinking about techno-stressors altogether by suggesting to "integrate the research on ICT and employee health and well-being to 'clean up' ICT terminologies and measures" (Hu et al., 2021, p. 22). This suggests that conceptual development in technostress literature is still ongoing and that as this literature evolves, so will our understanding of technostress and its link with leaders and employee outcomes. In other words: brace yourself for exciting times ahead!

Practical Implications

This study has a number of implications, in particular for childcare and other care organizations. Since childcare workers constitute an employee group whose work-related health is continuously at risk (Decker et al., 2002; Løvgren, 2016; Koch et al., 2017) and the use of ICT in the sector is likely to continue its accelerated pace over the next few years, it is important that childcare organizations are aware of this risk and acknowledge the potential implications of ICT. To mitigate technostress, COR theory presents a useful tool to organizations, arguing that interventions should strengthen employee's resource base (Hobfoll and Freedy, 2017). In this regard, our findings suggest such interventions could take the form of leadership interventions, geared at non-directive leader behaviors that strive to foster employees' autonomy, participative decision making, problem-solving behavior (Arnold et al., 2000; Ahearne et al., 2005; Audenaert and Decramer, 2016). Such leader behaviors could strengthen employees' resource base, stimulating employees to broaden their scope of potential solutions for given problems by exploring opportunities and alternatives, ultimately making them more resilient to technostress and preserving their well-being and care quality. However, leaders and organizations also have to remain vigilant, as in certain situations such leader behaviors could also overburden employees.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Review Board (ERB), School of Social and Behavioral Sciences, Tilburg University (no. EC-2019.76). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

RB: conceptualization, data collection, formal analysis, writing—original draft, and project administration. MD: conceptualization, data collection, formal analysis, and writing—original draft. JV and MC: writing—original draft, review, and editing. All authors contributed to the article and approved the submitted version.

FUNDING

This work was supported by the FP7 People: Marie-Curie Actions (grant number 896698).

ACKNOWLEDGMENTS

The authors wish to thank M. Boutchich, S. Purisiol, I. Uitdenbogaart, L. Langen, B. Vanderweyden, J. van Bilsen, C. van Hartingsveldt, N. Primananda, I. Snoeijs, and E. Vermare for their support in the data collection. Parts of the content of this publication have previously appeared online as part of the master thesis of the MD (Denissen, 2020).

REFERENCES

Ahearne, M., Mathieu, J., and Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *J. Appl. Psychol.* 90, 945–955. doi: 10.1037/0021-9010.90.5.945

Aiken, L. H., Clarke, S. P., and Sloane, D. M. (2002), Hospital staffing, organization, and quality of care: cross-national findings. *Int. J. Qual. Health Care* 14, 5–14. doi: 10.1093/intqhc/14.1.5

Alves, D. F. S., and Guirardello, E. B. (2016). Safety climate, emotional exhaustion and job satisfaction among Brazilian paediatric professional nurses. *Int. Nurs. Rev.* 63, 328–335. doi: 10.1111/inr.12276

Arnold, J. A., Arad, S., Rhoades, J. A., and Drasgow, F. (2000). The empowering leadership questionnaire: the construction and validation of a new scale for measuring leader behaviors. *J. Organ. Behav.* 21, 249–269. doi: 10.1002/(SICI)1099-1379(200005)21:3<249::AID-JOB10>3.0.CO;2-#

Audenaert, M., and Decramer, A. (2016). When empowering leadership fosters creative performance: the role of problem-solving demands and creative personality. *J. Manage. Organ.* 24, 4–18. doi: 10.1017/jmo.2016.20

Audenaert, M., George, B., Bauwens, R., Decuypere, A., Descamps, A.-M., Muylaert, J., et al. (2020). Empowering leadership, social support, and job crafting in public organizations: a multilevel study. *Public Pers. Manage.* 49, 367–392. doi: 10.1177/0091026019873681

Ayyagari, R., Grover, V., and Purvis, R. (2011). Technostress: Technological Antecedents and Implications. *MIS Q.* 35, 831–858. doi: 10.2307/41409963

Bartsch, S., Weber, E., Büttgen, M., and Huber, A. (2020). Leadership matters in crisis-induced digital transformation: how to lead service employees effectively during the COVID-19 pandemic. *J. Serv. Manage.* 32, 71–85. doi: 10.1108/JOSM-05-2020-0160

Batistič, S., Cerne, M., and Vogel, B. (2017). Just how multi-level is leadership research? A document co-citation analysis 1980-2013 on leadership constructs and outcomes. *Leadership Q.* 28, 86–103. doi: 10.1016/j.leaqua.2016.10.007

Bauwens, R., Batistič, S., Kilroy, S., and Nijs, S. (2021). New kids on the block? A bibliometric analysis of emerging COVID-19-trends in leadership research. *J. Leadership Organ. Stud.* doi: 10.1177/1548051821997406. [Epub ahead of print]

Bauwens, R., and Meyfroodt, K. (2021). Debate: Towards a more comprehensive understanding of ritualized bureaucracy in digitalized public organizations. *Public Money Manage.* 41, 281–282. doi: 10.1080/09540962.2021.1884349

Bauwens, R., Muylaert, J., Clarysse, E., Audenaert, M., and Decramer, A. (2020). Teachers' acceptance and use of digital learning environments after hours: implications for work-life balance and the role of integration preference. *Comput. Hum. Behav.* 112:106479. doi: 10.1016/j.chb.2020.106479

Benlian, A. (2020). A daily field investigation of technology-driven spillovers from work to home. *MIS Q.* 44, 1259–1300. doi: 10.25300/MISQ/2020/14911/

Bradley, M., and Chahar, P. (2020). Burnout of healthcare providers during COVID-19. *Cleveland Clin. J. Med.* doi: 10.3949/ccjm.87a.ccc051

Brod, C. (1982). Managing technostress: optimizing the use of computer technology. *Pers. J.* 61, 753–757.

Brooks, S., and Califf, C. (2017). Social media-induced technostress: its impact on the job performance of it professionals and the moderating role of job characteristics. *Comput. Netw.* 114, 143–153. doi: 10.1016/j.comnet.2016.08.020

Brown, R., Duck, J., and Jimmieson, N. (2014). E-mail in the workplace: the role of stress appraisals and normative response pressure in the relationship between e-mail stressors and employee strain. *Int. J. Stress Manage.* 21, 325–347. doi: 10.1037/a0037464

Califf, C., Sarker, S., Sarker, S., and Fitzgerald, C. (2015). "The bright and dark sides of technostress: an empirical study of healthcare workers" in *Proceedings of ICIS 2015 AIS (Chair)* (Fort Worth, TX).

Califf, C. B., and Brooks, S. (2020). An empirical study of techno-stressors, literacy facilitation, burnout, and turnover intention as experienced by K-12 teachers. *Comput. Educ.* 157, 103971. doi: 10.1016/j.compedu.2020.103971

CBS (2020). *Monitor Arbeid, Zorg en Kinderopvang 2019 [Monitor Labor, Care and Childcare 2019]*. Retrieved from: https://www.cbs.nl/-/media/_excel/2020/18/monitor-arbeid-zorg-kinderopvang-2019.xlsx

Cheong, M., Spain, S. M., Yammarino, F. J., and Yun, S. (2016). Two faces of empowering leadership: enabling and burdening. *Leadership Q.* 27, 602–616. doi: 10.1016/j.leaqua.2016.01.006

Cheong, M., Yammarino, F. J., Dionne, S. D., Spain, S. M., and Tsai, C.-Y. (2019). A review of the effectiveness of empowering leadership. *Leadership Q.* 30, 34–58. doi: 10.1016/j.leaqua.2018.08.005

Cortellazzo, L., Bruni, E., and Zampieri, R. (2019). The role of leadership in a digitalized world: a review. *Front. Psychol.* 10:1938. doi: 10.3389/fpsyg.2019.01938

Coun, M., Peters, P., Blomme, R. J., and Schaveling, J. (2021). To empower or not to empower, that's the question. Using an empowerment process approach to explain employees' workplace proactivity. *Int. J. Hum. Resour. Manage.* doi: 10.1080/09585192.2021.1879204. [Epub ahead of print]

Decker, J. T., Bailey, T. L., and Westergaard, N. (2002). Burnout among childcare workers. *Resident. Treat. Child. Youth* 19, 61–77. doi: 10.1300/J007v19n04_04

Denissen, M. (2020). *Technostress, emotional exhaustion and quality of care in childcare organizations* (Master's thesis). Tilburg University, Tilburg.

Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., and Hu, J. (2014). Leadership theory and research in the new millennium: current theoretical trends and changing perspectives. *Leadership Q.* 25, 36–62. doi: 10.1016/j.leaqua.2013.11.005

Estrada-Muñoz, C., Castillo, D., Vega-Muñoz, A., and Boada-Grau, J. (2020). Teacher technostress in the Chilean School system. *Int. J. Environ. Res. Public Health* 17:5280. doi: 10.3390/ijerph17155280

Fagerström, C., Tuvesson, H., Axelsson, L., and Nilsson, L. (2017). The role of ICT in nursing practice: an integrative literature review of the Swedish context. *Scand. J. Caring Sci.* 31, 434–448. doi: 10.1111/scs.12370

FCB (2018). *Factsheet Technologische Ontwikkelingen [Factsheet Technological Developments]*. Retrieved from: https://www.kinderopvang-werkt.nl/sites/fcb_kinderopvang/files/2020-11/factsheet_technologie_wge_2018_ko.pdf

Feng, Q., Song, Q., Zhang, L., Zheng, S., and Pan, J. (2020). Integration of moderation and mediation in a latent variable framework: a comparison of estimation approaches for the second-stage moderated mediation model. *Front. Psychol.* 11:2167. doi: 10.3389/fpsyg.2020.02167

Fischer, T., Reuter, M., and Riedl, R. (2021). The digital stressors scale: development and validation of a new survey instrument to measure digital stress perceptions in the workplace context. *Front. Psychol.* 12:646. doi: 10.3389/fpsyg.2021.607598

Gadeyne, N., Verbruggen, M., Delanoeije, J., and De Cooman, R. (2018). All wired, all tired? Work-related ICT-use outside work hours and work-to-home conflict: the role of integration preference, integration norms and work demands. *J. Voc. Behav.* 107, 86–99. doi: 10.1016/j.jvb.2018.03.008

Gardner, W. L., Lowe, K. B., Meuser, J. D., Noghani, F., Gullifor, D. P., and Cogliser, C. C. (2020). The leadership trilogy: a review of the third decade of the leadership quarterly. *Leadership Q.* 31:101379. doi: 10.1016/j.leaqua.2019.101379

Gaudioso, F., Turel, O., and Galimberti, C. (2017). The mediating roles of strain facets and coping strategies in translating techno-stressors into adverse job outcomes. *Comput. Hum. Behav.* 69, 189–196. doi: 10.1016/j.chb.2016.12.041

George, B., and Pandey, S. K. (2017). We know the Yin-but where is the Yang? Toward a balanced approach on common source bias in public administration scholarship. *Rev. Public Pers. Admin.* 37, 245–270. doi: 10.1177/0734371X17698189

Ghislieri, C., Emanuel, F., Molino, M., Cortese, C. G., and Colombo, L. (2017). New technologies smart, or harm work-family boundaries management? Gender differences in conflict and enrichment using the JD-R theory. *Front. Psychol.* 8:1070. doi: 10.3389/fpsyg.2017.01070

Goetz, T. M., and Boehm, S. A. (2020). Am I outdated? The role of strengths use support and friendship opportunities for coping with technological insecurity. *Comput. Hum. Behav.* 107:106265. doi: 10.1016/j.chb.2020.106265

González-López, Ó. R., Buenadicha-Mateos, M., and Sánchez-Hernández, M. I. (2021). Overwhelmed by technostress? Sensitive archetypes and effects in times of forced digitalization. *Int. J. Environ. Res. Public Health* 18:4216. doi: 10.3390/ijerph18084216

Harris, K. J., Harris, R. B., Carlson, J. R., and Carlson, D. S. (2015). Resource loss from technology overload and its impact on work-family conflict: can leaders help? *Comput. Hum. Behav.* 50, 411–417. doi: 10.1016/j.chb.2015.04.023

Hill, N. S., and Bartol, K. M. (2016). Empowering leadership and effective collaboration in geographically dispersed teams. *Pers. Psychol.* 69, 159–198. doi: 10.1111/peps.12108

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Appl. Psychol.* 50, 337–421. doi: 10.1111/1464-0597.00062

Hobfoll, S. E., and Freedy, J. (2017). "Conservation of resources: a general stress theory applied to burnout," in *Professional Burnout*, eds W. Schaufeli, C. Maslach, and T. Marek (London: Routledge), 115–129. doi: 10.4324/9781315227979-9

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., and Westman, M. (2018). Conservation of resources in the organizational context: the reality of resources and their consequences. *Annu. Rev. Organ. Psychol. Organ. Behav.* 5, 103–128. doi: 10.1146/annurev-orgpsych-032117-104640

Hu, X., Park, Y. A., Day, A., and Barber, L. K. (2021). Time to disentangle the information and communication technology (ICT) constructs: developing a taxonomy around ICT use for occupational health research. *Occupat. Health Sci.* doi: 10.1007/s41542-021-00085-6

Humphries, N., Morgan, K., Catherine Conry, M., McGowan, Y., Montgomery, A., and McGee, H. (2014). Quality of care and health professional burnout: Narrative literature review. *Int. J. Health Care Qual. Assur.* 27, 293–307. doi: 10.1108/IJHCQA-08-2012-0087

Iannotta, M., Meret, C., and Marchetti, G. (2020). Defining leadership in smart working contexts: a concept synthesis. *Front. Psychol.* 11:2448. doi: 10.3389/fpsyg.2020.556933

Jorgensen, T. D., Pornprasertmanit, S., Schoemann, A., Rosseel, Y., Miller, P., Quick, C., et al. (2018). *Package 'semTools'*. Available online at: https://cran.r-project.org/web/packages/semTools/semTools.pdf

Karatepe, O. M., and Uludag, O. (2008). Role stress, burnout and their effects on frontline hotel employees' job performance: evidence from Northern Cyprus. *Int. J. Tourism Res.* 10, 111–126. doi: 10.1002/jtr.645

Kilroy, S., Bosak, J., Flood, P. C., and Peccei, R. (2020). Time to recover: the moderating role of psychological detachment in the link between perceptions of high-involvement work practices and burnout. *J. Bus. Res.* 108, 52–61. doi: 10.1016/j.jbusres.2019.10.012

Kim, M., and Beehr, T. A. (2020). The long reach of the leader: can empowering leadership at work result in enriched home lives? *J. Occupat. Health Psychol.* 25, 203–213. doi: 10.1037/ocp0000177

Kim, M., and Beehr, T. A. (2021). The power of empowering leadership: Allowing and encouraging followers to take charge of their own jobs. *The International Journal of Human Resource Management*. 39(9), 1865–1898. doi: 10.1080/09585192.2019.1657166

Kim, M., Beehr, T. A., and Prewett, M. S. (2018). Employee responses to empowering leadership: a meta-analysis. *J. Leadership Organ. Stud.* 25, 257–276. doi: 10.1177/1548051817750538

Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling, 3rd Edn*. New York, NY: Guilford Press.

Koch, P., Kersten, J. F., Stranzinger, J., and Nienhaus, A. (2017). The effect of effort-reward imbalance on the health of childcare workers in Hamburg: a longitudinal study. *J. Occupat. Med. Toxicol.* 12, 1–9. doi: 10.1186/s12995-017-0163-8

Kroon, B., van de Voorde, K., and van Veldhoven, M. (2009). Cross-level effects of high-performance work practices on burnout. *Pers. Rev.* 38, 509–525. doi: 10.1108/00483480910978027

La Torre, G., Esposito, A., Sciarra, I., and Chiappetta, M. (2019). Definition, symptoms and risk of techno-stress: a systematic review. *Int. Arch. Occupat. Environ. Health* 92, 13–35. doi: 10.1007/s00420-018-1352-1

Lee, Y.-K., Chang, C.-T., Lin, Y., and Cheng, Z.-H. (2014). The dark side of smartphone usage: psychological traits, compulsive behavior and technostress. *Comput. Hum. Behav.* 31, 373–383. doi: 10.1016/j.chb.2013.10.047

Liu, L., Yang, C., and Huang, D. (2021). How do empowered leaders influence the job satisfaction of kindergarten teachers in China? Evidence from mediation analysis. *Front. Psychol.* 11:3694. doi: 10.3389/fpsyg.2020.586943

Løvgren, M. (2016). Emotional exhaustion in day-care workers. *Eur. Early Childhood Educ. Res. J.* 24, 157–167. doi: 10.1080/1350293X.2015.1120525

Lutz, S., Schneider, F. M., and Vorderer, P. (2020). On the downside of mobile communication: an experimental study about the influence of setting-inconsistent pressure on employees' emotional well-being. *Comput. Hum. Behav.* 105:106216. doi: 10.1016/j.chb.2019.106216

Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., and Schwab, R. L. (1986), *Maslach Burnout Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Schaufeli, W. B., and Leiter, M. P. (2001). Job burnout. *Annu. Rev. Psychol.* 52, 397–422. doi: 10.1146/annurev.psych.52.1.397

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., et al. (2020). Wellbeing costs of technology use during covid-19 remote working: an investigation using the Italian translation of the technostress creators scale. *Sustainability* 12:5911. doi: 10.3390/su12155911

Nimrod, G. (2018). Technostress: measuring a new threat to well-being in later life. *Aging Mental Health* 22, 1086–1093. doi: 10.1080/13607863.2017.1334037

Parker, S. K., and Grote, G. (2020). Automation, algorithms, and beyond: why work design matters more than ever in a digital world. *Appl. Psychol.* doi: 10.1111/apps.12241

Pearce, C. L., and Sims, H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: an examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dyn. Theory Res. Pract.* 6, 172–197. doi: 10.1037/1089-2699.6.2.172

Penado Abilleira, M., Rodicio-García, M.-L., Ríos-de Deus, M. P., and Mosquera-González, M. J. (2021). Technostress in Spanish University teachers during the COVID-19 pandemic. *Front. Psychol.* 12:617650. doi: 10.3389/fpsyg.2021.617650

Petry, T. (2018), "Digital leadership," in *Knowledge Management in Digital Change*, eds K. North, R Maier, and O. Haas (Cham: Springer), 209–218. doi: 10.1007/978-3-319-73546-7_12

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., and Tu, Q. (2008). The consequences of technostress for end users in organizations: conceptual development and empirical validation. *Inform. Syst. Res.* 19, 417–433. doi: 10.1287/isre.1070.0165

Rosseel, Y. (2012). lavaan: an R package for structural equation modeling. *J. Stat. Softw.* 48, 1–36. doi: 10.18637/jss.v048.i02

Salanova, M., Llorens, S., and Cifre, E. (2013). The dark side of technologies: technostress among users of information and communication technologies. *Int. J. Psychol.* 48, 422–436. doi: 10.1080/00207594.2012.680460

Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. *Career Dev. Int.* 20, 446–463. doi: 10.1108/CDI-02-2015-0025

Schaufeli, W. B., Leiter, M. P., Maslach, C., and Jackson, S. E. (1996). *Maslach Burnout Inventory - General Survey (MBI-GS)*. Palo Alto, CA: Mind Garden.

Schlachter, S., McDowall, A., Cropley, M., and Inceoglu, I. (2018). Voluntary work-related technology use during non-work time: a narrative synthesis of empirical research and research agenda. *Int. J. Manage. Rev.* 20, 825–846. doi: 10.1111/ijmr.12165

Sharma, P. N., and Kirkman, B. L. (2015). Leveraging leaders. *Group Organ. Manage.* 40, 193–237. doi: 10.1177/1059601115574906

Shu, Q., Tu, Q., and Wang, K. (2011). The impact of computer self-efficacy and technology dependence on computer-related technostress: a social cognitive theory perspective. *Int. J. Hum. Comput. Interact.* 27, 923–939. doi: 10.1080/10447318.2011.555313

Siemsen, E., Roth, A., and Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organ. Res. Methods* 13, 456–476. doi: 10.1177/1094428109351241

Spagnoli, P., Molino, M., Molinaro, D., Giancaspro, M. L., Manuti, A., and Ghislieri, C. (2020). Workaholism and technostress during the COVID-19 emergency: the crucial role of the leaders on remote working. *Front. Psychol.* 11:3714. doi: 10.3389/fpsyg.2020.620310

Srivastava, S. C., Chandra, S., and Shirish, A. (2015). Technostress creators and job outcomes: theorising the moderating influence of personality traits. *Inform. Syst. J.* 25, 355–401. doi: 10.1111/isj.12067

Tarafdar, M., Cooper, C. L., and Stich, J. F. (2019). The technostress trifecta - techno eustress, techno distress and design: theoretical directions and an agenda for research. *Inform. Syst. J.* 29, 6–42. doi: 10.1111/isj.12169

Tarafdar, M., Pullins, E. B., and Ragu-Nathan, T. S. (2015). Technostress: negative effect on performance and possible mitigations. *Inform. Syst. J.* 25, 103–132. doi: 10.1111/isj.12042

Tarafdar, M., Tu, Q., and Ragu-Nathan, T. S. (2010). Impact of technostress on end-user satisfaction and performance. *J. Manage. Inform. Syst.* 27, 303–334. doi: 10.2753/MIS0742-1222270311

Turel, O., and Gaudioso, F. (2018). Technostressors, distress and strain: the roles of leadership and competitive climates. *Cogn. Technol. Work* 20, 309–324. doi: 10.1007/s10111-018-0461-7

Wang, W., Sakata, K., Komiya, A., and Li, Y. (2020). What makes employees' work so stressful? Effects of vertical leadership and horizontal management on employees' stress. *Front. Psychol.* 11:340. doi: 10.3389/fpsyg.2020.00340

Wang, X., Tan, S. C., and Li, L. (2020). Technostress in University students' technology-enhanced learning: An investigation from multidimensional person-environment misfit. *Comput. Hum. Behav.* 105:106208. doi: 10.1016/j.chb.2019.106208

Weil, M. M., and Rosen, L. D. (1997). *Technostress: Coping with Technology@ Work@ Home@ Play*. New York, NY: Wiley.

Windeler, J. B., Maruping, L., and Venkatesh, V. (2017). Technical systems development risk factors: the role of empowering leadership in lowering developers' stress. *Inform. Syst. Res.* 28, 775–796. doi: 10.1287/isre.2017.0716

Wright, T. A., and Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *J. Appl. Psychol.* 83, 486–493. doi: 10.1037/0021-9010.83.3.486

Yost, H., and Fan, S. (2014). Social media technologies for collaboration and communication: perceptions of childcare professionals and families. *Austral. J. Early Childhood* 39, 36–41. doi: 10.1177/183693911403900206

Zhang, Y., LePine, J. A., Buckman, B. R., and Wei, F. (2014). It's not fair … or is it? The role of justice and leadership in explaining work stressor-job performance relationships. *Acad. Manage. J.* 57, 675–697. doi: 10.5465/amj.2011.1110

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 06 August 2021
doi: 10.3389/fpsyg.2021.682459

Work–Life Balance of the Employed Population During the Emergency Situation of COVID-19 in Latvia

Jelena Lonska[1], Iveta Mietule[1], Lienite Litavniece[1], Iluta Arbidane[1], Ivars Vanadzins[2], Linda Matisane[2] and Linda Paegle[2]*

[1] Business and Society Process Research Center, Rezekne Academy of Technologies, Rezekne, Latvia, [2] Institute of Occupational Safety and Environmental Health, Riga Stradins University, Riga, Latvia

All the employees face the challenge of finding the right work–life balance. The ability of employees to deal with the successful combining of work, family responsibilities, and personal life is crucial for both employers and family members of employees. During the COVID-19 emergency situation, many people around the world were forced to work remotely. Initially, there were observed some certain expectations about the possibility of working from home as a positive factor that will promote work–life balance. However, over time, negative tendencies were also revealed, as employees were only one call or message away from the employer, and uncertainty and leisure time with family often created more stress. As many organizations and individuals were not ready for this sudden change, many mistakes were made, which further raised the issue of work–life balance. The aim of the research was to evaluate the flexibility of reconciling work and private life of Latvian employees in various socio-demographic groups during the COVID-19 emergency situation in spring 2020, to investigate how family life influenced employees' ability to perform work duties, to find out if employees had any additional housework responsibilities and how their workload changed concerning housework amount during the COVID-19 emergency situation. The research is based on the data obtained in the survey of the Latvian employed population, which was conducted within the framework of the Latvian National Research Programme Project "CoLife" in the second half of 2020. As a result, the hypothesis of the research that all groups of employees experienced work–life balance difficulties during the COVID-19 emergency situation has been partially confirmed, i.e., women in the 18–44 age group and respondents with minor children in the household more likely faced difficulties of work–life balance. The scientific research methods that were used in the research are the monographic method, content analysis, survey, data processing with SPSS to determine the mutual independence of the data from the questionnaires.

Keywords: work–life balance, COVID-19, teleworking, remote working, homework

OPEN ACCESS

Edited by:
Rûta Adamonienė, Mykolas Romeris University, Lithuania

Reviewed by:
Martina Rašticová, Mendel University in Brno, Czechia
Krzysztof Nowacki, Silesian University of Technology, Poland

****Correspondence:***
Jelena Lonska
Jelena.Lonska@rta.lv

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *18 March 2021*
Accepted: *19 July 2021*
Published: *06 August 2021*

Citation:
Lonska J, Mietule I, Litavniece L, Arbidane I, Vanadzins I, Matisane L and Paegle L (2021) Work–Life Balance of the Employed Population During the Emergency Situation of COVID-19 in Latvia. Front. Psychol. 12:682459. doi: 10.3389/fpsyg.2021.682459

INTRODUCTION

All the employees face the challenge of finding the right work–life balance. The ability of employees to deal with successful combining of work, family responsibilities and personal life is crucial for both employers and family members of employees. Work–life balance not only means an even distribution of time between work and private life, but rather flexibility in being able to work in the professional field, while maintaining the time and energy to spend on personal life.

According to scientific and practical research, one of the tools for work–life balance is remote working, but it must be borne in mind that the COVID-19 emergency situation for employees who have minor children changed the everyday life of private life, responsibilities, and timing. Considering that the emergency situation has encouraged the use of remote working, which has the tendency to increase, it is essential to facilitate/ensure work–life balance for employees, regardless of employment type and form of working hours.

The aim of the research is to evaluate the possibilities of flexibility to reconcile work and private life of Latvian employees in various socio-demographic groups during the COVID-19 emergency situation in spring 2020; to study how family life affected employees' ability to perform work duties, to find out whether employees had additional housework responsibilities and how their workload changed performing household responsibilities during the COVID-19 emergency situation. The answers were evaluated by gender and age of the respondents, as well as depending on the presence of minor children in the household.

Within the framework of the research, a hypothesis was put forward—during the COVID-19 emergency, all groups of employees experienced difficulties in balancing work and private life.

The significance of the research becomes particularly important in the COVID-19 emergency situation, which has exactly affected the remotely working population, significantly affecting their work–life balance. When working remotely, employees tend to disregard work schedule, because it is difficult to distinguish between working hours and free time, which can lead to a deterioration of employees' psycho-emotional state and increased tension. In such a situation, it is important for the employers to support the employees—both in the organization of remote working (for example, providing the opportunity to freely plan one's working hours, introduce changes in work schedules that allow combining work and housework responsibilities) and in providing psycho-emotional support, what in general enhances the work–life balance of employees. As a result, employers obtain increased work efficiency and productivity, improved employee's health, higher motivation, and strengthened loyalty of the employee, etc.

The novelty of the research is related to the fact that for the first time in Latvia there was conducted a survey of employed population from different socio-demographic groups with the aim to evaluate the possibilities to reconcile their work and private life in order to reduce the spread of COVID-19 during the period of imposed restrictions.

The scientific research methods that were used in the research are monographic method, content analysis, survey, data processing with SPSS to determine the mutual independence of the data from the questionnaires.

LITERATURE REVIEW

In the EU countries, including Latvia, the balance between employees' work and private life is becoming more and more important. This issue became particularly important during the spread of the COVID-19 consequences. Consequences of continuous remote working and access to the employer, stress caused by long-term use of technologies, burnout syndrome, the need to take care of children, and sick family members while performing work responsibilities, unavailability of opportunities to look for children—all the factors have a significant impact on work–life balance and quality of life.

The separation of work and private life is a challenge that most of the people active in the labor market face. In many cases, this can lead to burnout—a state of physical and mental exhaustion when a person's ability to work is drained. It was found that the negative impact of work on work–life balance is usually concentrated in the early stages of parenting, when employees in the household have pre-school children (Eurofound, 2017).

There are different approaches to the use of the concept "work-private life balance," i.e., equilibrium of work and family life, equilibrium of work and private life, etc. Earlier research often deal with examination of the equilibrium between family and professional life in relation to the concept of work–life balance (Ramakrishnan, 2020a,b). The concepts of "work–life balance" or "work–personal life reconciliation" are widely used to raise awareness of which areas of life need to be combined and reconciled, thereby forming division of work and non-working life, emphasizing that reconciliation is required not only for work and family life, but also religious activities, involvement in community life, education, and other activities (Korpa, 2012).

Work–life balance is formed when a person has the same level of priorities in relation to the requirements of his/her career and the requirements of personal life. The most common reasons for imbalance between the personal life and work life are increased responsibility for work commitments; working longer hours; increased responsibility for housework as well as for employees with children. In turn, a positive work–life balance reduces employee stress, reduces the risk of burnout and creates greater wellbeing. This positively affects not only an employee him/herself but also the employer (Sanfilippo, 2020).

Work–life balance can be viewed much more broadly, considering its positive impact on social and economic sustainability. Improving work–life balance is linked to higher-level goals, including: increasing employment in the labor market, ensuring equal opportunities for the sexes, tackling demographic challenges. Our needs and the needs of our children or dependents change with age. Our necessity for work–life balance is also changing (Parent-Thirion, 2016).

Already at the beginning of this century, remote working was evaluated as an important tool for promoting work–life balance.

Remote working enables a variety of family responsibilities and can be particularly useful for employees with children, as it allows them to breastfeed, take care of a sick child or look after young children who may be on school holidays. Regular remote working offers additional advantages, as it reduces work-related expenses (such as travel costs) and saves time spent on the way to work (Hein, 2005).

During the COVID-19 emergency situation, many people in the world were forced to work from home. Initially, there were observed some certain expectations about the possibility of working from home as a positive factor that will promote work–life balance. However, also negative trends appeared, as employees were only one call or message away from the employer, and it was therefore expected that the employee would work outside working hours and would also be available outside working hours. Uncertainty and spending time with family often caused more stress. As many organizations and individuals were not ready for this sudden change, many mistakes were made, which further raised the issue of work–life balance. At the same time, the COVID-19 emergency situation has provided valuable lessons. The public is offered the opportunity to think about what cooperation means in reality and how it can improve collaboration between companies and employees. Employers are facing new challenges; and it is essential to ensure both the economic growth of companies in the future and to create praxis supporting the work–life balance of employees. Work–life balance, especially for an indefinite time, such as caused by COVID-19, is essential for employee growth, personal happiness and company retention. When employees receive support to find a positive work–life balance, they are usually more motivated to do the job qualitatively (Ramakrishnan, 2020a,b).

Some studies conducted all over the world show that most people have not improved their work–life balance during the emergency situation, even though they were able to spend more time with their families and did have to spend time to get to workplace. For most people, the period of COVID-19 emergency situation seemed more stressful as they spent more time in webinars and meetings. They also lacked "chatting" with colleagues. The division between family time and working time overlapped so much that they found it difficult to cope with. Moreover, the uncertainty about work and the future compounded the problem. While women already did the majority of the unpaid care work in households before the beginning of COVID-19 pandemic, recent studies show that this load has increased dramatically due to the crisis. The negative effects on women and families are likely to last for several more years. What we usually call the "economy" would not be able to function without the (often unrecognized) work ensured by the care economy: providing daily living, cooking, upbringing children, etc. (Power, 2020; Ramakrishnan, 2020a,b). The care economy globally, comprising both paid and unpaid care work, underpins and sustains the market economy. Unpaid work accounts for 16.4 billion hours a day, three-quarters performed by women—as the International Labour Organization reports, this is equivalent to two billion jobs. Paid care work, 11.5% of global employment, encompasses 381 million workers, two-thirds of whom are women (Sadasivam, 2020).

The research carried out by The European Foundation for the Improvement of Living and Working Conditions Agency before the COVID-19 emergency situation show an unequal distribution of paid and unpaid work between men and women in the EU countries. This is especially true for families with pre-school children. It was concluded that long working hours have a negative impact on work–life balance, and both men and women report that long working hours reduce their opportunities to combine work and family responsibilities. The particularly negative influence of work on work–life balance tend to be focused in the life stage of employees when they bring up pre-school children. This period usually coincides with a reduction in working hours for working mothers and an increase for working fathers, while both sexes would prefer to work shorter hours during this period of life (Eurofound, 2017).

Remote working during the COVID-19 pandemic was more complicated than remote working under normal circumstances, as it was compulsory rather than voluntary, often full-time, rather than part-time or casual. In addition, surveys conducted within some studies suggest that there is also a positive experience of working remotely from home (Cartmill, 2020; Gálvez et al., 2020; Uresha, 2020). An approach which facilitates work–life balance of employees and provides for organizing and evaluating remote working according to the results should be supported, rather than focusing on the number of hours or specific work schedules. Defining clear requirements for specific results to be achieved, employees are better prepared to manage their time and tasks, thus effectively balancing their work responsibilities with personal life, including family responsibilities. One of the most significant problems faced by employees working remotely during the pandemic is the conflict between work and private life, as they experience a blurred line between work and private life. Defining the boundaries between work and private life is always a topical issue in the case of remote working, but it is particularly problematic due to the unique circumstances of the pandemic (ILO, 2020).

The crisis during COVID-19 has shattered the notion that paid work and personal life are two completely different areas, and there appeared a myth that employees always can and must be available to the employer to perform their work-related functions (ILO, 2020).

Trends in the labor market already even before the COVID-19 pandemic suggested that employers face difficulties and significant challenges in attracting the workforce required by companies, both in general and at different levels of qualifications and positions. Often employers mentioned flexible working hours and various social guarantees in their job advertisements as benefits that could be of interest to potential employees. How the employees in Latvia evaluated these additional benefits was studied in a Eurobarometer survey on work–life balance. In Latvia, the survey was conducted by the research agency Kantar in the framework of the Flash Eurobarometer 47 from June 26 to 30, 2018, surveying 1,000 Latvians aged 15 and over. In total, the survey was conducted in 28 EU Member States (26,578 respondents). 65% of those Latvians for whom flexible working hours were not available wanted to use the possibility of flexible working hours or adjust the start and end time of work. About

one in five respondents (18%) wanted to take the opportunity to work from home, 1 in 10 (12%)—wanted to take the opportunity to work part-time. The results reveal that the majority or 73% of Latvian employees (self-employed, hired workers, and manual workers) were generally satisfied with their work–life balance, but the average level of overall satisfaction among the EU employees was significantly higher at 79%. Viewing the work–life balance at the Baltic level, the satisfaction levels of Estonian and Lithuanian population were also significantly higher than in Latvia and above the European average level with 80% of Lithuanian and 81% of Estonian population satisfied with their work–life balance (Kantar, 2018).

The results of the study conducted by this agency in August 2020 show that during the COVID-19 restrictions in the spring, for Latvian inhabitants it was comparatively the most difficult to reconcile work and private life as well as taking care of their families. There was a tendency for women with low average family income (up to 300 euro a month) and those with children in the family (especially if more than four) to report relatively more often that it was difficult to balance remote working with taking care of children and parenting. It is likely that this was largely influenced by children's distance learning process and changes in the daily routines, which were mainly taken care of by women in parallel with their job responsibilities regardless of work schedule (onsite or remotely) (Kantar, 2020).

In addition, there should be noted a number of negative features of remote working that can potentially affect work–life balance as well as the psycho-emotional state of employees and consequently work efficiency. The available data suggest that remote working makes it more difficult for workers to comply with EU directives (Directive (EU) 2003/88/EK of the European Parliament and of the Council, 2003; Directive (EU) 2019/1152 of the European Parliament and of the Council, 2019; Directive (EU) 2019/1158 of the European Parliament and of the Council, 2019) and the terms specified in the national regulatory enactments which are related to rest and the maximum weekly working time, especially in connection with unpaid overtime work. During remote working, the boundaries between work and private time become more blurred, making it difficult to distinguish between working time and rest periods (Eurofound, 2020b).

Eurofound research shows that while the use of remote working and flexible working allows workers to better balance working hours and leisure time, it can also have a negative impact on work–life balance, as teleworkers or flexible workers are more likely to work longer hours and overtime, they have fewer rest periods and less predictable and irregular schedules (except for night work). The reasons for this are heavy workload, accessibility outside normal working hours, frequent interruptions, and (to some extent) a degree of autonomy (Eurofound, 2019).

METHODOLOGY

This article is based on the results of a large-scale research conducted within the framework of the Latvian National Research Programme Project—Life with COVID-19: Evaluation of Overcoming the Coronavirus Crisis in Latvia and Recommendations for Societal Resilience (CoLife), one of the goals of which was to evaluate the influence of the COVID-19 restriction period in the spring of 2020 on changes in forms of employment and employees' ability to combine work responsibilities and private life from different aspects (employees' gender, age, region of residence, presence of children under 18 in the household, etc.); identify factors promoting and hindering the balance of private life on the part of both employees and employers. The research also assessed the role of employers in promoting work–life balance for employees, including remote workers, taking into account that during the COVID-19 emergency situation, most employees needed to perform both work and family responsibilities at the same time. In particular, this article reflects only a small part of the results of the research carried out within the project.

In order to obtain the data required for the research, a structured survey of the employed Latvian population was conducted. The questionnaire was coordinated with the Labour Relations and Labour Protection Policy Department of the Ministry of Welfare of the Republic of Latvia. The survey was disseminated via an internet link on publicly available websites, social networks as well as through direct e-mails from September 28, 2020 until October 27, 2020. At the beginning of the survey, filtering questions were applied to recruit only paid workers who were employed during the previous year. The following exclusion criteria were used: working without salary in family businesses, working without salary on family farm, being on maternity leave, being unemployed persons, being only retired persons, being housewives, being only school-children, or students during the survey period.

TABLE 1 | Distribution of the total study sample, taking into account those respondents who answered all the questionnaire questions, *n* (%).

Gender		
Male		204 (20.3%)
Female		802 (79.7%)
Age groups (years)		
18–24		35 (3.5%)
25–34		203 (20.2%)
35–44		298 (29.6%)
45–54		270 (26.8%)
55–63		169 (16.8%)
64+		31 (3.1%)
The presence of children under 18 in the household		
Yes	441 (44.0%)	196 (19.5%)* have children in the age group of 0–6 (preschool), in total 240 children
		490 (48.7%)* have children in the age group 7–18 (school), in total 533 children
No		562 (56.0%)
Worked remotely during the first wave COVID-19 emergency situation		
Yes		486 (48.3%)
No		520 (51.7%)

These may include respondents with children of both age groups in the household.

TABLE 2 | Analysis of respondents' answers to the question "When working remotely, did you feel that family life affects your ability to perform work responsibilities?" (*n* = 522).

Question[a]	Multiple choice answers[b]	Values
When working remotely, did you feel that family life influences your ability to perform work responsibilities?	Yes	1
	No	2

		Unweighted sample of respondents			Weighted sample of respondents		
Variables		**Mean**	**Significance, *p***	**Statistical significance**	**Mean**	**Significance, *p***	**Statistical significance**
Gender	Male	1.45	Sig. (2-tailed) = 0.580	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different	1.43	Sig. (2-tailed) = 0.954	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different
	Female	1.42			1.43		
The presence of children under 18 in the household	Yes	1.22	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different	1.21	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different
	No	1.62			1.61		
Age groups	18–24	1.54	Sig. < 0.001	Sig. ≤ 0.05 Group results are statistically significantly different	1.66	Sig. < 0.001[c]	Sig. ≤ 0.05 Group results are statistically significantly different
	25–34	1.42			1.38		
	35–44	1.29			1.29		
	45–54	1.52			1.55		
	55–63	1.57			1.54		
	64+	1.62			1.53		

[a] *Only respondents who worked remotely during the COVID-19 emergency situation could answer this question.*
[b] *The answer option "Hard to say" was not analyzed.*
[c] *Statistical significance p is observed between the following age groups: p = 0.038—18–24 years and 25–34 years; p = 0.005—18–24 years and 35–44 years; p = 0.019—25–34 years and 45–54 years; p = 0.039—25–34 years and 55–63 years; p < 0.001—35–44 years and 45–54 years; p = 0.001—35–44 years and 55–63 years.*

TABLE 3 | Analysis of respondents' answers to the question "Taking into account your remote working experience during the COVID-19 emergency situation, please evaluate how the balance between your work and private life has changed" (*n* = 512).

Question[a]	Multiple choice answers[b]	Values
Please evaluate how your work–life balance has changed, considering your remote working experience during the COVID-19 emergency situation	Improved	1
	Did not change	2
	Became worse	3

		Unweighted sample of respondents			Weighted sample of respondents		
Variables		**Mean**	**Significance, *p***	**Statistical significance**	**Mean**	**Significance, *p***	**Statistical significance**
Gender	Male	1.93	Sig. (2-tailed) = 0.191	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different	1.95	Sig. (2-tailed) = 0.157	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different
	Female	2.07			2.06		
The presence of children under 18 in the household	Yes	2.13	Sig. (2-tailed) = 0.031	Sig. ≤ 0.05 Group results are statistically significantly different	2.07	Sig. (2-tailed) = 0.239	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different
	No	1.96			1.97		
Age groups	18–24	2.23	Sig. = 0.313	Sig. > 0.05 Group results are not statistically significantly different	2.17	Sig. = 0.493	Sig. > 0.05 Group results are not statistically significantly different
	25–34	1.97			2.01		
	35–44	2.14			2.06		
	45–54	1.94			1.91		
	55–63	2.00			1.98		
	64+	2.15			2.30		

[a] *Only respondents who worked remotely during the COVID-19 emergency situation could answer this question.*
[b] *The answer option "Hard to say" was not analyzed.*

The so-called snowball effect and social network advertising were used as a method of disseminating the survey, adapting the advertisement to maximize the recruitment of the missing groups of respondents. While designing the survey, the survey sample size was calculated, using 5% margin error, 99% confidence intervals, 50% response rate, and 892,100 employed persons in Latvia in the second quarter of 2020 (Central Statistical Bureau of Latvia, 2020), resulting in 663 persons. To increase the probability of finding statistically significant results and taking into account the planned time frame of the survey, the authors decided to make the web-link available one full calendar month or until the moment when there will be 1,000 fully filled answers, whichever will occur first. In this case, the link to the web-survey was locked on the next morning of workday after 1,000 respondents have answered all of the survey questions. In total, 1,823 people took part in the survey, but considering that the survey was relatively long only 1,006 respondents answered all the questions (response rate—55.2%). A detailed description of the sample of respondents who answered all of the questions is available in **Table 1**. However, this study analyzes the responses of all employed respondents who answered the certain survey question, which provides the highest coverage of the number of respondents.

At the beginning of the web-survey, written information on the purpose of the study was provided, therefore, participants by voluntary proceeding to the questions agreed to participate in the survey. The answers provided by the survey respondents are confidential and were analyzed in an aggregated way.

The data of the web-survey were collected and managed using REDCap (Research Electronic Data Capture) tool for electronic data collection and compilation. REDCap is a secure, web-based software platform designed to support data collection for research. The study applied a non-probability sampling method which is one of the limitations of this study. To overcome it at least partly and to obtain data that is representative for the demographic profile of the working population in Latvia, data were weighted by age crossed with gender (in 12 age-gender combinations). Weighting targets included 2020 year third quarter population estimates from the Central Statistical Bureau of Latvia by age groups and gender. Data analysis was performed using quantitative methods. All the survey data were weighted and analyzed with the data processing programme IBM SPSS (version 26) and visualized using MS Excel.

This article includes analysis of the answers of Latvian employed respondents to certain survey questions about their work–life balance during the emergency situation caused by the first wave of the COVID-19 in the spring of 2020 by gender, age group of respondents as well as depending on the presence of minor children in the respondents' households. The SPSS Compare Means—The Independent Samples T-Test Method

TABLE 4 | Analysis of respondents' answers to the question "Is it important for you be able to disconnect from digital devices outside working hours/after completing the assigned work tasks?" (n = 515).

Question[a]	Multiple choice answers[b]	Values
Is it important for you to be able to disconnect from digital devices outside working hours/after completing the assigned work tasks?	Yes	1
	No	2

		Unweighted sample of respondents			Weighted sample of respondents		
Variables		**Mean**	**Significance, *p***	**Statistical significance**	**Mean**	**Significance, *p***	**Statistical significance**
Gender	Male	1.34	Sig. (2-tailed) = 0.065	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different	1.31	Sig. (2-tailed) = 0.106	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different
	Female	1.23			1.23		
The presence of children under 18 in the household	Yes	1.24	Sig. (2-tailed) = 0.833	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different	1.27	Sig. (2-tailed) = 0.899	Sig. (2-tailed) > 0.05 Group results are not statistically significantly different
	No	1.25			1.26		
Age groups	18–24	1.08	Sig. = 0.092	Sig. > 0.05 Group results are not statistically significantly different	1.06	Sig. = 0.169[c]	Sig. > 0.05 Group results are not statistically significantly different
	25–34	1.17			1.23		
	35–44	1.22			1.24		
	45–54	1.33			1.32		
	55–63	1.29			1.31		
	64+	1.31			1.43		

[a] *Only the respondents who worked remotely during the COVID-19 emergency situation could answer this question.*
[b] *The answer option "Hard to say" was not analyzed.*
[c] *Statistical significance p is observed between the following age groups: p = 0.044—18–24 years and 45–54 years; p = 0.050—18–24 years and 55–63 years; p = 0.028—18–24 years and 64+ years.*

was used to analyze respondents' responses depending on their gender and presence of children under 18 in the household, which is used in cases where only two variables (groups) are compared. In turn, the SPSS Compare Means—One-Way ANOVA Method was used to analyze the respondents' responses by age groups, which is used when more than two variables (groups) are compared. Respondents' answers to the last question viewed in the article were analyzed using the SPSS Frequencies distributions method.

RESEARCH OUTCOMES

Although this research was conducted in the second half of 2020, it focused on earlier developments—the emergency situation caused by the COVID-19 pandemic in Latvia in the first half of 2020, or the period when the Latvian government decided to reduce the spread of COVID-19 on March 12, 2020, making a decision to declare a state of emergency in the country, which lasted until June 10, the so-called first wave of COVID-19. During this time, education process in schools took place remotely, as did the work of state and local government institutions where it was possible. The availability of kindergarten services was significantly limited. Likewise the private sector had to organize work remotely as much as possible.

Only those respondents who were employed during the first wave of COVID-19 could participate in the survey. The total number of respondents who answered all the questions of the web-survey is 1,006 employees. Of these, 79.7% are women and 20.3% are men; 44.0% of them have minor children in the household, 48.3% of the respondents worked remotely during the COVID-19 emergency situation.

The results of the study are summarized in **Tables 2–6**, which show the analysis of answers provided by unweighted sample of respondents and weighted sample of respondents. Further in the text of the article, only the analysis of weighted sample of respondents' answers was considered.

The survey included a number of questions about the working and home conditions of employees, which directly and indirectly affect work–life balance.

Analysis of respondents' answers to the question "*When working remotely, did you feel that family life affects your ability to perform work responsibilities?*" is available in **Table 2**. Only respondents who worked remotely during the first COVID-19 emergency situation could answer this question (n = 522).

The data in **Table 2** show that the difference between the mean values of the answers of the respondents by gender is -0.003, and the results of the group answers do not differ statistically significantly, as evidenced by the statistical significance index p = 0.954 (>0.05). It can be concluded that the answers provided by the respondents to this question do not differ significantly by gender.

Analyzing the answers provided by the respondents depending on whether or not there are children under 18 in their households, it is evident that the difference between the mean values of the answers provided by the respondents is -0.398, and the results of the group answers are statistically significantly different, as evidenced by the statistical significance

TABLE 5 | Analysis of respondents' answers to the question "Did you incur any additional housework during the COVID-19 emergency situation?" (n = 1,049).

Question[a]	Multiple choice answers[b]	Values
Did you incur additional housework during the COVID-19 emergency?	Yes	1
	No	2

		Unweighted sample of respondents			Weighted sample of respondents		
Variables		**Mean**	**Significance, *p***	**Statistical significance**	**Mean**	**Significance, *p***	**Statistical significance**
Gender	Male	1.78	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different	1.77	Sig. (2-tailed) = 0.002	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different
	Female	1.66			1.68		
The presence of children under 18 in the household	Yes	1.50	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different	1.60	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different
	No	1.82			1.81		
Age groups	18–24	1.71	Sig. < 0.001	Sig. ≤ 0.05 Group results are statistically significantly different	1.61	Sig. = 0.006[c]	Sig. ≤ 0.05 Group results are statistically significantly different
	25–34	1.73			1.74		
	35–44	1.54			1.66		
	45–54	1.71			1.73		
	55–63	1.81			1.81		
	64+	1.74			1.69		

[a] *All the respondents could answer his question, irrespective of whether or not they worked remotely during the COVID-19 emergency situation.*
[b] *The answer option "Hard to say" was not analyzed.*
[c] *Statistical significance p is observed between the following age groups: p = 0.004—18–24 years and 55–63 years; p = 0.045—25–34 years and 35–44 years; p < 0.001—35–44 years and 55–63 years.*

index $p < 0.001$ (≤ 0.05). The mean answer value 1.21 for respondents with children under the age of 18 in the household means that when working remotely, they generally felt that family life affected their ability to perform their work responsibilities during the COVID-19 emergency situation, while the mean answer value 1.61 for respondents, who have no children under the age of 18 in the household, indicates that they largely did not feel the impact of family life on their ability to perform work responsibilities. It can be concluded that the presence of children under the age of 18 in the household is an important factor that negatively affects the work–life balance.

Analyzing the answers of the respondents by age groups, it can be noted that the results of the group answers are statistically significantly different between the following age groups: the statistical significance index $p = 0.038$ (≤ 0.05) exists between the respondent age groups of 18–24 and 25–34 years; the statistical significance index $p = 0.005$ (≤ 0.05) exists between the respondent age groups of 18–24 and 35–44 years; $p = 0.019$ (≤ 0.05)—between the respondent age groups 25–34 years and 45–54 years; $p = 0.039$ (≤ 0.05)—between the respondent age groups 25–34 years and 55–63 years; $p < 0.001$ (≤ 0.05)—between the respondent age groups 35–44 years and 45–54 years; and $p = 0.001$ (≤ 0.05)—between the respondent age groups 35–44 years and 55–63 years. There are no statistically significant differences in the results of the answers of the respondents of other age groups. The mean values of the answers of respondents in the age groups of 25–34 years and 35–44 years (1.38 and 1.29, respectively) show that mostly teleworkers of this age felt that family life affects their ability to perform work responsibilities, while the mean values of the answers of the respondents of other age groups show the opposite. It can be concluded that the respondents aged 25–44 felt work-life imbalance the most during the COVID-19 emergency. One of the reasons could be that this is the age when respondents have pre-school and school-age children who needed parental supervision and additional support during the COVID-19 emergency, especially for distance learning. It should be noted that 79.3% of respondents in the age group 35–44 years have at least 1 child under the age of 18 in the household, which is the highest indicator among all age groups.

Summarizing the teleworkers' answers to the question of whether they felt that family life affected their ability to perform work responsibilities while working remotely, it can be concluded that the respondents of both genders aged 25–44 with children in the household under the age of 18 felt it.

The analysis of the respondents' answers to the question *"Taking into account your remote working experience during the COVID-19 emergency situation, please evaluate how the balance*

TABLE 6 | Analysis of respondents' answers to the question "Please evaluate how your workload changed in terms of the household responsibilities during the COVID-19 emergency situation" (n = 1,103).

Question[a]	Multiple choice answers[b]	Values
Please evaluate how your workload changed in terms of the household responsibilities during the COVID-19 emergency situation	Significantly reduced	1
	Slightly reduced	2
	Did not change	3
	Slightly increased	4
	Significantly increased	5

		Unweighted sample of respondents			Weighted sample of respondents		
Variables		**Mean**	**Significance, *p***	**Statistical significance**	**Mean**	**Significance, *p***	**Statistical significance**
Gender	Male	3.28	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different	3.30	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different
	Female	3.65			3.60		
The presence of children under 18 in the household	Yes	3.94	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different	3.69	Sig. (2-tailed) < 0.001	Sig. (2-tailed) ≤ 0.05 Group results are statistically significantly different
	No	3.30			3.29		
Age groups	18-24	3.61	Sig. < 0.001	Sig. ≤ 0.05 Group results are statistically significantly different	3.64	Sig. < 0.001[c]	Sig. ≤ 0.05 Group results are statistically significantly different
	25-34	3.56			3.46		
	35-44	3.86			3.63		
	45-54	3.48			3.39		
	55-63	3.32			3.30		
	64 +	3.29			3.30		

[a] *All the respondents could answer his question, irrespective of whether or not they worked remotely during the COVID-19 emergency situation.*
[b] *The answer option "Hard to say" was not analyzed.*
[c] *Statistical significance p is observed between the following age groups: p = 0.047—18–24 years and 45–54 years; p = 0.007—18–24 years and 55–63 years; p = 0.036—18–24 years and 64+ years; p = 0.026—25–34 years and 35–44 years; p = 0.048—25–34 years and 55–63 years; p = 0.002—35–44 years and 45–54 years; p < 0.001—35–44 years and 55–63 years; p = 0.011—35–44 years and 64+ years.*

between your work and private life has changed" is available in **Table 3**. Only respondents who worked remotely during the COVID-19 emergency situation could answer this question ($n = 512$).

The data in **Table 3** show that the difference between the mean values of the answers provided by the respondents by gender is -0.112, and the results of the group answers have no statistically significant differences, as evidenced by the statistical significance index $p = 0.157$ (>0.05). It can be concluded that the answers provided by the respondents to this question do not differ significantly by gender.

Analyzing the answers provided by the respondents depending on whether or not there are children under the age of 18 in their households, it is evident that the difference between the mean values of the answers provided by the respondents is 0.095, and the results of the group answers have no statistically significant differences, as evidenced by the statistical significance index $p = 0.239$ (>0.05). It means that the answers of the respondents to this question do not differ significantly depending on the presence of children under the age of 18 in their households.

Despite the fact that the mean values of the respondents' answers differ across age groups, the statistical significance index $p = 0.493$ (>0.05) suggests that these results are not statistically significantly different. It can be concluded that the answers of the respondents to this question do not differ significantly across age groups.

Summarizing the data analysis in the **Table 3**, it can be concluded that the respondents' answers to the question of how their work–life balance changed when working remotely during the COVID-19 emergency situation did not differ significantly by gender and age group, as well as did not vary depending on whether or not there are children under the age of 18 in the respondents' households.

Analysis of respondents' answers to the question *"Is it important for you be able to disconnect from digital devices outside working hours/after completing the assigned work tasks?"* is available in the **Table 4**. Only the respondents who worked remotely during the COVID-19 emergency situation could answer this question ($n = 515$).

The data in **Table 4** show that the results of the group answers do not differ statistically significantly by gender, as evidenced by the statistical significance index $p = 0.106$ (>0.05). It can be concluded that the answers provided by the respondents to this question do not differ significantly by gender.

Analyzing the answers provided by the respondents depending on whether or not there are children under 18 in their households, it is obvious that the results of the answers of both groups are not statistically significantly different, as evidenced by the statistical significance index $p = 0.899$ (>0.05). It means that the answers of the respondents to this question do not differ significantly depending on the presence of children under the age of 18 in their households.

As regards the fact that in general the results of the respondents' answers across age groups are not statistically significantly different, which is evidenced by the statistical significance index $p = 0.169$ (>0.05), it should be noted that statistical significance $p = 0.044$ (≤ 0.05) is observed between the age groups of 18–24 and 45–54 years; $p = 0.05$ (≤ 0.05)—between the age groups 18–24 and 55–63 years; and $p = 0.028$—between the age groups 18–24 and 64+ years. Considering the mean answer values for respondents in the age groups of 18–24, 25–34, and 35–44 years (1.06, 1.23, and 1.24, respectively), it can be concluded that for these teleworkers the ability to disconnect from digital devices outside working hours/after completion of the assigned work tasks during the COVID-19 emergency situation was more important when for respondents in the age groups of 45+.

Summarizing the answers of teleworkers to the question of whether it was important for them to be able to disconnect from digital devices outside working hours/after completing the assigned work tasks, it can be concluded that the opportunity to disconnect was most important for respondents aged 18–44, regardless of their gender and the presence of children under 18 in the household.

Analysis of respondents' answers to the question *"Did you incur any additional housework during the COVID-19 emergency situation?"* is available in **Table 5**. All the respondents could answer this question, irrespective of whether or not they worked remotely during the COVID-19 emergency situation ($n = 1{,}049$).

The data in **Table 5** suggest that the results of the answers of the respondent groups are statistically significantly different, as evident from the statistical significance index $p = 0.002$ (≤ 0.05), which means that the answers of the respondents to this question differ by gender. As regards the mean value of the respondents' answers, it is obvious that the difference between the mean values of the respondents' answers by gender is small 0.093; however, the mean value of women's answers of 1.68 indicates that women slightly more often than men indicated that they incurred additional responsibilities in the household during the COVID-19 emergency.

Analyzing the answers provided by the respondents depending on whether or not there are children under 18 in their households, it is evident that the difference between the mean values of the answers provided by the respondents is -0.202, and the results of the group answers are statistically significantly different, as evidenced by the statistical significance index $p < 0.001$ (≤ 0.05). The mean answer value of 1.60 for respondents who have children under the age of 18 in their households means that there were more respondents in this group who believed that they incurred additional housework during the COVID-19 emergency situation, while for respondents who have no children under the age of 18 in their households, the mean answer value is 1.81, indicating that there were more respondents in this group who believed that they did not incur additional housework. It enables a conclusion that the additional burden of responsibilities is related to the presence of children under the age of 18 in the household, which can have a negative impact on work–life balance.

Analyzing the answers of the respondents by age groups, it can be noted that the results of the group answers are statistically significantly different between the following age groups: the statistical significance index $p = 0.004$ (≤ 0.05) exists between the age groups of respondents who are 18–24 and 55–63 years

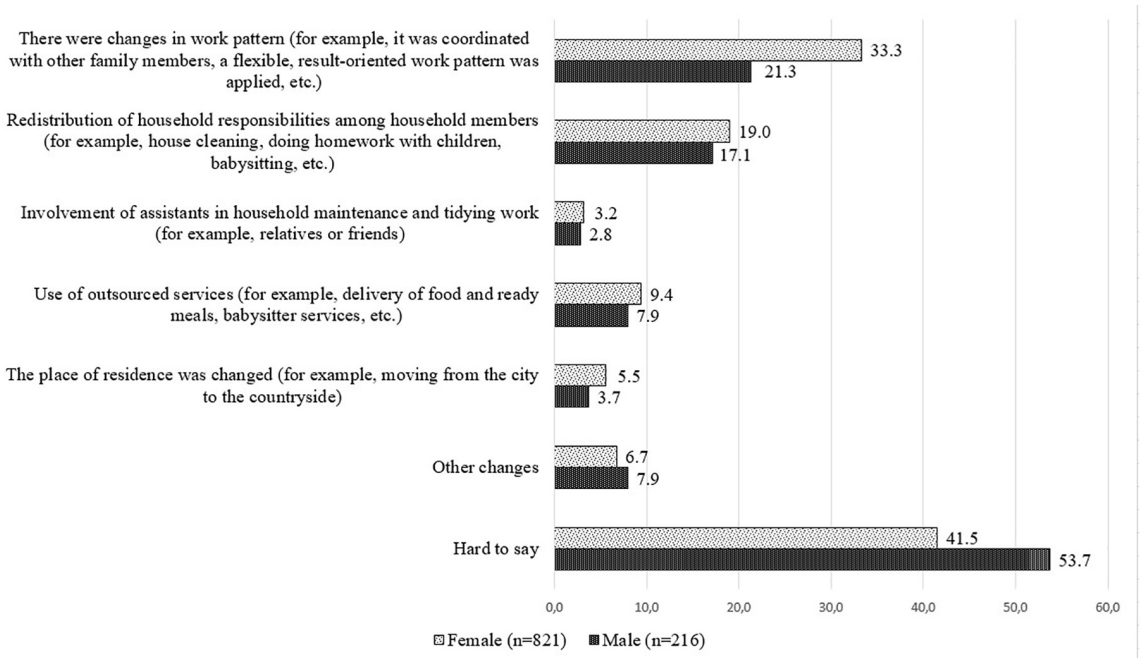

FIGURE 1 | Distribution of answers of the employed respondents to the question "Please mark what changes were made to your household's daily routine during COVID-19 to enhance work–life balance?"; gender; %.

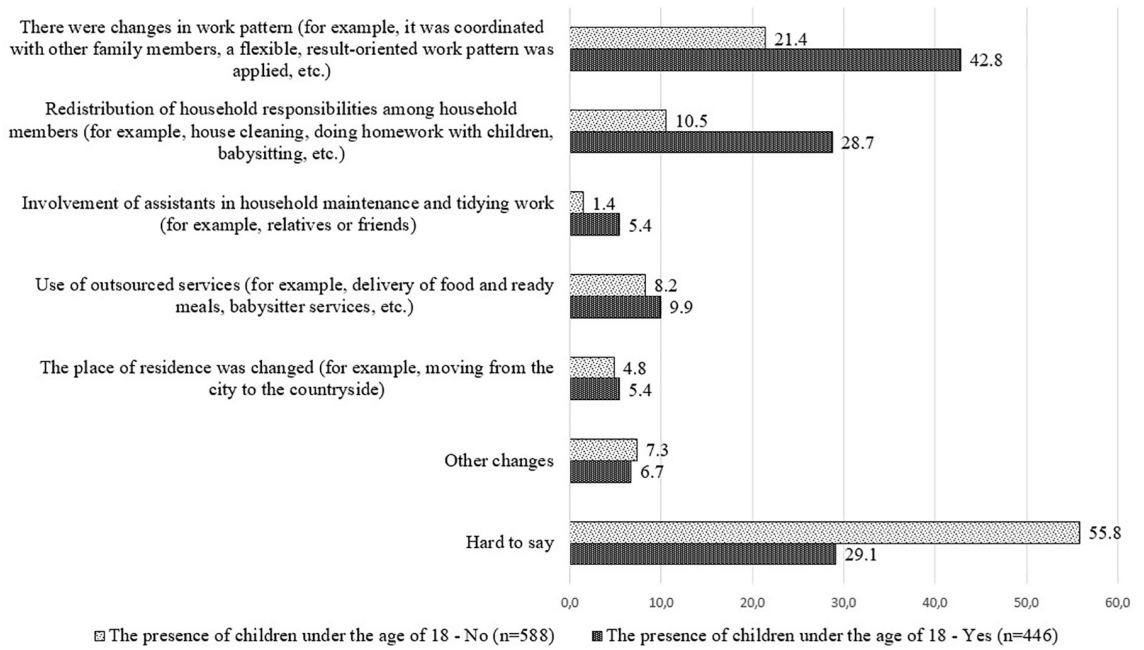

FIGURE 2 | Distribution of answers of employed respondents to the question "Please mark what changes were made to your household's daily routine during COVID-19 to enhance work–life balance?"; presence of children under the age of 18 in the household; %.

old; statistical significance index $p = 0.045$ (≤ 0.05)—between the age groups of respondents who are 25–34 and 35–44 years old; and $p < 0.001$ (≤ 0.05)—between the age groups of respondents who are 35–44 and 55–63 years old. There are no statistically significant differences in the results of the answers of the respondents of other age groups. It should be noted that the mean values of the answers of the respondents in the age group of 18–24 and 35–44 years are the lowest—1.61 and 1.66,

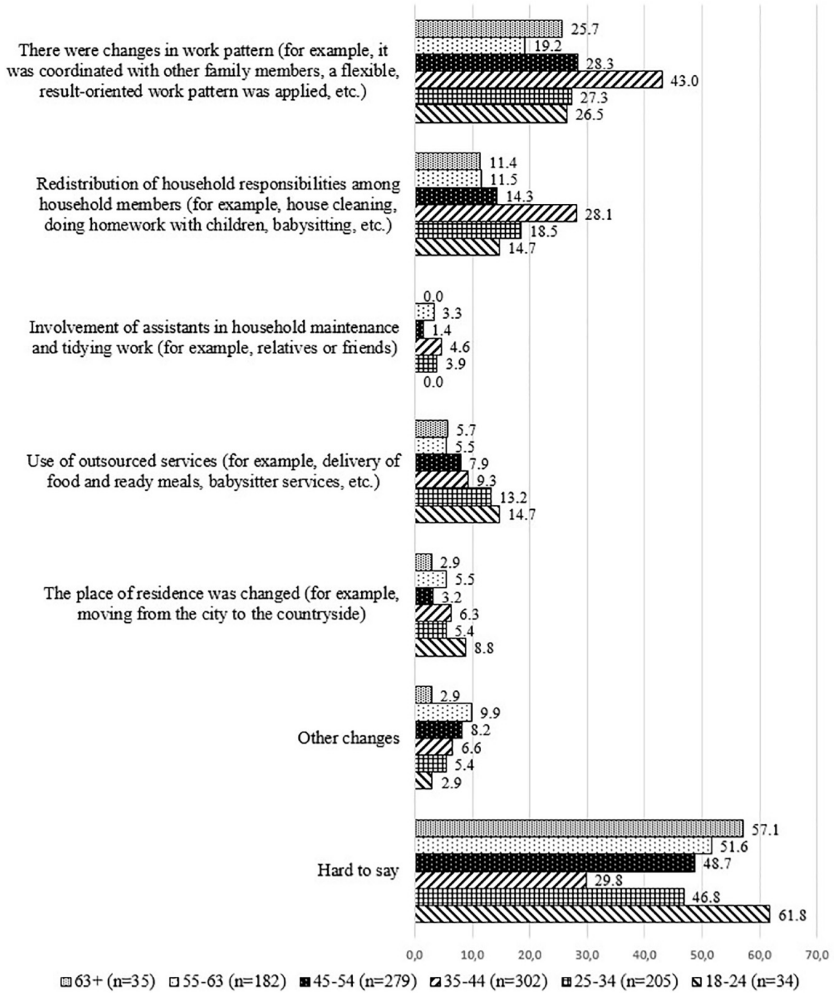

FIGURE 3 | Distribution of answers of employed respondents to the question "Please mark what changes were made to your household's daily routine during COVID-19 to enhance work–life balance?"; age groups; %.

respectively, which means that these respondents noted more that they incurred additional responsibilities in the household during the COVID-19 emergency situation.

Summarizing the respondents' answers about additional housework incurred during the COVID-19 emergency, it can be concluded that those employees who indicated the emergence of additional responsibilities in the household are of both genders (but slightly more often women) aged 18–24, who have children under the age of 18 in the household.

The analysis of the respondents' answers to the question *"Please evaluate how your workload changed in terms of the household responsibilities during the COVID-19 emergency situation"* is available in **Table 6**. All the respondents could answer his question, irrespective of whether or not they worked remotely during the COVID-19 emergency situation (n = 1,103).

The data in **Table 6** show that the results of the answers of the respondent groups are statistically significantly different by gender, which is evidenced by the statistical significance index $p < 0.001$ ($\leq$0.05), which means that the answers of the respondents to this question differ by gender. As regards the mean value of the respondents' answers, it is evident that the difference between the mean values of the answers given by the respondents by gender is -0.308, but the mean value of women's answers is 3.60, indicating that women were more likely than men to note increase in the load related to household responsibilities during the COVID-19 emergency situation, while the mean answer value of 3.30 for men means that men were more likely to note that their load of housework during the COVID-19 emergency situation did not change.

Analyzing the answers provided by the respondents depending on whether or not there are children under the age of 18 in their households, it is evident that the difference between the mean values of the answers provided by the respondents is 0.399, and the results of the group answers are statistically significantly different, as evidenced by the statistical significance index $p < 0.001$ ($\leq$0.05). The mean answer value of 3.69 for respondents with children under the age of 18 in the household clearly indicated that this group of respondents

generally noted a slight increase in the load of housework during the COVID-19 emergency, while for the respondents who have no children under the age of 18 in the household, the mean value of the answers is 3.29, indicating that there were more respondents in this group who believed that their workload did not change. It enables a conclusion that the increase in workload concerning household responsibilities is closely related to the presence of children under the age of 18 in the household, which may have a negative impact on work–life balance.

Analyzing the answers of the respondents by age groups, it can be noted that the results of the group answers are statistically significantly different between the following age groups: the statistical significance index $p = 0.047(\leq 0.05)$ exists between the age groups of respondents who are 18–24 and 45–54 years old; statistical significance index $p = 0.007$ (≤ 0.05)—between the age groups of respondents who are 18–24 and 55–63 years old; $p = 0.036$ (≤ 0.05)—between the age groups 18–24 years and 64+ years; $p = 0.026$ (≤ 0.05)—between the age groups 25–34 years and 35–44 years; $p = 0.048$ (≤ 0.05)—between the age groups 25–34 years and 55–63 years; $p = 0.002$ (≤ 0.05)—between the age groups 35–44 years and 45–54 years; $p < 0.001$ (≤ 0.05)—between the age groups 35–44 years and 55–63 years; and $p = 0.011$ (≤ 0.05)—between the age groups 35–44 years and 64+ years. There are no statistically significant differences in the results of the answers of the respondents of other age groups. It should be noted that the mean values of the answers of the respondents in the age group of 18–24 and 35–44 years are the highest—3.64 and 3.63, respectively, which means that these respondents noted increase in the load related to household responsibilities during the COVID-19 emergency situation.

Summarizing the answers of the respondents about the changes in the workload of their housework during the COVID-19 emergency situation, it can be concluded that more often women, respondents aged 18–24 and 35–44 and those who have children under the age of 18 in their households indicated to increase in workload.

All the respondents, irrespective of whether or not they worked remotely during the COVID-19 emergency situation, could answer the question *"Please mark what changes were made to your household's daily routine during COVID-19 to enhance work–life balance?"*, choosing one of the following answers:

1. There were changes in work pattern (for example, it was coordinated with other family members, a flexible, result-oriented work pattern was applied, etc.);
2. Redistribution of household responsibilities among household members (for example, house cleaning, doing homework with children, babysitting, etc.);
3. Involvement of assistants in household maintenance and tidying work (for example, relatives or friends);
4. Use of outsourced services (for example, delivery of food and ready meals, babysitter services, etc.);
5. The place of residence was changed (for example, moving from the city to the countryside);
6. Other changes; and
7. Hard to say.

Analyzing the data by gender, they suggest that in general women were more likely than men to choose an answer from 1 to 5. On the other hand, men pointed to "*other changes*" in the daily routine to enhance work–life balance, mostly stating that nothing had changed for them in the daily routine concerning housework. Only one man indicated emigration as other change in the daily routine. It should be noted that the majority of men found it difficult to answer this question—53.7%, compared to women—41.5%. As *"other changes"* in the daily routine, women mostly mentioned that they were forced to help children in the distance learning process, had to look after their grandchildren, had to provide the elderly parents with food and other goods, had to spent more time on cooking at home (see **Figure 1**).

Analysis of the responses of the respondents depending on whether or not there are children under the age of 18 in their households, shows that the respondents with children under the age of 18 in their households were more likely to choose answers between 1 and 5. This means that in order to ensure balance between work and private life, these respondents needed to adjust the daily routine of their household members during the COVID-19 emergency situation to be able to perform both work duties and other household responsibilities, including childcare. In turn, those respondents who had no children under the age of 18 in the household more often referred to "*other changes*" that were made in the daily routine or chose the answer option "*hard to say*" (see **Figure 2**).

Analyzing the obtained data depending on the age groups of the respondents, it can be concluded that the answer options 1 and 2 were mostly chosen by the employees aged from 35 to 44. This group of respondents chose the answer "*hard to say*" the least—29.8%. One of the reasons for this could be that this is the age when respondents have school-age children who needed parental supervision and additional support during the COVID-19 emergency situation, especially in the process of distance learning. It should be noted that no significant differences for the answer options from three to six by the respondent age groups were observed (see **Figure 3**).

Summarizing the information about the major changes in respondents' households aimed at enhancing work–life balance during the COVID-19 emergency situation, it can be concluded that women aged 35–44 with children under the age of 18 in their households the most frequently involved in changes related to working patterns and redistribution of household responsibilities.

CONCLUDING DISCUSSION

Evaluating the results of the survey, it can be concluded that the emergency situation caused by COVID-19 did not promote work–life balance of the employed in Latvia, especially of teleworkers, particularly if there were children under the age of 18 in the households.

So far, global research on employees' work–life balance during the COVID-19 emergency situation has shown a similar trend, i.e., due to the COVID-19 pandemic the burden of household

responsibilities on women significantly increased, especially if they had minor children. Del Boca et al. (2020) reveals that in Italy, working women with young children (particularly those aged 0–5) are most vulnerable and most aware of the difficult work–family balance. The COVID-19 crisis further increased the workload of women, resulting from both their housework and the occupation (Del Boca et al., 2020). In April 2020, a study conducted by Boston Consulting Group on the impact of the COVID-19 pandemic on working parents in the United States, United Kingdom, Italy, Germany, and France concluded that during the COVID-19 pandemic parents have almost doubled the time spent on education and household tasks, moreover, women per 31 percentage points more were shouldering a bigger share of the additional time spent on childcare and household tasks. Consequently, parents feel their ability of performance at work has dropped significantly, especially those with younger children (Boston Consulting Group, 2020). Chauhan (2020) in his research concluded that in India COVID-19 pandemic even more influenced the existing gender inequalities and increased both employed and unemployed women burden of unpaid work. In Spain, during the COVID-19 period in spring 2020 the amount of childcare and housework taken on by both parents increased considerably; however, women continued to shoulder most of the burden: a gender gap in parents' shares of childcare and housework during the lockdown was found about 17 percentage points on average (Farré et al., 2020). It is obvious that the COVID-19 pandemic has affected employees of both genders, but it has affected women the most, in particular, if there are minor children in the household.

Summarizing the results of the survey of Latvian employees on the work–life balance of respondents and the problems related to ensuring it during the first wave of the COVID-19 emergency situation in the spring of 2020, a similar trend can be observed—employees of both genders felt that family life affected their ability to perform work duties remotely, especially the respondents aged 25–44, and those with children under the age of 18 in their household.

The deterioration of work–life balance during the COVID-19 emergency situation did not differ significantly by gender and age group, as well as did not vary depending on whether or not there are children under the age of 18 in the respondents' households. However, an analysis of the responses of the unweighted sample of respondents suggests, that the presence of children under the age of 18 in the household affected the deterioration of work–life balance during the COVID-19 emergency situation.

For younger teleworkers aged 18–44, it was important to disconnect from digital devices outside working hours/after completing the assigned work tasks, regardless of their gender and the presence of children under 18 in the household. This is one of the crucial factors in ensuring work–life balance, especially for teleworkers.

The emergence of additional responsibilities in the household during the COVID-19 emergency situation was slightly more frequently indicated by women, as well as by employed respondents at the age of 18–24 and 35–44 who have children younger than 18 in the household. In general, employed women were more likely to point at changes in the household's daily routine, such as modifying work patterns, redistributing household responsibilities among the household members, involving assistants in housework or using outsourced services to balance their work–private life during the COVID-19 emergency situation.

It can be concluded that the research hypothesis put forward that during the COVID-19 emergency situation all the groups of employees experienced difficulties in balancing work and private life is partially confirmed, i.e., employed women in the age group of 18–44 and the respondents with minor children in the household more often experienced difficulties in balancing work and private life.

The research limitations of our study are related to formation of selection amount, as only the people who had access to the internet could participate in the web-survey. As a result some groups of workers may be excluded from the sample by default (e.g., elderly, people living in remote areas, and people with low education and digital literacy). The same, so-called snowball, recruiting principle was used during the Eurofound survey "Living, working and COVID-19" (Eurofound, 2020a). In addition, the questionnaire was available only in Latvian, and it might have caused less response rate from the side of the Russian-speaking population. A non-probability sampling method which was used to gather survey data is another limitation of the study. The advantage of this method is the possibility to quickly gather information from respondents which was important because of the implementation requirements of the project "Life with COVID-19: Evaluation of Overcoming the Coronavirus Crisis in Latvia and Recommendations for Societal Resilience in the Future" (CoLife). To overcome this limitation at least partly and to obtain data that is representative of the demographic profile of the working population in Latvia, data was weighted by age crossed with gender (in 12 age-gender combinations). Weighting targets included 2020 year third quarter population estimates from Central Statistical Bureau of Latvia by age groups and gender. It should be noted that the seasonality impact was not studied in this article, which can also be considered as a limitation of the study.

This research examines a small part of the questions included in the survey, which was conducted within the framework of the Latvian National Research Programme Project "CoLife," one of the goals of which was to assess the flexibility of work–life balance in different socio-demographic groups during the COVID-19 emergency situation in Latvia in the spring of 2020. The evaluation revealed that the risk group of employees most affected by the emergency situation of the first wave of COVID-19 in Latvia are middle-aged (35–44 years) women with children under the age of 18 in the household. Although only a small part of the range of issues covered by this research was addressed in this article, the result suggests a similar trend.

Although remote working is mentioned in scientific and practical research as one of the tools for work–life balance, it should be borne in mind that the daily private life, responsibilities and timing of employees with minor children had changed during the COVID-19 emergency situation. Considering that the emergency situation has encouraged the use of remote working,

with the tendency to grow, it is essential to facilitate/ensure work–life balance for all employees, regardless of the type of employment and the form of working hours. As noted by Del Boca et al. working from home may have important consequences on gender gaps. On the one hand, a proper flexibility is desirable for better work–life balance of both men and women, it may result in better sharing of family work within the couple. On the other hand, if this becomes a female-dominated option, with men mostly working at the workplace and women working from home, a critical increase of unbalanced family work with majority of the work borne by women is observed (Del Boca et al., 2020).

It should be noted that work–life imbalance is one of the factors that negatively affects sustainability of work (the ability to work for up to the age of 60 or more), i.e., the physical and mental health and well-being of employees. Work–life balance contributes to increasing work efficiency and productivity, improving the health of employees, strengthening the highest motivation and loyalty of employees, etc. In order to promote a work–life balance for employees, employers must use such patterns of working hours that prevent negative influence on health and well-being of the employees, inclusion of family-friendly initiatives in personnel policies of the companies through collective agreements at the level of a sector or company. In turn, the government also needs to think about high-quality, accessible, family-friendly care infrastructure (i.e., childcare, care for the elderly people, care for people with special needs, and other public services).

Work–life balance requirements are highly dependent on the individual's personal circumstances, such as the partner's working hours and the presence of children or elderly dependents in the household. And these conditions change over a lifetime. This is particularly relevant in view of the current postponement of the retirement age and the increase in life expectancy in the world, which means that it will be significant to ensure a balance between work and long-term care for family members in the future. It is therefore important to promote the development of accessible, high-quality care services for children, the sick, people with disabilities, the elderly and other dependents, especially in the place of their residence, taking into account priorities and principles of social service policy (deinstitutionalisation and provision of a service primarily at or close to the person's place of residence) so that as many employed people as possible can reconcile work and family life.

It should be added that the research of the impact of the COVID-19 pandemic on the work–life balance of employees in Latvia continues after the completion of the "CoLife" project. At the beginning of 2021, the authors organized a repeated web-survey of Latvian employees intending to study the changes in the situation and the adaptation of employees to *new-normal* conditions.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found below: Zenodo https://doi.org/10.5281/zenodo.5090519.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Ethics Committee of Riga Stradins University (July 23, 2020, No. 6-1/08/16). Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

JL, IM, and LM: methodology. JL, LL, and LP: formal analysis and investigation. JL: writing—original draft preparation. IM, IA, and IV: writing—review and editing. LM: supervision. All authors: conceptualization. All authors contributed to the study conception and design.

FUNDING

This research was funded by the Ministry of Education and Science, Republic of Latvia, project "Life with COVID-19: Evaluation of overcoming the coronavirus crisis in Latvia and recommendations for societal resilience in the future", project No. VPP-COVID-2020/1-0013.

REFERENCES

Boston Consulting Group (2020). *Easing the COVID-19 Burden on Working Parents*. Available online at: https://www.bcg.com/publications/2020/helping-working-parents-ease-the-burden-of-covid-19 (accessed December 7, 2020).

Cartmill, C. (2020). *New Survey Shows 87% of Staff Wish to Work from Home in Post Lockdown World*. Available online at: https://www.newsletter.co.uk/business/new-survey-shows-87-staff-wish-work-home-post-lockdown-world-2864590 (accessed December 7, 2020).

Central Statistical Bureau of Latvia (2020). *In the 2nd Quarter of 2020, 64.1% of the Population of Latvia Were Employed*. Available online at: https://www.csb.gov.lv/en/statistics/statistics-by-theme/social-conditions/unemployment/search-in-theme/2729-employment-2nd-quarter-2020 (accessed September 4, 2020).

Chauhan, P. (2020). Gendering COVID-19: impact of the pandemic on women's Burden of Unpaid Work in India. *Gend. Issues* 1–25. doi: 10.1007/s12147-020-09269-w

Del Boca, D., Oggero, N., Profeta, P., and Rossi, M. (2020). Women's and men's work, housework and childcare, before and during COVID-19. *Rev. Econ. Household* 18, 1001–1017. doi: 10.1007/s11150-020-09502-1

Directive (EU) 2003/88/EK of the European Parliament and of the Council (2003). *Concerning Certain Aspects of the Organisation of Working Time*. Available online at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32003L0088 (accessed December 7, 2020).

Directive (EU) 2019/1152 of the European Parliament and of the Council (2019). *On Transparent and Predictable Working Conditions in the European Union*. Available onine at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019L1152 (accessed December 7, 2020).

Directive (EU) 2019/1158 of the European Parliament and of the Council (2019). *On Work-Life Balance for Parents and Carers and Repealing Council Directive 2010/18/EU*. Avaialble online at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L1158 (accessed December 7, 2020).

Eurofound (2017). *Working Time Patterns for Sustainable Work*. Available online at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1720en.pdf (accessed December 5, 2020).

Eurofound (2019). *Further Exploring the Working Conditions of ICT-Based Mobile Workers and Home-Based Teleworkers*. Available online at: https://www.eurofound.europa.eu/sites/default/files/wpef18007.pdf (accessed December 5, 2020).

Eurofound (2020a). *Living, Working and COVID-19*. Available online at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20059en.pdf (accessed September 4, 2020).

Eurofound (2020b). *Regulations to Address Work–Life Balance in Digital Flexible Working Arrangements*. Available online at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef19046en.pdf (accessed December 5, 2020).

Farré, L., Fawaz, Y., González, L., and Graves, J. (2020). *How the COVID-19 Lockdown Affected Gender Inequality in Paid and Unpaid Work in Spain*. Available online at: http://ftp.iza.org/dp13434.pdf (accessed January 7, 2021).

Gálvez, A., Tirado, F., and Jesús Martínez, M. (2020). Work–life balance, organizations and social sustainability: analyzing female telework in Spain. *Sustainability* 12:3567. doi: 10.3390/su12093567

Hein, C. (2005). *Reconciling Work and Family Responsibilities. Practical Ideas from Global Experience*. Available online at: https://www.ilo.org/public/libdoc/ilo/2005/105B09_142_engl.pdf (accessed December 5, 2020).

ILO (2020). *Practical Guide on Teleworking during the COVID-19 Pandemic and Beyond*. Available online at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/instructionalmaterial/wcms_751232.pdf (accessed December 5, 2020).

Kantar (2018). *Darba un Privātās Dzīves Līdzsvars Latvijā un Eiropas Savienībā [Work-Life Balance in Latvia and the European Union]*. Available online at: https://www.kantar.lv/darba-un-privatas-dzives-lidzsvars-latvija-un-eiropas-savieniba/ (accessed December 2, 2020).

Kantar (2020). *41% Strādājošo Atzīst, ka Covid-19 Pandçmijas Apstākïi ir Ietekmçjuði Viòu Emocionālo Labsajûtu [41% of Workers Admit that the Conditions of the Covid-19 Pandemic have Affected their Emotional Well-Being]*. Available online at: https://www.kantar.lv/41-stradajoso-atzist-ka-covid-19-pandemijas-apstakli-ir-ietekmejusi-vinu-emocionalo-labsajutu/ (accessed December 3, 2020).

Korpa, V. (2012). *Darba un ģimenes dzīves Saskaņošana Privātā Sektora Organizācijās [Reconciliation of Work and Family Life in Private Sector Organizations]*. Ph.D thesis. Available online at: https://www.szf.lu.lv/fileadmin/user_upload/szf_faili/Petnieciba/promocijas_darbi/Viola_Korpa_2012.pdf (accessed December 2, 2020).

Parent-Thirion, A. (2016). *Working Hours are Decreasing, So Does Work–Life Balance Still Matter?*. Available online at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1649en.pdf (accessed December 2, 2020).

Power, K. (2020). The COVID-19 pandemic has increased the care burden of women and families. *Sustain. Sci. Pract. Policy.* 16, 67–73. doi: 10.1080/15487733.2020.1776561

Ramakrishnan, R. (2020a). Work life balance during lockdown. *SSRN Electr. J.* 1–12. doi: 10.2139/ssrn.3717067

Ramakrishnan, R. (2020b). Work life balance post COVID-19. *SSRN Electr. J.* 1–17. doi: 10.2139/ssrn.3717081

Sadasivam, B. (2020). *Shifting the Burden: Can Covid-19 Do it For Women's Unpaid Work?* Available online at: https://www.socialeurope.eu/shifting-the-burden-can-covid-19-do-it-for-womens-unpaid-work (accessed December 2, 2020).

Sanfilippo, M. (2020). *How to Improve Your Work-Life Balance Today*. Available online at: https://www.businessnewsdaily.com/5244-improve-work-life-balance-today.html (accessed December 2, 2020).

Uresha, K. I. (2020). Influence of telecommuting on work-life balance and employee happiness: an empirical study of Sri Lankan employees. *Int. J. Manag. Excell.* 15, 2234–2243.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

frontiers in Psychology

ORIGINAL RESEARCH
published: 15 October 2021
doi: 10.3389/fpsyg.2021.715884

Stress at Work: Can the Spiritual Dimension Reduce It? An Approach From the Banking Sector

Rafael Robina-Ramírez[1], José Amelio Medina-Merodio[2], Rosa Estriegana[3], Marcelo Sánchez-Oro[1] and José Castro-Serrano[4]*

[1]Departamento de Dirección de Empresa y Sociología, Universidad de Extremadura, Cáceres, Spain, [2]Departamento de Ciencias de la Computación, Universidad de Alcalá, Madrid, Spain, [3]Departamento de Automática, Universidad de Alcalá, Madrid, Spain, [4]Departamento de Arte y Ciencias del Territorio, Universidad de Extremadura, Cáceres, Spain

Stress at work motivated by pressures and labour control can alter the behaviour of workers. Since the 2008 economic crisis, banking in Spain has suffered a series of massive lay-offs to adjust to the new market situation. This new financial restructuring has meant greater labour pressure to achieve the required results. Faced with this adversity, employees have experienced greater stress at work. This work analyses the effect of reinforcing employees' spiritual dimension to transcend and correctly manage work pressure and stress at work. In so doing, 601 employees from 294 financial entities of five large IBEX banks participated in this pilot project. Through a participatory methodology based on a review of the literature, the study indicators have been delimited. The data obtained have been treated using the SEM-PLS method. The results propose the incorporation of a series of tools to reinforce values and transcendent employee behaviour.

Keywords: stress, work, transcendence, values, spiritual dimension, banking

OPEN ACCESS

Edited by:
Rūta Adamonienė, Mykolas Romeris University, Lithuania

Reviewed by:
Rafael Ravina-Ripoll, University of Cádiz, Spain
María Pache, University of Extremadura, Spain

****Correspondence:***
Rafael Robina-Ramírez
rrobina@unex.es

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *27 May 2021*
Accepted: *09 September 2021*
Published: *15 October 2021*

Citation:
Robina-Ramírez R, Medina-Merodio JA, Estriegana R, Sánchez-Oro M and Castro-Serrano J (2021) Stress at Work: Can the Spiritual Dimension Reduce It? An Approach From the Banking Sector. Front. Psychol. 12:715884. doi: 10.3389/fpsyg.2021.715884

INTRODUCTION

Due to the 2008 international economic crises in the financial sector, different restructuring processes have been approached, such as that used in the 1929 crises (Reinhart and Rogoff, 2009; Sánchez, 2010; De Haan et al., 2020). In Spain, banking has experienced a 54.4% reduction in financial entities from 2008 to 2020 (CCOO, 2020). High unemployment rates and job insecurity have ended up affecting competitiveness in the banking system (Barroso, 2017; Klutse, 2020). The impact that the closure of offices has had on the well-being, personal stability and health of employees has been devastating (Cortès-Franch and López-Valcárcel, 2014).

According to the new survival scenario within the banking sector, the need to obtain results has become the main pressure on employees (Lin et al., 2012). It erodes the trust between employees and managers (Robina-Ramírez et al., 2020a; Wang et al., 2020; Robina-Ramírez, 2021) and increases stress at work (Altavilla et al., 2020; Sanusi et al., 2020). As a result, it definitely contributes to a gradual worsening of workers' mental health (Espino Granado, 2014; Barceló et al., 2016; Khalid et al., 2020) and their living conditions (i Meléndez, 2012). According to Suzabar et al. (2020), adverse social and organisational working conditions can turn work into a toxic place not exempt from extreme pressure. This situation leads to states of fear, paranoia, and anxiety (Mausner-Dorsch and Eaton, 2000; De Clercq et al., 2020).

Different authors have approached the phenomenon of stress in the organisational field (Long, 1995; Quick and Cooper, 2003; Gismera et al., 2019; Wang et al., 2020). From the organisational point of view, stress can come from the lack of freedom of decision possessed by employees in jobs with high work demands, facing uncertain employment consequences or long-term job insecurity; over time, these may lead to physical exhaustion (Ganster, 2013).

The origin of stress at work can come from external issues, such as abusive socio-labour conditions (Robina-Ramírez, 2017; Robina-Ramírez et al., 2020d), or from internal ones (Sánchez-Hernández et al., 2020a). It can also result from a lack of personal values that make it difficult to control stressful situations. Rather than analysing the organisational causes of employee stress, we delve into ways to reduce stress at work through developing a transcendent sense in the workplace (Robina-Ramírez, 2021). As a result, a research model is proposed so as to study what role spirituality plays in responding to current working conditions in bank employees. From the well-known model of Schwartz's behavioural transformation (1973), three factors are highlighted: (1) knowledge of the consequences of an adverse work environment; (2) an attitude built on personal values (Robina-Ramírez and Medina-Merodio, 2019); and (3) the development of transcendent behaviour in employees.

A total of 601 employees from five large banks of the IBEX-35 have participated in the work. Based on a participatory procedure, 24 employees and four managers were involved in the design of the indicators based on two focus groups (Sánchez-Oro Sánchez and Robina-Ramírez, 2020). The study was completed using two training sessions to deepen the importance of values and the transcendent meaning of work; 50% of the total participants were involved in these sessions. Their objective was to convey the role and meaning of spirituality and values in the control of stressful situations.

To date, there is not enough empirical evidence to support a stress control model among employees of the banking sector that goes beyond modifying employees' working conditions or organisational aspects. This proposal provides training tools to develop spirituality so as to reduce stress at work, hence this approach may arise as a future line of research.

THEORETICAL FRAMEWORK

Stress at Work

Stress as a psychological reaction of the person to certain stimuli at work has been widely studied (Hendriks et al., 2020). However, this phenomenon is not a mere physiological response to an unexpected situation but rather a reaction in the individual that comes from the interaction between what society demands of them and their response (Long, 1995). The dysfunction between what is expected (assumption of the workload) and what is contributed by the worker (transformation of the workload into results) can lead to a stress reaction. This dysfunction can become a risk factor that could end in physical and mental professional exhaustion through a variety of health disorders and diseases (Quick and Cooper, 2003).

Quick et al. (1997) identified four causes of stress derived from both the work environment and personal characteristics: (1) work overload and job insecurity; (2) conflicts and confusion of the roles to be performed and their relationship with the styles of leadership; (3) physical causes such as temperature, lighting and workplace design; and (4) personal causes due to personality problems or conflicting interpersonal relationships.

In the daily activity of the organisation, five factors can define any stressful situation at work: (1) the role of the employee in the organisation according to their level of responsibility (Murphy, 1995; Carroll and Laasch, 2020; Willness et al., 2020); (2) professional development related to promotions, job security and career development opportunities (Church et al., 2021; Marvel, 2021); (3) interpersonal relationships in the workplace that can lead to conflictive social relationships involving harassment, discrimination and threats (Greer, 2021; Pellegrini et al., 2021; Vila-Vázquez et al., 2021); (4) the organisational climate in relation to management style, the execution of work tasks and their performance and the type of participation in planning (Robina Ramírez, 2017; Jacobs and Kaufmann, 2021; Knight et al., 2021; Su et al., 2021); and (5) lack of rewards for work done (Siegrist, 1996; Balducai et al., 2021).

These factors are activated in circumstances of crisis, namely the crisis that the banking sector has faced since 2008 with devastating consequences for employees. In addition, massive lay-offs (Tarki et al., 2020), high results control systems in financial operations (Altavilla et al., 2020), increasing competitiveness to attract financial resources (Klutse, 2020), long working hours until objectives are reached (Sanusi et al., 2020) and high turnover in positions and offices (Sudria, 2016; Kurdi and Alshurideh, 2020; Yukongdi and Shrestha, 2020) have been identified.

The Spiritual and Transcendent Dimension in the Face of Adverse Conditions at Work

Adverse working conditions currently faced by banks in Spain, characterised by the fragility of the Spanish banking system (García and Vázquez, 2019) and high temporality (Araújo-Vila et al., 2020), is translated into aggressive client deposit-taking policies (Royo, 2020). This hinders employees' personal and vital stability.

Nowadays, the psychological conception of suffering is managed by providing tools to regulate emotions at work (Robina-Ramírez and Pulido-Fernández, 2019; Robina-Ramírez et al., 2020b). In the business scenario, the role of transcendence and spirituality is playing a key role to appropriately channel adversity (Gupta et al., 2014; Counted et al., 2020; Sanchez-Hernández et al., 2020b; Vasconcelos, 2021).

The topic of spirituality is interdisciplinary, intercultural and rich in giving meaning to suffering (Weathers et al., 2016). While some authors relate it to the search for the "sacred" (Zinnbauer and Camerota, 2004), others identify it with human qualities that facilitate a transcendent vision to bring new meaning to human actions beyond the materiality of work (Reischer et al., 2021).

According to the European Forum, Spirituality in Economics and Society (European Forum SPES, 2014), transcendence is aligned with the search for the deep meaning of human actions connected with the sacred, with the excellent and with the perfection to which every person can aspire (European Forum SPES, 2014). The sacred contains an idea of divinity, beauty, perfection and goodness, which has its origin in Creation (Ellingson, 2016). This inspiring reality transcends human realities, and an idea of creation lies at the base of any work, namely a more habitable, better organised and shared world (Robina-Ramírez and Cotano-Olivera, 2020; Robina-Ramírez et al., 2020c).

Translating the idea of perfection to organisations, a principle of transcendence in the way of doing any works can be discovered. This principle can be introduced in the designing, organising and evaluating process according to the premises of perfection and goodness (Lepisto and Pratt, 2017). Transcendence allows employees to provide directionality at work under the premises of beauty, perfection and kindness, which allows them to overcome unexpected situations at work and reduce their harmful effects (De Clercq et al., 2020).

In managing the unexpected situations which can increase the gap between what society demands of the individual and their response, emotions, attitudes, and conscience come into play. Spirituality helps to give direction and prioritise each of them based on a pattern developed by the individual themselves from their beliefs and values (Vasconcelos, 2021).

Setting priorities involves developing an internal analysis, setting goals and above all looking towards what is more perfect than us; this allows us to receive inspiration to grow and improve. Inspiration comes when personal models are imitated through aspirations and a desire for growth. As a result, following these personal models is possible to overcome egocentric, static and self-centred behaviours so as to initiate the search for meaningful work to identify what role an individual plays in both professional environments and society.

The development of this role provides tools to the employees to overcome pressurising situations and reduce their work stress. Work stress is lessened when employees' objectives go from mere economic and financial gain to the incorporation of adversity as part of the integral development of the person. In other words, when meaningful work is added to the daily management through adequate responsibility especially, when adversities are addressed as growth opportunities for the benefit of the organisation and third parties.

At this point, our hypotheses are proposed.

H1: The development of transcendent behaviour (CT) influences a reduction in work stress (RWS).
H2: Knowledge of the consequences of an adverse work environment (CA) influences a reduction in work stress (RWS).
H3: Knowledge of the consequences of a CA influences the development of transcendent behaviour (CT).

The Development of Values in the Face of an Adverse Work Environment

According to Norris (2019), any change in people's attitudes occur thanks to the monitoring of behavioural patterns. Exemplary personal performance develops a mimetic effect that inspires individuals to transform their behaviours. However, any change in behaviour needs the support of values to bring this change into effect (Finegan, 1994). This mimetic effect is also transferred to the organisation in each of its activities.

In adversity at work, the acquisition of values endows the person with a sense of calm and tranquillity that allows them to control emotions through the exercise of patience (Schnitker, 2012), compassion (Lim and DeSteno, 2016) and forgiveness to face injustices (Flaskas et al., 2007). These values allow individuals to develop positive feelings to be tolerant, respectful at work (Mazzola and Kessler, 2012) and supportive (Wilmers, 2019).

The embodiment of those values not only gives rise to authenticity and integrity at work (Meyer and Parfyonova, 2010) but also guides behaviour towards successful experiences at work (Schwartz, 2007; Ménard and Brunet, 2011). Furthermore, it helps to cultivate hope for what is to come (Anandarajah and Hight, 2001), as well as gratitude to any opportunity to combat any adversity (Wood et al., 2010).

In this process of behavioural transformation, we find different leaders who have embodied those values in their lives. As a result, they are an example towards facing adversity (Cartledge, 1977; Kearns, 1989; Keen, 2020; Le Goff, 2020; Stokes-Parish et al., 2020). The characters or heroes are characterised by having sought the interest of others before their own, and therefore, they become a CT model to follow (Winter, 1994). Values that decisively contribute to social and personal change, as well as to the motivational bases of attitudes and behaviour, emerge in the narratives of their lives (Schwartz, 2012).

We can thus state the following hypotheses:

H4: Knowledge of the consequences of a CA influences the acquisition of values (V).
H5: The acquisition of V influences the development of CT.
H6: The acquisition of V influences the RWS.

Working Model and Hypothesis

H1: The development of CT influences the RWS.
H2: Knowledge of the consequences of a CA influences the RWS.
H3: Knowledge of the consequences of a CA influences the development of CT.
H4: Knowledge of the consequences of a CA influences the acquisition of V.
H5: The acquisition of V influences the development of CT.
H6: The acquisition of V influences the RWS.

Figure 1 shows the model and the hypothesis.

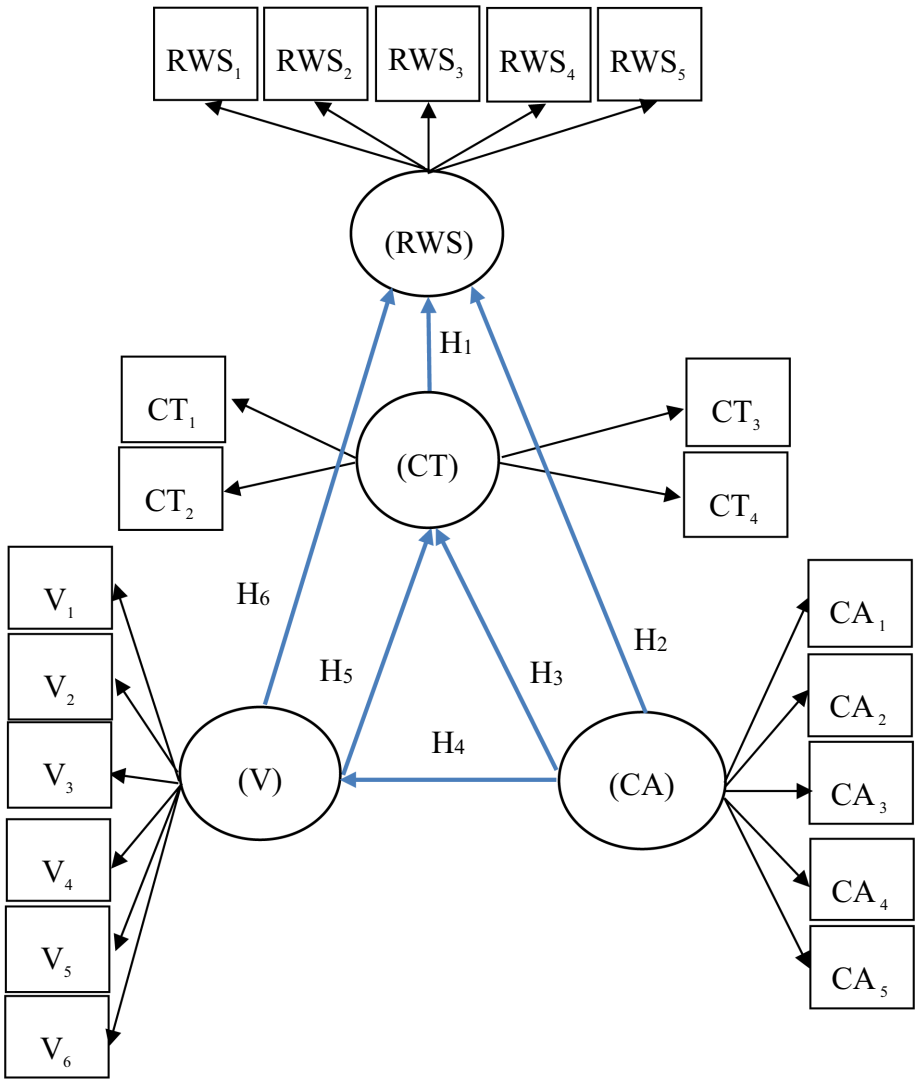

FIGURE 1 | Presentation of the model.

METHODOLOGY

The Behaviour Transformation Model Based on the Schwartz Model

It was Schwartz who in 1973 proposed a widely tested model to study the behaviour transformation process (Schwartz, 1973). This model explains the change in final behaviour. This is made from the knowledge of the consequences of an action (awareness of the consequences: CA). This generates responsible behaviours [assignment of responsibility (AR)] and personal obligations of action [personal norms (NP)].

As Schwartz and Howard (1981) pointed out, the behaviour transformation process develops moral actions to execute or avoid responsible actions. This process follows the next steps: the knowledge of the consequences of a CA (awareness of the consequences) can lead to responsible actions through the development of V (AR) to generate norms that transform behaviours (CT) (through NP) that influence behaviours that reduce the work stress generated by work (RWS).

Population and Sample

Based on employees employed in the five large banks of the IBEX 35 (see **Table 1**), 273 financial entities belonging to these banks were randomly chosen, distributed among the 15 cities with the largest population in Spain.

During the 1st week of February 2021, the research team contacted the director of each entity by telephone after sending a cover letter. Throughout the month of February, adhesion emails were received either from the office director or from employees interested in participating individually. In the 1st week of March, participation reached 632 employees, of which 31 left the study for personal reasons. The final sample was 601 employees from the Spanish banking sector (**Table 1**).

The majority of the participants were male (55%), aged between 30 and 39 years and possessed a university education (57%; **Table 2**).

Selection of Indicators

In the book "grupos focales como herramienta de investigación turística" "focus group as a tool for touristic research," Sánchez-Oro Sánchez and Robina-Ramírez (2020) explains that over the past decade, focus groups and group interviews have re-emerged as a popular technique for gathering qualitative data, both among sociologists and across a wide range of academic and applied research areas, such as tourism.

Focus groups are currently used as both a self-contained method and in combination with surveys and other research methods, most notably individual, in-depth interviews. Comparisons between focus groups and both surveys and individual interviews help to show the specific advantages and disadvantages of group interviews, concentrating on the role of the group in producing interaction and the role of the moderator in guiding this interaction. The advantages of focus groups can be maximised through careful attention to research design issues at both the project and the group level. Important future directions include: the development of standards for reporting focus group research, more methodological research on focus groups, more attention to data analysis issues, and more engagement with the concerns of the research participants.

Due to the role that spirituality plays on providing solution to reduce the stress at work, we have chosen this technic so as to discuss the indicators just at the beginning of the research process. Contrasting the variables and indicators with employees and managers have helped us to understand their points of view about the questions we have made to them.

At the beginning of the research design 250 employees and 50 managers were randomly invited to be part of the focus groups (see **Table 3**). Emails were sent to them explaining the scientific proposal of the research as well as the methodology we followed which is based on two steps. Eventually 24 employees and 6 managers were part of the work team. In the first one we carefully explained the main concepts of the research work: Schwartz activation norm model, stress at work, values, spirituality, transformation of the conducts. For about 2 h, we received suggestions about how these topics had to be translated to the banking sector. In the **Table 1**, it is shown the distributions of participants from each regional bank.

During the 2nd week of March 2021, two focus groups were held through the online platform Zoom to select the indicators for each of the latent variables extracted from the literature review. A total of 24 employees and six managers were part of the work team. In the first meeting, the concept of each of the indicators extracted from the literature review was transferred. The typology of adverse situations and the values necessary to develop CT were analysed so as to reduce the stressful work in the banking sector. During the second meeting, the meaning of the indicators was examined and modified. The results are shown in **Table 4**.

TABLE 1 | Mergers in the banking system in Spain as of 2008.

BANCO SANTANDER	Banco Central Hispano	Banco Central, Banco Hispano Americano
	Banco Santander	Banesto, Banif
	Banco Popular	Banco Pastor, Banco de Andalucía
BBVA	Unnim	Caixa Sabadell, Caixa Manlleu, Caixa Terrasa
	BBVA	Catalunya Banc
	Catalunya Banc	Caixa Tarragona, Caixa Manresa, Caixa Catalunya
		General de Canarias, Cajasol, Caja de Burgos
CAIXABANK	Banca Cívica	Caja Navarra; C. Guadalajara
	CaixaBank	Barclays, Caixa Gerona, Banco de Valencia, Banco de Valencia
		Caja Madrid, Bancaja, Caja Rioja, Insular de Canarias
BANKIA	BFA Bankia	Caja Ávila, Caja Segovia, C. Laietana
	BMN (Banco Mare Nostrum)	Sa Nostra; Caixa Penedés, Caja Murcia, Caja Granada
BANCO SABADELL	Banco Sabadell	CAM, Banco Guipuzcuano
	Banco Gallego	

Source: own elaboration based on CCOO (2020). Report on the evolution of employment in the financial sector restructuring process 2008–2020, CCOO Servicios, Madrid.

TABLE 2 | Sample composition.

	N = 601	%
Gender		
Male	330	0.55
Female	269	0.45
No responded	2	0
Total	601	1
Age		
18–29	136	0.22
30–39	164	0.27
40–49	153	0.25
50–59	103	0.2
More than 60	39	0.06
No responded	6	0.01
Total	601	1
Level of studies		
Primary education	6	0.01
Secondary education	60	0.1
Bachelor	95	0.16
University	343	0.57
Master	91	0.15
No responded	6	0.01
Total	601	1

TABLE 3 | Distributions of participants in the collecting data procedure.

	Initially proposed randomly		Proposal accepted	
	Employees	**Directors**	**Employees**	**Directors**
SANTANDER BANK	50	10	4	1
BBVA	50	10	6	2
CAIXABANK	50	10	3	1
BANKIA	50	10	7	1
SABADELL BANK	50	10	4	1
	250	50	24	6

TABLE 4 | Indicators.

Indicators		Authors
RWS: Reduction in work stress		
(RWS1)	Reduce the stress produced by the level of responsibility and different roles	Murphy, 1995; Carroll and Laasch, 2020; Willness et al., 2020
(RWS2)	Reduce stress caused by a lack of promotion, job security and career development opportunities	Church et al., 2021; Marvel, 2021
(RWS3)	Reduce stress caused by negative interpersonal relationships within the workplace	Greer, 2021; Pellegrini et al., 2021; Vila-Vázquez et al., 2021
(RWS4)	Reduce stress produced by a toxic organisational climate	Jacobs and Kaufmann, 2021; Su et al., 2021
(RWS5)	Reduce stress produced by the absence of rewards for the work done	Siegrist, 1996; Balducai et al., 2021
CT: The development of transcendent behaviour		
(CT1)	The behaviour is linked to a transcendent attitude in their work that goes beyond mere financial gain	Davis, 2015
(CT2)	Spirituality modifies the perception of clients' desires and aspirations	Kochukalam and Srampickal, 2018
(CT3)	Transcendence and spirituality can become the main engine of the daily routine	Lerner et al., 2006
V: Values		
(V1)	Compassion towards employees and clients in adverse circumstances	Lim and DeSteno, 2016
(V2)	Developing an attitude of reconciliation between colleagues would increase their happiness	Flaskas et al., 2007
(V3)	Developing hope for what is to come would increase their happiness	Schnitker, 2012
(V4)	Tolerance and respect at work	Mazzola and Kessler, 2012
(V5)	Solidarity	Wilmers, 2019
(V6)	Authenticity and integrity	Meyer and Parfyonova, 2010
CA: Knowledge of the consequences of an adverse work environment		
(CA1)	Mass lay-offs	Tarki et al., 2020
(CA2)	High fragility of the Spanish banking system	García and Vázquez, 2019
(CA3)	High temporality	Araújo-Vila et al., 2020
(CA4)	Aggressive customer acquisition policies and demanding work schedules	Royo, 2020
(CA5)	High mobility between offices	Sudria, 2016

Training Sessions

Once the indicators were defined, the research team held two voluntary training sessions for the participants. The first was entitled "The role played by transcendence in behaviour modification" and the second "Values as axes on which to build a change in behaviour." Approximately 50% of the total participants agreed to join the training sessions given in the 4th week of March using Zoom. In both sessions, examples were selected from a group of characters who have stood out for their personal qualities, as well as narrative passages that have correctly described the overcoming of adversity thanks to their values and their capacity for transcendence.

Table 5 lists the characters or written passages highlighting exemplary behaviours and personal values. These were grouped into four sections (relational, authenticity, justice, and forgiveness). From the carefully selected passages, a connection was established in the training sessions between the adversities in the current jobs of bank employees and a new way of understanding their work based on the improvement of spirituality and meaning of work.

Once the training sessions were finished, 18 participants in said sessions were selected to analyse the validity of each of the questions in the questionnaire. Three of the questions were modified.

Tabulation of Data From PLS-SEM

PLS-SEM is an exploratory methodology that is based on primary or secondary data, which makes it ideal for approaches in which the objective is oriented to researchers' predictions, since it does not require a normal distribution of data and adapts to small sample sizes (Chin and Newsted, 1999). PLS-SEM also provides R2 values and indicates the importance of relationships between constructs and can handle numerous independent variables at the same time (Hair et al., 2011). Bootstrapping-based methods are used to evaluate the general fit of the model in PLS, which seems to work quite well, as indicated by Dijkstra and Henseler (2015).

This statistical technique is observed when dependency relationships are established between latent variables and indicators (Sarstedt et al., 2016). For the generation of the statistical model, the PLS (Partial Least Squares) SmartPLS 3 Version 26 technique was applied. This version is particularly recommended for composite site models (Rigdon et al., 2017). SEM-PLS modelling was defined based on two approaches: the measurement model and the structural model. To proceed with the analysis of the structural model, the reliability that exists between the indicators and the constructs was analysed, as well as the validity of the measurement model (Hair et al., 2011). In this case, we use reflective elements because they are interchangeable (Haenlein and Kaplan, 2004).

Evaluation of the Fit of the Global Model

Although the criteria proposed to fit the model in PLS-SEM are in the initial stage of investigation, they should be taken

TABLE 5 | Authors and passages that have correctly described the variables of the model.

Variables	Characters-narratives	Exemplary behaviours
Behavioural changes		
Search for the meaning of life	Viktor Frankl (1905–1997) (Längle and Sykes, 2006) (Yunus et al., 2010).	1. Human capacity to transcend the difficulties of a concentration camp 2. The value of sincerity that helps to develop in a person and those around them
Origin of creation	Bible (Genesis 1–2) (Wenham, 1994).	1. Communicate inner goodness to other creatures 2. Discover the reality of providence in people and government of creatures
Contemplation of the beauty of creation	Bible (Genesis 1–2) (Wenham, 1994).	1. Learn from the fruits of the contemplation of beauty 2. Develop acts of gratitude and praise
Values		
Relational (kindness, respect, tolerance)	Mahatma Gandhi (1869–1948) (Barnabas and Clifford, 2012).	1. Sowing peace, friendship and tolerance as a way of life 2. Respect for the ideas of others
Authenticity (honesty, trust, fidelity, sincerity and optimism)	Marco Tulio Cicerón (106 aC-46 aC) (Sierra, 2009).	1. Honesty must be the ultimate goal to which a human being must aspire above the useful and pleasant 2. Honesty is one of the most important components of a healthy personality.
Justice (solidarity, freedom and commitment)	Muhammad Yunus (1940–2018) (Yunus et al., 2010).	1. Development of a micro-credit programme in poor neighbourhoods 2. Committed to the extension of solidarity entrepreneurship
Forgiveness, reconciliation with an adversary	Teresa de Calcutta (1910–1997) (Poplin, 2011).	1. They met all those who have experienced pain and suffering 2. They practised mercy in all their actions
Forgiveness, patience in the face of adversity	Nelson Mandela (1918–2013) (Glad and Blanton, 1997) Martin King (1929–1968) (Ward et al., 1996).	1. Faithful fighters to achieve peace in South Africa before the yoke of whites and an example of learning how to keep a country at peace in the midst of differences 2. Luther King patiently fought to realise the American dream to advance the rights of African Americans
Tenacity and perseverance in the face of adversity	Marie Curie (1867–1934) (Radvanyi and Villain, 2017).	1. Curie managed to stand out with tenacity and effort in a time where machismo and xenophobia were present everywhere. 2. She was the first person to receive two Nobel prizes: one for Physics in 1903 and one for Chemistry in 1911.

with some caution (Hair et al., 2017). However, when applying a consistent PLS approach (PLSc-SEM), focused on reflexively measured constructs, one may be interested in the fit of the model. Therefore, it is possible to mimic CB-SEM more completely through the PLSc-SEM approach (Henseler et al., 2016; Sarstedt et al., 2016). SmartPLS offers the following fit measures: firstly, the residual standardised root mean square (SRMR), which is defined as the difference between the observed correlation and the implicit correlation matrix of the model, so values less than 0.08 (Hu and Bentler, 1998) and Henseler et al. (2016) suggest that SRMR <95% starting quantile (SRMR HI95) is considered a good fit (**Table 6**).

Second, there is the normalised fit index (NFI), whose measure represents an acceptable fit above 0.9 (Henseler et al., 2016). In our case, NFI = 0.927. The third exact fit of the model is bootstrap-based statistical inference tests, which can be evaluated using the squared Euclidean distance (dULS) and the geodetic distance (dG) as the two different ways to calculate the discrepancy between the empirical covariance and the covariance implicit in the composite factor model (Dijkstra and Henseler, 2015).

Furthermore, Henseler et al. (2016) suggest that dULS and dG should be lower than the starting quantile of 95% dULS < starting quantile of 95% (HI95 of dULS) and dG lower than 95% starting quantile (HI95 of dG; **Table 7**). Therefore, a model fits well if the difference between the implicit correlation matrix in the model being tested and the empirical correlation matrix is so small that it can be attributed purely to sampling error, hence the difference between the correlation matrix implicit in our model and the empirical matrix. The correlation matrix must be non-significant ($p > 0.05$).

RESULTS

Data Analysis and Measurement Model

The data have been processed using the multivariate PLS technique. This approach is recommended for social science analysis (Fornell and Bookstein, 1982) in small samples (Hulland, 1999). According to Carmines and Zeller (1979), individual reliability must be analysed right at the beginning of the methodological process of determining the appropriate indicators. In this sense, the loads (λ) must be greater than 0.707 (**Table 8**).

Table 9 examines the individual reliability of Cronbach's alpha (Nunnally and Bernstein, 1994) and Rho_A with values >0.70 (Dijkstra and Henseler, 2015) and the composite reliability with values >0.5 (Fornell and Larcker, 1981). The minimum level of mean variance extracted (AVE) explains that all the analysed constructs were reliable with more than 50% of variance between their own indicators (Hair et al., 2017). In our case, all the constructs exceed the minimum values of compound reliability and convergent validity.

To analyse the discriminant validity, the analysis demonstrated by Fornell and Larcker (1981) is carried out by examining the amount of variance that exists between its indicators (AVE), which must be greater than the variance

TABLE 6 | Measure of fit according to the SRMR.

SRMR	Original sample (O)	Sample mean (M)	95%	99%
Saturated model	0.013	0.011	0.015	0.017
Estimated model	0.013	0.011	0.015	0.016

TABLE 7 | Measure of fit according to the dULS and the dG.

dULS	Original sample (O)	Sample mean (M)	95%	99%
Saturated model	0.007	0.006	0.010	0.013
Estimated model	0.007	0.005	0.009	0.012
dG	**Original sample (O)**	**Sample mean (M)**	**95%**	**99%**
Saturated model	0.013	0.012	0.020	0.025
Estimated model	0.013	0.012	0.021	0.026

that said variable shares with others in the model (Roldán and Cepeda, 2016). A second, more rigorous analysis is called heterotrait-monotrait (HTMT) whose value must be <0.90 (Henseler et al., 2015; see **Table 10**). In our case, the criterion is met.

To assess the best fit of the model, it must be analysed using the value obtained from the residual mean square root (SRMR). In our case, the value was 0.042, which did not exceed the approved 0.08 (Hu and Bentler, 1998).

Structural or Internal Model Analysis

After ensuring that the relationships between the constructs and indicators were acceptable, the structural or internal model was evaluated by examining the relationships between constructs to predict the viability of the model (Hair et al., 2014). The most important value is the coefficient of determination that measures the explanatory capacity of the dependent variable (R2; Hair et al., 2014). This can be weak, moderate or strong, depending on the values obtained (0.19, 0.33, and 0.67, respectively; Chin, 1998). As can be seen in **Table 9**, the value of R2 is 0.553, which shows that the model is significant and adequately explains the elements that contribute to improving the happiness of bank employees by developing behaviours that reinforce their spirituality.

To measure the path coefficients, we use two nonparametric tests in **Table 11**: *t* values and value of *p*. Both indicate whether the hypotheses were supported. In this case, the Student *t* value should exceed 1.96 (Hair et al., 2014) and the value of p should be less than 0.05 (Henseler et al., 2009). Both criteria are met in all hypotheses. The path coefficients (β) and the t distribution explain the importance of the hypotheses when activating 5,000 subsamples in the original model. This method is called bootstrapping, and it

TABLE 8 | Outer model loadings.

	CA	RWS	CT	V
CA1	0.928			
CA4	0.900			
CA5	0.929			
RWS1		0.939		
RWS3		0.944		
CT1			0.928	
CT2			0.935	
V2				0.951
V3				0.941

provides the fit of the model (Henseler, 2017). The confidence intervals and *t* values outline a second test to assess the significance of the path coefficient. The measure is based on analysing each interval, which cannot contain a 0 value (Henseler et al., 2009; see **Table 11**).

Use of Predictive Analysis

Table 12 also measures Q2 predictive relevance by predicting endogenous latent constructs. The resulting parameter must be higher than $Q2 > 0$. In our case, $Q2 > 0.438$; this criterion is thus validated.

DISCUSSION

In the last decades, banks have faced enormous changes in the structure and organisation. New technology and deregulation labour markets have reshaped working lives by periodically changing working conditions (Kaur et al., 2017). As a result, not only companies´ structure and organisations have evolved but also have impacted on working population's health and their psycho-social disorders of employees. Those changes have had serious effect on bank employees as well as in their daily lives based on the banking sector's ongoing competition (Bozdo and Kripa, 2015).

The banking sector evolution has defined their task as bank sellers rather bank employees subjected under a great pressure to meet the bank's objectives by selling investment funds, bonds and insurance policies (Adrian and Ashcraft, 2016). Pressure, tension, and stress in the bank atmosphere is a daily routine that is currently threatening the employee's banking activity (Silva and Navarro, 2012).

That physical and mental experiences related to the stress at work were analysed through the interviews made to employees and directors in the banking sector. Among them "Workers are under immense levels of pressure, from both the demands of the job and the knowledge that automation might soon put them out of work. As a result, far too many days are lost to stress every year" (employee 2), "when you consider the effect that stress will have on employee productivity, the figure's likely much, much higher" (employee 4), "if you talk to every employee, you might start to hear the same issues come up again and again." At this point, you'll have a good idea of the biggest causes of stress in your organisation.

TABLE 9 | Reliability and validity.

	Cronbach's alpha	rho_A	Composite reliability	AVE	Fornell-Larcker criterion			
CA	0.908	0.910	0.942	0.844	0.919			
RWS	0.872	0.873	0.940	0.886	0.723	0.941		
CT	0.847	0.848	0.929	0.867	0.687	0.680	0.931	
V	0.883	0.888	0.945	0.895	0.669	0.677	0.682	0.946

TABLE 10 | HTMT ratio.

	CA	RWS	CT	V
CA				
RWS	0.811			
CT	0.782	0.791		
V	0.745	0.771	0.786	

And once you know what's making your employees stressed, you can start thinking about the steps you could take to make things better (employee 7), "for us stress can cause headaches, heartburn, insomnia, depression, and other serious conditions. In the short-term, this will make your team unhealthy, unhappy, and unproductive. It's no wonder that so many days are lost to stress each year" (employee 11), "stress is a normal human reaction. The financial sector is defined by risk and high-stakes decisions. Of course, workers are going to feel stressed. But when the stress gets too much, when it starts to affect workers' health and, by extension, the business, then you have a problem" (employee 14), "when it comes to organisational change and restructuring, it's not necessarily the change itself that causes stress. It's the uncertainty. Employees hate the idea that 1 day they could show up to work to find that everything's changed or worse, that they do not have a job anymore. This must cause millions of sleepless nights each year" (employee 18).

Similarly, director also have shown what the stress is harming to employees and the managing system at the banking sector. "Leaders and managers are important role models in fostering healthy behaviours at work. These findings underline how harmful the impact can be if managers aren't equipped with the competence and confidence to go about their people management role in the right way" (director 1), "if you foster a community that's entirely driven by profit and results, do not be surprised when the air turns toxic. This sort of attitude could turn your employees against each other" (director 2), "businesses work best when everyone works together towards a shared goal. If this goal is nothing more than 'profit,' then you may create an unhealthy culture of ruthless competition. This is bad for stress levels and very bad for productivity" (director 4).

The "Report on the evolution of employment in the financial sector restructuring process 2008–2020" prepared by CCOO (2020) for the banking sector in Spain. It proposes mechanisms to improve working conditions based on external issues, such as the development of a greener, more sustainable and digital economy, improving ethical banking and guaranteeing financial inclusion in an environment with fewer operators, fewer offices and fewer staff.

However, they put aside the personalised training in values and the transcendent vision of work, which gives them a more complete meaning of adverse conditions based on exemplary behaviours of individuals who have excelled throughout humanity.

In the last decades, spirituality as a searching process for transcendence, entails abilities drawn from spiritual themes to improve and better adapt workers to pressure and stressful tasks at the company (Emmons, 1999). Those adaptation comes from the developing of values and personal capabilities which can place the actions and lives in a wider, richer, meaningful context (Zohar et al., 2000).

Spirituality provides a deep understanding about question that goes beyond professional issues increasing the awareness of developing an adaptive application of the non-material and transcendence aspects of one's existence (Vaughan, 2002). Spirituality not only provides a transcendental awareness about a meaningful perception of the self, of other and the physical world also implies a personal meaning production by developing the ability to construct purpose in physical and mental experiences (King and DeCicco, 2009).

Leadership spirituality intrinsically motives and drives the employees' internal locus towards organisational development by aligning their personal values with the values of organisational vision and mission which resultantly creates a psychological affiliation between employees' and their organisations and increases their level of self-fulfilment at work.

Personal values are highlighted in the life of outstanding individuals. Based on those values two training sessions were given in order to make them see the possibility of transforming behaviour based on the ability that each employee and manager has to transcend adverse conditions (Viktor Frankl, 1905–1997) and develop acts of gratitude to the good received (Bible, Genesis 1–2).

According to Markow and Klenke (2005) leadership spirituality not only impart delight full impact on the job performance, productivity and organisational attachment, but also affiliation and commitment with a decline in employee's turn over tension and stress. In the same direction, Fry et al. (2003) highlight that values emphasise on innovation, affection, interconnectedness and better communication which reduce the stress at work.

For this, an empirical model has been presented in order to reinforce the spirituality and transcendence of employees

TABLE 11 | Results of the structural model.

	Path coefficients (β)	Low interval	High interval	*T* Statistics	*p*
H1: CT → RWS	0.273	0.141	0.408	3.388	0.000***
H2: CA → RWS	0.414	0.260	0.563	4.512	0.000***
H3: CA → CT	0.440	0.324	0.559	6.174	0.000***
H4: CA → V	0.744	0.677	0.803	19.361	0.000***
H5: V → CT	0.459	0.331	0.577	6.242	0.000***
H6: V → RWS	0.247	0.095	0.390	2.688	0.004**

*$p < 0.05$ ($t(0.05; 499) = 1.64791345$).
**$p < 0.01$ ($t(0.01; 499) = 2.333843952$).
***$p < 0.001$ ($t(0.001; 499) = 3.106644601$).

TABLE 12 Coefficients and parameters of the route.

	R^2	Q^2
CA		
RWS	0.616	0.537
CT	0.562	0.484
V	0.447	0.394

in their daily activities. This model is based on the knowledge of adverse conditions and of the values that are necessary to incorporate to adapt the response of employees to adverse conditions in order to be able to reduce work stress.

From the results obtained, we observe that all the external loads of the indicators elaborated by the consensus of the bank employees are valid ($\lambda > 0.7$). To achieve this result, a participatory methodology was developed not only in the definition of the indicators but also in the organisation of training actions to deepen the factors and indicators that contribute to reducing work stress.

The model presented is significant with a moderate-high explanatory capacity ($R^2 = 0.616$). Following Schwartz (1973), it can be said that knowledge of CA leads the employee to need to develop a series of values as the main means to combat them (V) (H3: CA → V; $\beta = 0.744$; $T = 19.361$). The values have been extracted from the examples of: Mahatma Gandhi (1869–1948) "tolerance and respect for others"; Marco Tulio Cicero (106 BC-46 BC) "Honesty"; Muhammad Yunus (1940–2018) "commitment and solidarity"; Teresa of Calcutta (1910–1997) "compassion"; Nelson Mandela (1918–2013), Martin Luther King (1929–1968) "reconciliation"; and Marie Curie (1867–1934) "patience." The teaching of these values has helped to develop CT among bank employees (RE) (H5: V → CT; $\beta = 0.459$; $T = 6.242$). The result opens the doors to a RWS among employees (H1: CT → RRWS; $\beta = 0.273$; $T = 3.388$). All those examples have personified values which have become a meaningful insight for the employees. It has also been stressed by Giacalone and Jurkiewicz (2003) adding that beside focusing on the values of organisational vision of the company the employees' self-fulfilment need should also be given coherent importance to personifies strong commitment and organisational accomplishment as a way to reduce tensions at work.

Those theories are well explained through Ryan and La Guardia (2000) who say that the organisations with cultures reflecting spiritual values such as individual support, effective communication, coordination, collaboration and strong interpersonal relationships which motivate employees and reduce tensions at work. Other benefits of developing those values are pointed out. According to his view employees' effectiveness reduce absenteeism by creating a cognitive attachment to remain loyal and careful for the future development of the organisation. That cognitive and psychological association with their organisations strengthens their commitment at work with strong sense of fulfilment which, eventually channel any potential dimension of stress in the company (Lilius et al., 2005).

Regarding to those statement drawn from the literature review, managers (D) and employees (E) were asked about the chosen mode to reduce work stress. Two modes were proposed: (1) direct; from the knowledge of the adverse consequences in advance or (2) indirect; following the steps proposed by the Schwartz model from the promotion of V and CT.

Six dichotomous questions were added at the end of the original questionnaire with answers (Yes/No/Do not Know). Of the total sample ($n = 601$), 496 are employees (E) whose response percentage was 72% and 106 managers (D) who answered 77% of the questions.

As can be seen in **Table 13**, both employees and managers prefer to reinforce values and their CT as mechanisms to reduce work stress, since the former presents higher values than the latter. Results are aligned with Frew (2000) when he states a view that spirituality is found beneficial in reducing the feelings of tensions, anxiety as it aids the employees to cope with the burden and pressure of work.

CONCLUSION

Three conclusions can be drawn from the study results:

First: Not only were all the hypotheses validated (H1–H5; value of $p < 0.05$), but the proposed model also allows us to establish a training strategy to go beyond the routine work of each bank employee and thus to propose modes of overcoming suffering at work. Based on the model proposed and the hypotheses validated the training strategy is based

TABLE 13 | Direct and indirect mechanisms to reduce work stress ($n = 601$).

Schwartz model: CA-V-CT-RWS	**E**	**D**
Do you think that the development of V and CT could help you reduce the work stress caused by a layoff?	9.5	9.1
Do you think that the development of V and CT could help you reduce the work stress produced by aggressive customer acquisition policies?	9.1	8.9
Do you think that the development of V and CT could help you reduce the work stress produced by a mobility plan between offices?	8.3	8.5
Direct effect (CA-RWS)	**E**	**D**
Do you think that the knowledge of a possible dismissal well in advance could help you to directly reduce the stressful situation that it may cause you?	7.9	7.5
Do you think that knowing about aggressive customer acquisition policies well in advance could help you to directly reduce the stressful situation that it may cause you?	7.5	7.3
Do you think that knowing the mobility plan between offices well in advance could help you to directly reduce the stressful situation that it may cause you?	6.4	6.1

on turning the workplace in a place where elements of spirituality have an impact on an organisation since the organisation is able to gain advantages by developing a humanistic environment in which workers can achieve their full capacity.

As a result of the focus groups statements as well as studies drawn from the literature review stressed in the paper we believe that a humanistic work environment can create a win-win situation for employees, for employee's coworkers, reducing stress and tension in the workplace and that it is good for the banking sector. If the employees are at liberty to bring his or her physical, intellectual, emotional, and spiritual attributes to the workplace, they will become more productive, creative, and fulfilled. On the contrary, if the employees work in a dispirited workplace, they will manifest themselves in various work troubles- low morale, rising absenteeism, high turnover, burnout, frequent stress-related illness and non-committed to the organisation. Hence, the purpose of the training strategy is to give knowledge about the association between workplace spirituality (team's sense of community, alignment between organisational and individual values, sense of contribution to society and enjoyment at work) and affective commitment among employees and directors who are working in the banking sector in Spain.

Second: Employees and managers in the banking sector in Spain opt for a model to reduce work stress based on the learning of behavioural models based on the development of values and a transcendent vision. So, unlike the social improvements proposed by CCOO (2020) in the "Report on the evolution of employment in the financial sector restructuring process 2008–2020" based on organisational issues, this model proposes improvements that lie in the development of values and the transcendent vision of work to overcome adverse conditions resulting from massive lay-offs (Tarki et al., 2020), high fragility in the Spanish banking system (García and Vázquez, 2019) and high temporality (Araújo-Vila et al., 2020), aggressive policies to attract clients, demanding work schedules (Royo, 2020) and high mobility between offices (Sudria, 2016) which hinders personal and vital stability.

What the model has proved is that employees and director convey the intention to reduce the stress at work by developing their spirituality in the workplace based on values and transcendence. According to Morales-Sánchez and Cabello-Medina (2015) we are working on developing the values that will be incorporated in the second study that is about to start. It is based on presenting a list of values from that previous research such as: amiability, commitment, courage, environmental responsibility, generosity, gratitude, honesty, humility, justice, optimism, perseverance, prudence, self-control, service to others, solidarity and transcendence.

Third: The proposed model allows the construction of a set of training actions based on the contributions already made by international leaders who have stood out for their values, spiritual resources and ability to transcend at work. They include political leaders, scientists, religious leaders, economists, historians and humanists.

Fourth: According to the R^2 is 0.553, the model shows that is significant and adequately explains the elements that contribute to improving the happiness of bank employees by developing behaviours that reinforce their spirituality. That result is based on the happiness management which explains how workers from the banking sector are searching for welfare through quality, health, and safety parameters (Ravina-Ripoll et al., 2021).

The main limitation of this work has been the difficulty in organising joint variable selection sessions such as training sessions. For this reason, we have had to multiply the number of sessions to reach the largest number of bank employees. This has caused a loss of information when verified by several reporting agents at the same time.

Among future lines of research, the research team is working on data capture to develop a longitudinal model in order to validate the effect of training in values and significance in improving the capacities of bank employees to respond to stressful situations. An action plan is proposed to reduce the level of employees´ stress in the banking sector by developing personal and professional values. That Project will be incorporated in the second study. It is based on presenting a list of values such as: amiability, commitment, courage, environmental responsibility, generosity, gratitude, honesty, humility, justice, optimism, perseverance, prudence, self-control, service to others, solidarity and transcendence. Those values will be tested in the banking sector in order to set up indicators to be applied at the workplace.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material; further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

RR-R, JAM-M, and RE wrote the paper and retrieved the data. MS-O and JC-S supervised the paper and included new literature. All authors contributed to the article and approved the submitted version.

FUNDING

The publication of this work was possible thanks to the funding provided by the European Regional Development Fund and by the Consejería de Economía, Ciencia y Agenda Digital from Junta de Extremadura through grant GR18052.

ACKNOWLEDGMENTS

Authors want to acknowledge the contributions of employee and directors from the Banking sector who have been actively involved in the paper.

REFERENCES

Adrian, T., and Ashcraft, A. B. (2016). "Shadow banking: a review of the literature," in *Banking Crises*. ed. G. Jones (London: Palgrave Macmillan), 282–315.

Altavilla, C., Boucinha, M., Peydró, J. L., and Smets, F. (2020). Banking supervision, monetary policy and risk-taking: big data evidence from 15 credit registers, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg.

Anandarajah, G., and Hight, E. (2001). Spirituality and medical practice: using the HOPE questions as a practical tool for spiritual assessment. *Am. Fam. Physician* 63:81.

Araújo-Vila, N., Fraiz-Brea, J. A., and de Araújo, A. F. (2020). Spanish economic-financial crisis: social and academic interest. *J. Bus. Cycle Res.* 16, 135–149. doi: 10.1007/s41549-020-00045-z

Balducai, C., Conway, P. M., and van Heugten, K. (2021). "The contribution of organizational factors to workplace bullying, emotional abuse and harassment," in *Pathways of Job-Related Negative Behaviour*. Springer, 3–28.

Barceló, M. A., Coll-Negre, M., Coll-de-Tuero, G., and Saez, M. (2016). Effects of the financial crisis on psychotropic drug consumption in a cohort from a semi-urban region in Catalonia, Spain. *PLoS One* 11:e0148594. doi: 10.1371/journal.pone.0148594

Barnabas, A., and Clifford, P. S. (2012). Mahatma Gandhi: an Indian model of servant leadership. *Int. J. Leadersh. Stud.* 7, 132–150.

Barroso, M. M. (2017). Crisis y trabajo. Un análisis de las políticas laborales de emergencia en Portugal, España y Grecia: crisis and work: an analysis of emergency labour market policies in Portugal, Spain and Greece. *Revista Española de Investigaciones Sociológicas* 158, 3–22. doi: 10.5477/cis/reis.158.3

Bozdo, A., and Kripa, E. (2015). The impact of macro-economic factors on nonperforming loans in Albania. *Acad. J. Interdiscip. Stud.* 4(Suppl. 1):534.

CCOO (2020). Informe sobre la evolución del empleo en el proceso de reestructuración del sector financiero 2008–2020″; en defensa del empleo y la profesionalidad del principal activo del sector financiero español, CAOO Servicios, Madrid. Available at: https://www.ccoo-servicios.es/financiero/html/50374.html (Accessed February 24, 2021).

Carmines, E. G., and Zeller, R. A. (1979). "Reliability and validity assessment." in *Sage University Paper Series on Quantitative Applications in the Social Sciences, No. 07–017*, Beverly Hills, CA: Sage.

Carroll, A. B., and Laasch, O. (2020). "From managerial responsibility to CSR and back to responsible management," in *Research Handbook of Responsible Management* (Edward Elgar Publishing).

Cartledge, P. (1977). Hoplites and heroes: Sparta's contribution to the technique of ancient warfare. *J. Hell. Stud.* 97, 11–27. doi: 10.2307/631018

Chin, W. W. (1998). "The partial least squares approach to structural equation modeling," in *Modern Methods for Business Research*. ed. G. A. Marcoulides (Mahwah, NJ: Lawrence Erlbaum), 295–336.

Chin, W. W., and Newsted, P. R. (1999). "Structural equation modeling analysis with small samples using partial least squares," in *Statistical Strategies for Small Sample Research*. *Vol. 1*. 307–341.

Church, A. H., Guidry, B. W., Dickey, J. A., and Scrivani, J. A. (2021). Is there potential in assessing for high-potential? Evaluating the relationships between performance ratings, leadership assessment data, designated high-potential status and promotion ouCTomes in a global organization. *Leadersh. Q.* 101516. doi: 10.1016/j.leaqua.2021.101516

Cortès-Franch, I., and López-Valcárcel, B. G. (2014). Crisis económico-financiera y salud en España. Evidencia y perspectivas. Informe SESPAS 2014. Gaceta Sanitaria, 28, 1–6.

Counted, V., Neff, M. A., Captari, L. E., and Cowden, R. G. (2020). Transcending place attachment disruptions during a public health crisis: spiritual struggles, resilience, and transformation. *J. Psychol. Christ.* 39, 276–287.

Davis, A. (2015). Transcendence: dissolving limitations in the art environment a proposal on integrating new users into the traditional museum model. Doctoral dissertation, The George Washington University.

De Clercq, D., Haq, I. U., and Azeem, M. U. (2020). The relationship between workplace incivility and depersonalization toward co-workers: roles of job-related anxiety, gender, and education. *J. Manag. Organ.* 26, 219–240. doi: 10.1017/jmo.2019.76

De Haan, J., Schoenmaker, D., and Wierts, P. (2020). *Financial Markets and Institutions: A European Perspective*. Cambridge University Press.

Dijkstra, T. K., and Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Q.* 39, 297–316. doi: 10.25300/MISQ/2015/39.2.02

Ellingson, S. (2016). *To Care for Creation: The Emergence of the Religious Environmental Movement*. University of Chicago Press.

Emmons, R. A. (1999). Religion in the psychology of personality: an introduction. *J. Pers.* 67, 874–888. doi: 10.1111/1467-6494.00076

Espino Granado, A. (2014). Crisis económica, políticas, desempleo y salud (mental). *Revista de la asociación española de neuropsiquiatría* 34, 385–404. doi: 10.4321/S0211-57352014000200010

European Forum SPES (2014). European Fórum, Spirituality in Economics and Society. Available at: http://eurospes.org/content/our-mission-spiritual-based-humanism (Accessed March 08, 2021).

Finegan, J. (1994). The impact of personal values on judgments of ethical behaviour in the workplace. *J. Bus. Ethics* 13, 747–755. doi: 10.1007/BF00881335

Flaskas, C., MCAarthy, I., and Sheehan, J. (eds.) (2007). *Hope and Despair in Narrative and Family Therapy: Adversity, Forgiveness and Reconciliation*. Routledge.

Fornell, C., and Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *J. Mark. Res.* 19, 440–452. doi: 10.1177/002224378201900406

Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18:39. doi: 10.1177/002224378101800313

Frew, E. J. (2000). *Stressors, Strain, and Spirituality at Work*. Las Cruces NM: New Mexico State University.

Fry, L. W., Vitucci, S., and Cedillo, M. (2003). *Transforming the Army Through Spiritual Leadership*. Killeen, TX: Tarleton State University-Central Texas.

Ganster, C. D. (2013). Rosen, C.C. work estrés and employee health: a multidisciplinary review. *J. Manag.* 39, 1085–1122.

García, B. A., and Vázquez, J. P. A. (2019). "Fragility of the Spanish banking system and financial exclusion: lessons learned from the global crisis and new challenges for the 21st century banking sector," in *Maintaining Financial Stability in Times of Risk and Uncertainty* (IGI Global), 69–91.

Giacalone, R. A., and Jurkiewicz, C. L. (2003). "Toward a science of workplace spirituality," in *Handbook of Workplace Spirituality and Organizational Performance*. eds. R. A. Giacalone and C. L. Jurkiewicz (New York: M. E. Sharp).

Gismera, E., Fernández, J. L., Labrador, J., and Gismera, L. (2019). Suffering at work: a challenge for corporate sustainability in the Spanish context. *Sustainability* 11:4152. doi: 10.3390/su11154152

Glad, B., and Blanton, R. (1997). FW de Klerk and Nelson Mandela: a study in cooperative transformational leadership. *Pres. Stud. Q.* 27, 565–590.

Greer, C. R. (2021). *Strategic Human Resource Management.* Pearson Custom Publishing.

Gupta, M., Kumar, V., and Singh, M. (2014). Creating satisfied employees through workplace spirituality: a study of the private insurance sector in Punjab (India). *J. Bus. Ethics* 122, 79–88. doi: 10.1007/s10551-013-1756-5

Haenlein, M., and Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Underst. Stat.* 3, 283–297. doi: 10.1207/s15328031us0304_4

Hair, J. F. Jr., Matthews, L. M., Matthews, R. L., and Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *Int. J. Multivariate Data Analysis* 1, 107–123. doi: 10.1504/IJMDA.2017.10008574

Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *J. Mark. Theory Pract.* 19, 139–152.

Hair, J. F. Jr., Sarstedt, M., Hopkins, L., and Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): an emerging tool in business research. *Eur. Bus. Rev.* 26, 106–121. doi: 10.1108/EBR-10-2013-0128

Hendriks, T., Schotanus-Dijkstra, M., Hassankhan, A., De Jong, J., and Bohlmeijer, E. (2020). The efficacy of multi-component positive psychology interventions: a systematic review and meta-analysis of randomized controlled trials. *J. Happiness Stud.* 21, 357–390. doi: 10.1007/s10902-019-00082-1

Henseler, J. (2017). "Partial least squares path modeling," in *Advanced Methods for Modeling Markets* (Cham: Springer), 361–381.

Henseler, J., Hubona, G., and Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Ind. Manag. Data Syst.* 116, 2–20. doi: 10.1108/IMDS-09-2015-0382

Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* 43, 115–135. doi: 10.1007/s11747-014-0403-8

Henseler, J., Ringle, C. M., and Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Adv. Int. Mark.* 20, 277–319. doi: 10.1108/S1474-7979(2009)0000020014

Hu, L. T., and Bentler, P. M. (1998). Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. *Psychol. Methods* 3:424. doi: 10.1037/1082-989X.3.4.424

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strateg. Manag. J.* 20, 195–204. doi: 10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7

i Meléndez, E. S. (2012). El mercado de trabajo español en la crisis económica (2008-2012): desempleo y reforma laboral. *Revista de Estudios Empresariales. Segunda época* 29–57.

Jacobs, D., and Kaufmann, W. (2021). The right kind of participation? The effect of a deliberative mini-public on the perceived legitimacy of public decision-making. *Public Manag. Rev.* 23, 91–111. doi: 10.1080/14719037.2019.1668468

Kaur, K., Kaur, P., and Kumar, P. (2017). Stress, coping mechanisms and its socioeconomic impact on organisations: a review. *Indian J. Econ. Dev.* 13, 744–751. doi: 10.5958/2322-0430.2017.00163.9

Kearns, E. (1989). *The Heroes of Attica. Bulletin Supplement.* University of London. Institute of Classical Studies, 212.

Keen, M. (2020). *Chivalry.* Manchester University Press.

Khalid, A., Pan, F., Li, P., Wang, W., and Ghaffari, A. S. (2020). The impact of occupational estrés on job burnout among bank employees in Pakistan, with psychological capital as a mediator. *Front. Public Health* 7:410. doi: 10.3389/fpubh.2019.00410

King, D. B., and DeCicco, T. L. (2009). A viable model and self-report measure of spiritual intelligence. *Int. J. Transpers. Stud.* 28, 68–85. doi: 10.24972/ijts.2009.28.1.68

Klutse, S. K. (2020). Competitiveness in the European consolidated banking sector after the 2008 financial crisis. *Rev. Econ. Perspect.* 20, 431–444. doi: 10.2478/revecp-2020-0021

Knight, C., Tims, M., Gawke, J., and Parker, S. K. (2021). When do job crafting interventions work? The moderating roles of workload, intervention intensity, and participation. *J. Vocat. Behav.* 124:103522. doi: 10.1016/j.jvb.2020.103522

Kochukalam, C., and Srampickal, S. G. (2018). Workplace spirituality: a transcending experience. *GJCMP* 7, 20–22. doi: 10.24105/gjcmp.7.1.1804

Kurdi, B., and Alshurideh, M. (2020). Employee retention and organizational performance: evidence from banking industry. *Manag. Sci. Lett.* 10, 3981–3990.

Längle, A., and Sykes, B. M. (2006). Viktor Frankl: advocate for humanity: on his 100th birthday. *J. Humanist. Psychol.* 46, 36–47. doi: 10.1177/0022167805281150

Le Goff, J. (2020). *Heroes and Marvels of the Middle Ages.* Reaktion Books.

Lepisto, D. A., and Pratt, M. G. (2017). Meaningful work as realization and justification: toward a dual conceptualization. *Organ. Psychol. Rev.* 7, 99–121. doi: 10.1177/2041386616630039

Lerner, R. M., Alberts, A. E., Anderson, P. M., and Dowling, E. M. (2006). "On making humans human: spirituality and the promotion of positive youth development," in *The Handbook of Spiritual Development in Childhood and Adolescence*. eds. E. C. Roehlkepartain, P. E. King, L. Wagener and P. L. Benson (Sage Publications, Inc.), 60–72.

Lilius, J. M., Worline, M. C., Dutton, J. E., Kanov, J., Frost, P. J., and Maitlis, S. (2005). "Exploring the contours of compassion at work." in *Working Paper Series, Centre for Positive Organizational Scholarship, Ross School of Business, Michigan*.

Lim, D., and DeSteno, D. (2016). Suffering and compassion: the links among adverse life experiences, empathy, compassion, and prosocial behavior. *Emotion* 16:175. doi: 10.1037/emo0000144

Lin, C. Y. Y., Edvinsson, L., Chen, J., and Beding, T. (2012). *National Intellectual Capital and the Financial Crisis in Greece, Italy, Portugal, and Spain. Vol. 7.* Springer Science and Business Media.

Long, B. (1995). Estrés in the work place: ERIC Digest. ERIC Clearinghouse on Coun-seling Greensboro NC, Canadian Guidance and Counselling Foundation Ottawa (Ontario). 1995-00-55, ED414521.

Markow, K., and Klenke, K. (2005). The effects of personal meaning and calling on organizational commitment: an empirical investigation of spiritual leadership. *Int. J. Organ. Anal.* 13, 8–27. doi: 10.1108/eb028995

Marvel, J. D. (2021). Equality of opportunity? Sex, race, and occupational advantages in promotion to top-level management. *J. Public Adm. Res. Theory* 31, 363–380. doi: 10.1093/jopart/muaa045

Mausner-Dorsch, H., and Eaton, W. (2000). Psychosocial work environment and depression: epidemiologic assessment of the demand-control model. *Am. J. Public Health* 90, 1765–1770. doi: 10.2105/ajph.90.11.1765

Mazzola, J. J., and Kessler, S. R. (2012). "Counterproductive work behaviors and their ethical dilemmas: creating just, respectful, and productive organizations," in *Work and Quality of Life* (Dordrecht: Springer), 157–179.

Ménard, J., and Brunet, L. (2011). Authenticity and well-being in the workplace: a mediation model. *J. Manag. Psychol.* 26, 331–346. doi: 10.1108/02683941111124854

Meyer, J. P., and Parfyonova, N. M. (2010). Normative commitment in the workplace: a theoretical analysis and re-conceptualization. *Hum. Resour. Manag. Rev.* 20, 283–294. doi: 10.1016/j.hrmr.2009.09.001

Morales-Sánchez, R., and Cabello-Medina, C. (2015). Integrating character in management: virtues, character strengths, and competencies. *Bus. Ethics* 24, S156–S174. doi: 10.1111/beer.12104

Murphy, L. R. (1995). "Occupational estrés management: Current status and future di-rection," in *Trends in Organizational Behavior. Vol. 2.* 1–14.

Norris, C. (2019). Mimetic effect in mentoring: the contribution of shared transcendence values. *Int. J. Evid. Based Coach. Mentor.* 17.

Nunnally, J. C., and Bernstein, I. H. (1994). *Psychometric Theory*. New York: McGraw-Hill.

Pellegrini, P. G., Tolfo, S. D. R., Bolze, S. D. A., and D'Cruz, P. (2021). "The interface between significant others and workplace bullying, emotional abuse and harassment," in *Pathways of Job-Related Negative Behaviour*. 423–446.

Poplin, M. (2011). *Finding Calcutta: What Mother Teresa Taught me About Meaningful Work and Service.* InterVarsity Press.

Quick, J. C., and Cooper, C. L. (2003). *Estrés and Strain. 2nd Edn*. Oxford, UK: Health Press, 75.

Quick, J. C., Quick, J. D., Nelson, D. L., and Hurrell, J. J. (1997). *Preventive Estrés Management in Organizations*. Washington, DC, United States: American Psychological Association.

Radvanyi, P., and Villain, J. (2017). The discovery of radioactivity. *C. R. Phys.* 18, 544–550. doi: 10.1016/j.crhy.2017.10.008

Ravina-Ripoll, R., Tobar-Pesantez, L. B., Galiano-Coronil, A., and Marchena-Domínguez, J. (eds.) (2021). *Happiness Management and Social Marketing: A Wave of Sustainability and Creativity*. Alemania: Editorial Peter Lang.

Reinhart, C. M., and Rogoff, K. S. (2009). The aftermath of financial crises. *Am. Econ. Rev.* 99, 466–472. doi: 10.1257/aer.99.2.466

Reischer, H. N., Roth, L. J., Villarreal, J. A., and McAdams, D. P. (2021). Self-transcendence and life stories of humanistic growth among late-midlife adults. *J. Pers.* 89, 305–324. doi: 10.1111/jopy.12583

Rigdon, E. E., Sarstedt, M., and Ringle, C. M. (2017). On comparing results from CB-SEM and PLS-SEM: five perspectives and five recommendations. *Marketing ZFP* 39, 4–16. doi: 10.15358/0344-1369-2017-3-4

Robina Ramírez, R. (2017). Teaching ethics through court judgments in finance, accounting, economics and business. *Etikk i Praksis* 11, 61–87. doi: 10.5324/eip.v11i1.1938

Robina-Ramírez, R. (2021). *la enseñanza de la ética empresarial a través del cine. Una propuesta desde el humanismo empresarial.* Editorial Editamas.

Robina-Ramírez, R., and Cotano-Olivera, C. (2020). Driving private schools to go "green": the case of Spanish and Italian religious schools. *Teach. Theol. Relig.* 23, 175–188. doi: 10.1111/teth.12547

Robina-Ramírez, R., Isabel Sánchez-Hernández, M., and Díaz-Caro, C. (2020a). Hotel manager perceptions about corporate compliance in the tourism industry: an empirical regional case study in Spain. *J. Manag. Gov.* 1–28.

Robina-Ramírez, R., and Medina-Merodio, J. A. (2019). Transforming students' environmental attitudes in schools through external communities. *J. Clean. Prod.* 232, 629–638. doi: 10.1016/j.jclepro.2019.05.391

Robina-Ramírez, R., Merodio, J. A. M., and McCallum, S. (2020b). What role do emotions play in transforming students' environmental behaviour at school? *J. Clean. Prod.* 258:120638. doi: 10.1016/j.jclepro.2020.120638

Robina-Ramírez, R., and Pulido-Fernández, M. (2019). What role do religious belief and moral emotions play in pilgrimage with regards to respecting nature? *Ann. Leis. Res.* 1–21. doi: 10.1080/11745398.2019.1703199

Robina-Ramírez, R., Sánchez-Hernández, M. I., Jiménez-Naranjo, H. V., and Díaz-Caro, C. (2020c). The challenge of greening religious schools by improving the environmental competencies of teachers. *Front. Psychol.* 11:520. doi: 10.3389/fpsyg.2020.00520

Robina-Ramírez, R., Sañudo-Fontaneda, L. S., and McCallum, S. (2020d). Human dignity as a mediator effect for the rights and duties of accessing water and sanitation. *Trans. R. Soc. South Africa* 75, 203–212.

Roldán, J. L., and Cepeda, G. (2016). *Modelos de ecuaciones estructurales basados en la varianza: Partial least squares (PLS) para investigadores en ciencias sociales*. Sevilla, Spain: Universidad de Sevilla.

Royo, S. (2020). *Why Banks Fail: The Political Roots of Banking Crises in Spain.* Springer Nature.

Ryan, K. D., and La Guardia, J. G. (2000). "What is being optimized over development? A self-determination theory perspective on basic psychological needs across the life span," in *Dialogues on Psychology and Aging*. eds. S. Qualls and R. Ables (Washington, DC: American Psychological Association), 145–172.

Sánchez, J. M. M. (2010). La crisis de septiembre de 2008: algunos datos y reflexiones (Especial referencia la economía española). Contribuciones a la Economía, (2010-06).

Sánchez-Hernández, M. I., Gismera-Tierno, E., Labrador-Fernández, J., and Fernández-Fernández, J. L. (2020a). Encountering suffering at work in health religious organizations: a partial least squares path modeling case-study. *Front. Psychol.* 11:1424. doi: 10.3389/fpsyg.2020.01424

Sánchez-Hernández, M. I., Stankevičiūtė, Ž., Robina-Ramirez, R., and Díaz-Caro, C. (2020b). Responsible job design based on the internal social responsibility of local governments. *Int. J. Environ. Res. Public Health* 17:3994. doi: 10.3390/ijerph17113994

Sánchez-Oro Sánchez, M., and Robina-Ramírez, R. (2020). *Los grupos focales ("focus group") como herramienta de investigación turística.* Universidad de Extremadura.

Sanusi, A., Yusuf, H., Mahrani, S. W., and Purwanto, M. R. (2020). Workplace Estrés among workers of banks and financial organizations. *Int. J. Psychosoc. Rehabil.* 24, 1317–1328. doi: 10.37200/IJPR/V24I1/PR200231

Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., and Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: where the bias lies! *J. Bus. Res.* 69, 3998–4010. doi: 10.1016/j.jbusres.2016.06.007

Schnitker, S. A. (2012). An examination of patience and well-being. *J. Posit. Psychol.* 7, 263–280. doi: 10.1080/17439760.2012.697185

Schwartz, S. H. (1973). Normative explanations of helping behavior: a critique, proposal, and empirical test. *J. Exp. Soc. Psychol.* 9, 349–364. doi: 10.1016/0022-1031(73)90071-1

Schwartz, S. H. (2007). Basic human values: theory, measurement, and applications. *Rev. Fr. Sociol.* 47:929.

Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *ORPC* 2:2307.

Schwartz, S. H., y Howard, J. A. (1981). "A normative decision-making model of altruism," in *Altruism and Helping Behavior*. Hillsdale, NJ: Erlbaum, 189–211.

Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *J. Occup. Health Psychol.* 1, 27–41.

Sierra, J. D. G. (2009). "Cicerón y la importancia de la justicia en la construcción del Estado," in *Pensamiento y Poder. Vol. 1.* 147–169.

Silva, J. L., and Navarro, V. L. (2012). Work organization and the health of bank employees. *Rev. Lat. Am. Enfermagem* 20, 226–234. doi: 10.1590/S0104-11692012000200003

Stokes-Parish, J., Elliott, R., Rolls, K., and Massey, D. (2020). Angels and heroes: the unintended consequence of the hero narrative. *J. Nurs. Scholarsh.* 52, 462–466. doi: 10.1111/jnu.12591

Su, G., Hastak, M., Deng, X., and Khallaf, R. (2021). Risk sharing strategies for IPD projects: interactional analysis of participants' decision-making. *J. Manag. Eng.* 37:04020101. doi: 10.1061/(ASCE)ME.1943-5479.0000853

Sudria, C. (2016). "Big banks in Spain. Successes and failures on the way towards a freer market," in *Immortal Banks: Strategies, Structures and Performances of Major Banks* (Genève: Droz), 139–157.

Suzabar, D. F., Soelton, M., Umar, M., and Triwulan, J. (2020). "Recognizing how the time demands of work influences the turnover intention in banking industry." in *4th international Conference on Management, Economics and Business (ICMEB 2019)*. Atlantis Press, 40–45.

Tarki, A., Levy, P., and Weiss, J. (2020). The Coronavirus Crisis Doesn't Have to Lead to Layoffs. Harvard Business Review Digital.

Vasconcelos, A. F. (2021). Exploring the meaning of work through a transcendental frame. *Int. J. Organ. Anal.* doi: 10.1108/IJOA-12-2020-2522 [Epub ahead of print]

Vaughan, F. (2002). What is spiritual intelligence? *J. Humanist. Psychol.* 42, 16–33. doi: 10.1177/0022167802422003

Vila-Vázquez, G., Castro-Casal, C., and Álvarez-Pérez, D. (2021). Person–organization fit and helping behavior: how and when this relationship occurs. *Curr. Psychol.* 1–12.

Wang, Z., Zaman, S., Rasool, S. F., uz Zaman, Q., and Amin, A. (2020). Exploring the relationships between a toxic workplace environment, workplace estrés, and project suCAess with the moderating effect of organizational support: empirical evidence from Pakistan. *Risk Manag. Healthc. Policy* 13:1055.

Ward, B., Badger, T., and Badger, A. J. (eds.) (1996). *The Making of Martin Luther King and the Civil Rights Movement*. NYU Press.

Weathers, E., MCAarthy, G., and Coffey, A. (2016). Concept analysis of spirituality: an evolutionary approach. *Nurs. Forum* 51, 79–96. doi: 10.1111/nuf.12128

Wenham, G. J. (1994). *GENESIS 1–15 Volume 1 Word Biblical Commentary*. Grand Rapids.

Willness, C. R., Jones, D. A., Strah, N., and Rupp, D. E. (2020). "Corporate social responsibility at the individual level of analysis: research findings that inform responsible management in the wild," in *Research Handbook of Responsible Management* (Edward Elgar Publishing).

Wilmers, N. (2019). Solidarity within and across workplaces: how cross-workplace coordination affects earnings inequality. *RSF* 5, 190–215. doi: 10.7758/rsf.2019.5.4.07

Winter, S. L. (1994). Human values in a postmodern world. *Yale J. Law Humanit.* 6:233.

Wood, A. M., Froh, J. J., and Geraghty, A. W. (2010). Gratitude and well-being: a review and theoretical integration. *Clin. Psychol. Rev.* 30, 890–905. doi: 10.1016/j.cpr.2010.03.005

Yukongdi, V., and Shrestha, P. (2020). The influence of affective commitment, job satisfaction and job estrés on turnover intention: a study of Nepalese bank employees. *RIBER* 9, 88–98.

Yunus, M., Moingeon, B., and Lehmann-Ortega, L. (2010). Building social business models: lessons from the Grameen experience. *Long Range Plan.* 43, 308–325. doi: 10.1016/j.lrp.2009.12.005

Zinnbauer, B. J., and Camerota, E. C. (2004). The spirituality group: a search for the sacred. *J. Transpers. Psychol.* 36, 50–65.
Zohar, D., Marshall, I. N., and Marshall, I. (2000). *SQ: Connecting With our Spiritual Intelligence*. US: Bloomsbury Publishing.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

frontiers in Psychology

ORIGINAL RESEARCH
published: 19 November 2021
doi: 10.3389/fpsyg.2021.719449

Impact of Role Conflict on Intention to Leave Job With the Moderating Role of Job Embeddedness in Banking Sector Employees

Fazal Hussain Awan[1], Liu Dunnan[1,2], Khalid Jamil[1], Rana Faizan Gul[1], Aliya Anwar[1], Muhammad Idrees[3] and Qin Guangyu[1]*

[1] School of Economics and Management, North China Electric Power University, Beijing, China, [2] Beijing Key Laboratory of New Energy and Low-Carbon Development, North China Electric Power University, Beijing, China, [3] Department of Sociology, Government College University Faisalabad, Faisalabad, Pakistan

This study investigates why some employees intend to leave their jobs when facing conflict between family responsibilities and job routines. The present study also reveals the moderating role of on-the-job embeddedness between role conflict and intention to leave the job. Drawing on conservation of resources theory, the paper investigates the buffering effect of the three on-the-job embeddedness components (fit, links, and sacrifice). Data were collected from banking officers because most of the employees have to face role conflict between family and job responsibilities, as banking is considered among the most stressful jobs. Collected data were analyzed by applying structural equation modeling. Results indicate that the role conflict significantly influences intention to leave the job. Furthermore, the study shows that on-the-job embeddedness moderates the relationship between role conflict and intention to leave. The results suggest that organizations can reduce turnover intention during times of work and life conflict by developing employee on-the-job embeddedness. This study provides some insights to managers on why many employees leave their jobs and how to overcome this problem. Management should also offer extra and available resources in periods of greater tension to minimize early thinking regarding quitting.

Keywords: role conflict, intention to leave, job embeddedness, Pakistan, bank employees

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Marc Jacquinet, Universidade Aberta, Portugal
Vikas Gupta, Amity University, India

****Correspondence:***
Muhammad Idrees
Muhammad.idrees@gcuf.edu.pk

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *02 June 2021*
Accepted: *01 October 2021*
Published: *19 November 2021*

Citation:
Awan FH, Dunnan L, Jamil K, Gul RF, Anwar A, Idrees M and Guangyu Q (2021) Impact of Role Conflict on Intention to Leave Job With the Moderating Role of Job Embeddedness in Banking Sector Employees. Front. Psychol. 12:719449. doi: 10.3389/fpsyg.2021.719449

INTRODUCTION

Employee turnover is not a new trend. Millions of people around the world leave their jobs annually. Despite all the public benefits that are attached to being employed, employees decide to quit. The researchers found several variables that affect the choice to leave during periods of work-life imbalance (Aboobaker et al., 2017). Existing literature draws our attention to multiple factors which lead to the Intention of an employee to leave and employee turnover. Those factors include internal factors related to the job itself and external factors associated with a person's personal and social life (Mansour and Tremblay, 2018). Numerous investigators have found that certain organizational factors, including organizational commitment, organizational support, and supervisors' support, along with some social and personal stress factors, might trigger Intention to leave a job among

employees (Zhang L. et al., 2019). Role conflict is one of those factors which might lead employees toward job quitting. Role conflict refers to one's unpleasant experience, which one faces due to the confronting and clashing demands of different social roles and statuses (Anand and Vohra, 2020). Two types of role conflicts include intra-role conflicts and inter-role conflicts. Intra-role conflict refers to the conflict a person faces due to increased mental pressure and stress due to conflicting expectations and demands from one domain of life. For example, the tension in the job due to multiple responsibilities can be considered a result of the intra-role conflict. Another type of role conflict is an inter-role conflict that a person faces due to conflicting demands from different life domains (Mansour and Tremblay, 2016). For example, an employee's inability to be a good parent or partner due to a demanding professional life can be considered the inter-role conflict that might lead them to quit their job (Dai et al., 2019).

When an employee leaves a job, they have to face two possible consequences. The person who leaves a job either joins another organization or is left unemployed (Lee et al., 2020). In the case of unemployment, a person faces several consequences. The financial situation of the quitter is an immediate and distressing outcome of sudden unemployment (Bayarcelik and Findikli, 2016). It is well documented that not every person gets a new job right after leaving an employer. Even for a few months, a break in the regular inflow of income can put the person into further distress (Samadi et al., 2020). Financial instability then leads to different issues related to a person's health, mainly psychological conditions. Unemployed people commonly report depression and anxiety for a long time (Minamizono et al., 2019). Social outcomes emerge in the shape of worry about dependents' financial security and the form of social gatherings being restricted (Jyoti and Rani, 2019).

Every organization aims to have high productivity and consistently increasing profitability. High profits are indicators of the success of companies. Employees are significant contributors to a company's success (Gyensare et al., 2016). The consequences of employee turnover for the employer are frequently documented. An employee's sudden departure can hinder the operations of an office for some time (Sun and Wang, 2017). It also affects team dynamics within an organization. Organizations invest a lot in their employees' training (Cho et al., 2017). All the company's investment in an employee is lost when a trained employee no longer continues to work in the organization (Lee, 2018). Highly motivated individuals serve as the driving forces of profit and competitiveness (Zimmerman et al., 2019). Along with the increase in productivity and profits, organizations try to have lower turnover as the managers are familiar with the importance of employee retention (Stamolampros et al., 2019). Numerous researchers have stressed the importance of employee retention and recommended incorporating retention strategies as fundamental principles in organizational policies (Degbey et al., 2021). Adoption of retention strategies is also recommended to small and medium sized business enterprises for the achievement of consistent productivity and rising profits (Alhmoud and Rjoub, 2019).

This research investigates if on-the-job embeddedness affects the connection between work-life conflict and an employee's intention to leave. Job embeddedness theory describes an employee's retention due to an employee's unique set of ties to the organization. In addition, it has been shown that an employee's embeddedness may serve as a buffer against bad events and ill circumstances. This study contributes to the work-life balance and job embeddedness literature by investigating whether on-the-job embeddedness moderates the effect of work-family conflict on employee leaving intention.

On the other hand, numerous attempts have been made to understand the association between role conflict and Intention to leave. Still, no investigations have been made so far which are specifically directed toward the banking sector. When it comes to the context of Pakistan, the literature seems even more limited on the subject. Therefore, this investigation's purpose is the empirical explanation of the association between role conflict and Intention to leave and the role of job embeddedness as a mediator in their relationship in the banking sector of Pakistan. This study will contribute to the existing literature by producing information about the causal relationship among role conflict, Intention to leave, and job embeddedness. This study is also aimed to provide an empirical understanding of all these concepts in the context of Pakistan's Banking sector for the development of effective retention policies by the banks.

The following paragraphs are a brief review of relevant literature and are followed up by the hypothesized relationships between focal constructs. Then the research methods, analyses, and findings are recorded and discussed. Finally, both the theoretical and managerial implications and the limitations and avenues for future research have been discussed.

REVIEW OF LITERATURE

A review of the literature about the relevant concepts and sectors is narrated below.

Intention to Leave

Sasso et al. (2019) revealed that Intention to leave or intention to quit refers to the potential plans to leave the job with an employer. It is a global phenomenon. Multiple factors include personal factors and employers' behavior, performance appraisal and feedback, absenteeism, burnout, lack of recognition, personal and professional advancement, miscommunication, and job satisfaction (Holland et al., 2019). A literature review of some of the critical factors that have been reported to be associated with leaving is presented in the following paragraphs.

Employers' attitude has been reported frequently in the literature as an indicator that triggers the intention to leave in an employee (Meriläinen et al., 2019). The majority of the people who leave their job have mentioned the employers' unprofessional attitude as the main factor that led them to quit. Numerous researchers have reported that employees are less likely to quit their jobs if they think their employers are professional (Chin et al., 2019). The second important factor that has been frequently used in the literature is appreciation

and performance appraisal. Several researchers have narrated that workers feel motivated when their managers and colleagues appreciate their work (Lo et al., 2018). Positive feedback on one's work is associated with improved performance. Employees have reported in numerous studies that appreciation inspires them to work better and harder with increased interest. However, investigators have noted that many organizations lack effective performance appraisal mechanisms (Yamaguchi et al., 2016).

de Oliveira et al. (2017) discussed that an ineffective appraisal system gives rise to a lack of recognition. Employees have reported that they work very hard to get credit for their contribution to an enterprise. As a result, they are left with a sense of worthlessness. This directly demotivates the workers and causes lessening interest in their work (Mihail, 2017). This affects the productivity of a firm negatively. Workers who left their jobs have informed us in the surveys that they were not concerned with the firm's overall productivity due to lack of recognition of their efforts at the workplace. People do not give their best at work when their work is not credited (Bohle et al., 2017).

Mahomed and Rothmann (2020) expressed that leaving is damaging for both employees and employers. An employer's investment in a managerial level employee's training is wasted if they quits the job (Asakura et al., 2020). A new employee takes a lot of time to understand the organizational environment and working mechanism. An organization has to invest in a new employee's training when an experienced manager leaves the organization (Domínguez Aguirre, 2019). If the intention to leave leads to job quitting, it can create personal, social, and psychological problems for the quitter (Loi et al., 2006).

Not every firm understands the importance of employee retention, as it has been reported that not all firms adopt retention strategies (MacIntosh and Doherty, 2010). However, many firms adopt different approaches and techniques to retain their workers. Retention strategies vary from firm to firm (Frye et al., 2020). Incentives, increments, competitive remuneration packages, promotions, appraisal systems, training, and recognition of work along an attractive working environment are among the tools commonly used by employers for employee retention (Silva et al., 2019).

Role Conflict

The concept of "role conflict" defines a kind of internal conflict in which job and family role obligations are at odds with one another to some degree, making it difficult to fulfill requirements in one area while having to meet them in the other (Zainal Badri and Wan Mohd Yunus, 2021). Both work and family roles may be defined by the obligations placed on the individual by their work colleagues and family members and the values the person has about their work and family role behavior. When work and family needs clash, it is easy to believe that the workplace is interfering with family happiness and pleasure (Díaz-Fúnez et al., 2021).

Role conflict may also arise when family issues interfere with job happiness and job performance. Dividing time between job and family (multiple roles) may lead to inter-role conflict since these responsibilities may deplete one-another's resources (Del Pino et al., 2021). To fulfill the needs of one job, the expectations of the other roles are ignored. If family responsibilities come after the job, the family strain may detract from the ability to fulfill the job function (Gul et al., 2021).

Inter-role conflict and intra-role conflict are two commonly used concepts in the literature of role conflict. An inter-role conflict is a form of role conflict that refers to stressful conditions resulting from conflicting demands from different life spheres (Iannucci and MacPhail, 2018). Workers have frequently reported the inter-role conflict due to continuous pressure from the employer and the increasing demands of family members (Karim, 2017; Sarfraz et al., 2021). Intra-role conflict, another form of role conflict, is associated with a single role's expectations and needs. It can occur due to either expectations in the workplace or family members' demands (Grzywacz, 2020). The employees frequently report Intra-role conflict. Both inter-role conflict and intra-role conflict cause employees to experience role strain. Role strain is another often-used concept in the literature regarding role conflict (Wendling et al., 2018). Role strain can be explained as tension that a person experiences when he/she faces competing demands within one particular role and find it challenging to perform according to the expected roles (Jamil et al., 2021a).

Inter-role conflict can occur due to multiple reasons, but role ambiguity is reported as a common reason people experience role conflict at the workplace (Wehner, 2016). Role ambiguity is when an employee lacks awareness about their job-related duties (Oviatt et al., 2017). Numerous researches demonstrate that employees who do not perform as per employers' expectations are usually unclear about their responsibilities in the workplace (Purohit and Vasava, 2017). That role ambiguity is reported mainly as a result of miscommunication. Role ambiguity can be overcome through clear communication of job responsibilities and duties (Furtado et al., 2016).

Role conflict may also result from workers' failure to manage their work and family (non-work) obligations on an equal footing (Yousaf et al., 2020). This kind of conflict may suggest that employees' job duties interfere with their happiness and success in their personal lives or that employees' personal lives interfere with their satisfaction and success at work (Naseem et al., 2020). Therefore, it is probable that role conflict will have adverse effects, such as stress and dissatisfaction, and interfere with the ability to fulfill work or family obligations (Baranik and Eby, 2016; Mohsin et al., 2021). Furthermore, this tension may result in voluntary turnover, according to studies conducted by Eby et al. (2014), which supports this assertion. Hence, we proposed the following hypothesis:

> H1: Role Conflict has a significant impact on intention to leave a job.

The Moderating Role of Job Embeddedness

The term "on-the-job embeddedness" refers to a worker's connection to social ties formed at work, making them reluctant to quit the company (Jiang et al., 2012). A detailed explanation is given by Lee et al. (2004) about the effect of on- and off-the-job embeddedness on job performance, attitude related to firm citizenship, and also decrease and lower the impact of

truancy on global turnover (Amjad et al., 2018). Sekiguchi et al. (2008) demonstrated that there is a strong bond between leadership-membership exchange (LMX) and task action, LMX and organizational citizenship behaviors (OCBs), organization-based self-appreciation, and is reinforced by job embeddedness factor (which is the composition of on-the-job and off-the-job embeddedness). Karatepe (2012) has depicted that embeddedness reinforces the negative effect of well-known firm and co-worker support (Karatepe, 2012; Naseem et al., 2021) and also increments the impacts of appreciation of organizational and firm equity (Karatepe and Shahriari, 2014) on representative leaving out proposals (Dunnan et al., 2020a). A demonstration was given by Özçelik and Cenkci (2014) about employee embeddedness that a worker with a fundamental level of work embeddedness detailed a weaker interconnection between finding work and turnover than those workers who have lower levels of embeddedness. Burton et al. (2010) demonstrated some interconnection between paternalistic administration and work in-role execution. Peachey et al. (2014) have detailed research regarding embeddedness and have shown that the impact of unfurling theory-type stuns on worker progress can be weakened by embeddedness. It fortifies the effect on OCB. Peachey et al. (2014) demonstrated that employee embeddedness strengthened the connection between workers' past encounters of work environment bullying and consequent work environment hostility. Al-Ghazali (2020) explained that worker embeddedness could fortify the effect of worker recognitions of procedural decency and transmission on danger evaluation and organizational rebuilding.

The Moderating Effect of On-the-Job Fit Embeddedness

This study claims that on-the-job fit embeddedness is a valuable resource for helping employees deal with work-life balance issues (Kiazad et al., 2014a). Work-life conflict is less likely to impact workers with greater fit embeddedness. Consequently, there is a minor link between work-family conflict and intention to leave and companies with lower fitness levels. Two mechanisms have been suggested:

First, those employees with a better person-job fit are more likely to have more essential work skills, making it easier for them to fulfill the ordinary demands of their position compared to employees with a worse fit (Dunnan et al., 2020b). Second, employees with low levels of person-job fit will deplete resources more quickly to fulfill the day-to-day work needs than those with high levels of person-job fit. Third, the extra depletion of resources that results from role conflict between the job and home domains adds to the stress and exhaustion felt in both fields (Al-Ghazali, 2020). As a result, workers who aren't a good match for the company will be hurt more. As a result, workers who fit in well on the job are less likely to be impacted and less likely to be motivated to leave.

Second, workers who better match the work-family conflict needs of the workplace may potentially adapt. Fasbender et al. (2019) suggest that conflict between a person's ideas and expectations and the reality they encounter prompts an employee to change their stance and attitudes. People that are more in sync are better able to find and create new workplace arrangements (Chan et al., 2019; Naseem et al., 2020b). Employees with better degrees of fit embeddedness will feel less of a negative impact as a result. Hence, we proposed the following hypothesis:

> H2: On-the-job fit positively moderates the relationship of role conflict and intent leave job.

The Moderating Effect of On-the-Job Link Embeddedness

Employees who have a greater level of on-the-job link embeddedness are more likely to know more individuals at the organization and be more engaged in the organization's matters than their counterparts (Lyu and Zhu, 2019). Because of this connectivity, workers have greater access to possibilities inside the organization and services like career sponsorship from higher-ranking colleagues (Coetzer et al., 2018). Thus, link embeddedness may be seen as a valuable resource that allows employees to more easily access ameliorating support services offered by the organization in which they work. This has the potential to operate in two ways. First, increasing levels of social connection throughout an organization may, in the first instance, offer personal support for those who are experiencing problems as a result of work-family conflict (Sender et al., 2018). Second, employees who have built up social capital can better identify and negotiate administrative support services, such as organizational work-life balance programs, feel more comfortable accessing these services, and obtaining supervisor support. In a recent study, researchers found that some employees are hesitant to use organizational support services and that employee use of family friendly corporate resources can be influenced by the quality of employee-manager relations (Jamil et al., 2021b). Workers with a greater degree of link embeddedness had an easier time implementing current ameliorative measures, resulting in a reduction in the experience of stress resulting from work and family conflict compared to employees with a lower level of link embeddedness. Hence, we proposed the following hypothesis:

> H3: On-the-job link positively moderates the relationship of role conflict and intent leave job.

The Moderating Effect of On-the-Job Sacrifice Embeddedness

While fit and connection embeddedness has been suggested to mitigate the impact of work-life conflict on leaving intention, sacrifice embeddedness has been proposed to enhance that relationship, following Zhang Y. et al. (2019). According to COR theory, workers with a higher level of sacrifice embeddedness are more likely to accumulate intrinsic resources than employees with a lower level of sacrifice embeddedness. When intrinsic resources are collected in larger quantities, there is a greater likelihood of eventual loss. At the same time, unlike instrumental resources, increases in intrinsic resource levels do not always result in an improvement in an entity's ability either to withstand threats or obtain additional resources (Hobfoll, 2011).

According to COR theory, a threat to current resources will elicit a more significant response than an opportunity to acquire new resources or invest existing resources in the short term (Hobfoll, 2011). Employees with more to lose, such as high levels

of intrinsic resources, will be more sensitive to risks, such as the depletion potential of work and life conflict since they have more to lose. Kiazad et al. (2014b) discovered that when confronted with a threat such as a psychological contract breach, employees with higher sacrifice embeddedness reacted more strongly in defense of their existing resources when compared to employees with lower sacrifice embeddedness (Kiazad et al., 2014a). Those workers who had a high level of sacrifice embeddedness used a resource defense strategy to reduce their exposure to the resource-depleting danger, which was shown to be effective in that research.

According to the findings of this research, workers who have a higher level of sacrifice embeddedness are more likely to undertake resource-saving measures, which may include considering quitting the organization (Stewart and Wiener, 2021). As a result of being unable to ward off threats to resources or obtain replacement resources, workers who have made significant sacrifices are more inclined than employees who have less to lose than they are to contemplate quitting the organization to protect their existing resources (Amoah et al., 2021). Therefore, workers with greater degrees of sacrifice embeddedness are more likely to experience conflict at work and home, and they are also more likely to consider quitting their current position. Hence, we proposed the following hypothesis:

> H4: On-the-job sacrifice positively moderates the relationship of role conflict and intent leave job (see **Figure 1** for all relationships).

METHODOLOGY

Data Collection and Sample Size

The study samples include branch managers, operations managers, credit officers, and all officers, including grade one, two, and three major private banks situated in three big cities of Pakistan: Faisalabad, Lahore, and Islamabad. Also, we only included respondents who had been working in the banking sector for more than 5 years. The average experience of respondents in the banking sector was 8.5 years, and their time at their current location was 2.5 years. A pilot study with 30 participants was carried out. Since providing recommendations, revisions were made to the final questionnaire to make it more understandable for respondents. To ensure the content validity of the measures, three academic experts of human resource management analyzed and made improvements in the items of constructs. The experts searched for spelling errors, grammatical errors, and ensured that things were correct. The experts have proposed minor text revisions to role conflict and job sacrifice items and advised that the original number of items be maintained. The sample size was determined by using Kline (2015) proposed criterion. He suggested at least ten responses per item. Therefore, a minimum of 180 samples was needed, given the 18 items in this study. To increase reliability and validity, 250 questionnaires were distributed to research participants. At the time of scrutiny, 30 questionnaires were found incomplete, and these questionnaires were excluded, and the final sample is 220 respondents.

Questionnaire and Measurements

The study used items established from prior research to confirm the reliability and validity of the measures. All items are evaluated through five-point Likert-type scales where "1" (strongly disagree), "3" (neutral), and "5" (strongly agree).

Role Conflict was measured with five items adapted from the study of Netemeyer et al. (1996); the sample item is, "The demands of my work interfere with my home and family life."

Job Embeddedness, with its three dimensions: on-the-job fit, on-the-job link, and on-the-job sacrifice, was assessed with items adapted from the study (Felps et al., 2009). Job Embeddedness was measured with nine items; on-the-job fit consisted of three items, and the sample item is, "I feel like I am a good match for my organization." The on-the-job link consisted of three items, and the sample item is, "I work closely with my coworkers." Finally, on-the-job sacrifice consisted of three items, and the sample item is, "I would sacrifice a lot if I left this job."

To assess the intention to leave, the four items were adopted from the work of Abrams et al. (1998) with the sample item, "In the next few years, I intend to leave this company."

Demographic Characteristics

This study analyzed the data through Smart partial least squares (PLS), primary data was collected from 220 respondents,

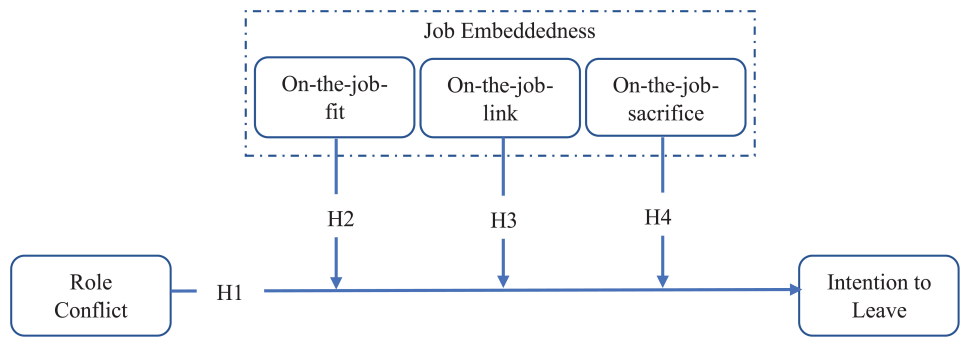

FIGURE 1 | Conceptual framework.

TABLE 1 | Demographic characteristics of respondents.

Categories	Subcategories	Size	Percentage
Gender	Male	150	68
	Female	70	32
Total		220	100
Age	20–30	40	18
	31–40	70	32
	41–50	80	36
	51 and above	30	14
Total		220	100
Family Status	Nuclear	100	45
	Joint	70	32
	Extended	50	23
Total		220	100

demographic characteristics of respondents such as age, gender, education, income, and experience are illustrated in **Table 1**.

DATA ANALYSIS

The study used PLS modeling using Smart-PLS 3.2.8 version (Ringle et al., 2015) as the numerical tool to analyze the structural and measurement model, as it can accommodate a smaller number of observations without normality assumptions and survey research is generally not normally distributed (Chin et al., 2003). Also, since data were collected using a single source, we followed Kock (2015) to test the common method bias using the full collinearity method. The test showed that all the VIFs were lower than five; thus, we can conclude common method bias is not a severe problem in our study (Sánchez-Hernández et al., 2020).

Reliability and Validity of the Constructs

The Measurement model explains the relationships among the constructs and the indicator variables. As part of the measurement model assessment, all the indicators held factor loading greater than 0.60 and were retained in the model (Gefen and Straub, 2005). The reliability analysis is the first element of the measurement model, which contains composite reliability. According to Ramayah et al. (2018), the composite reliability's required threshold value is 0.70. Subsequently, the indicators' findings are greater than 0.7, confirming the measurement model's composite reliability (see **Table 2**). The composite reliability values of all the constructs are also greater than 0.7, which further strengthens the reliability of all the variables (see **Figure 2**). Convergent Validity evaluates whether or not constructs measure what they are supposed to measure. In this study, convergent Validity was assessed by calculating the average-variance-extracted (AVE) that shows whether the construct variance can be described from the selected items (Fornell and Larcker, 1981a). According to Bagozzi and Yi (1988), the cut-off value for the average variance extracted is 0.5, and the Values of AVE of all constructs are greater than the recommended threshold, as shown in **Table 2**. This reflects the convergent Validity of the measurement model. **Table 3** displays the discriminant validity assessment whereby the HTMT ratios were all below the 0.90 cut-off value. The confidence intervals do not include a zero or one, as suggested by Henseler et al. (2016). Thus, we can conclude that the measures used in this are reliable, valid, and distinct.

Discriminant Validity

In short, the Fornell and Larcker technique demonstrates discriminant validity when the square root of the AVE enhances the relationships between the measure and every other measure. To stimulate the measurement of the model's discriminant

TABLE 2 | Reliability, validity, and descriptive of the measures.

Constructs	Items	Items Loading	Skewness	Kurtosis	Alpha	CR	AVE	SE_skew	SE_Kurt
Intention to Leave	ITL1	0.783	−1.3766	2.4867	0.7749	0.8541	0.5946	0.164	0.3266
	ITL2	0.828							
	ITL3	0.724							
	ITL4	0.746							
On-the-job-fit	OTJF1	0.852	−1.0434	1.2538	0.7909	0.8746	0.6993	0.164	0.3266
	OTJF2	0.854							
	OTJF3	0.803							
On-the-job-link	OTJL1	0.802	−0.8708	1.3622	0.7784	0.8042	0.5783	0.164	0.3266
	OTJL2	0.736							
	OTJL3	0.741							
On-the-job-sacrifice	OTJS1	0.724	−1.0955	1.4048	0.7566	0.8483	0.6522	0.164	0.3266
	OTJS2	0.825							
	OTJS3	0.867							
Role Conflict	RC1	0.625	−1.6315	2.4645	0.8784	0.8889	0.6184	0.164	0.3266
	RC2	0.753							
	RC3	0.831							
	RC4	0.865							
	RC5	0.834							

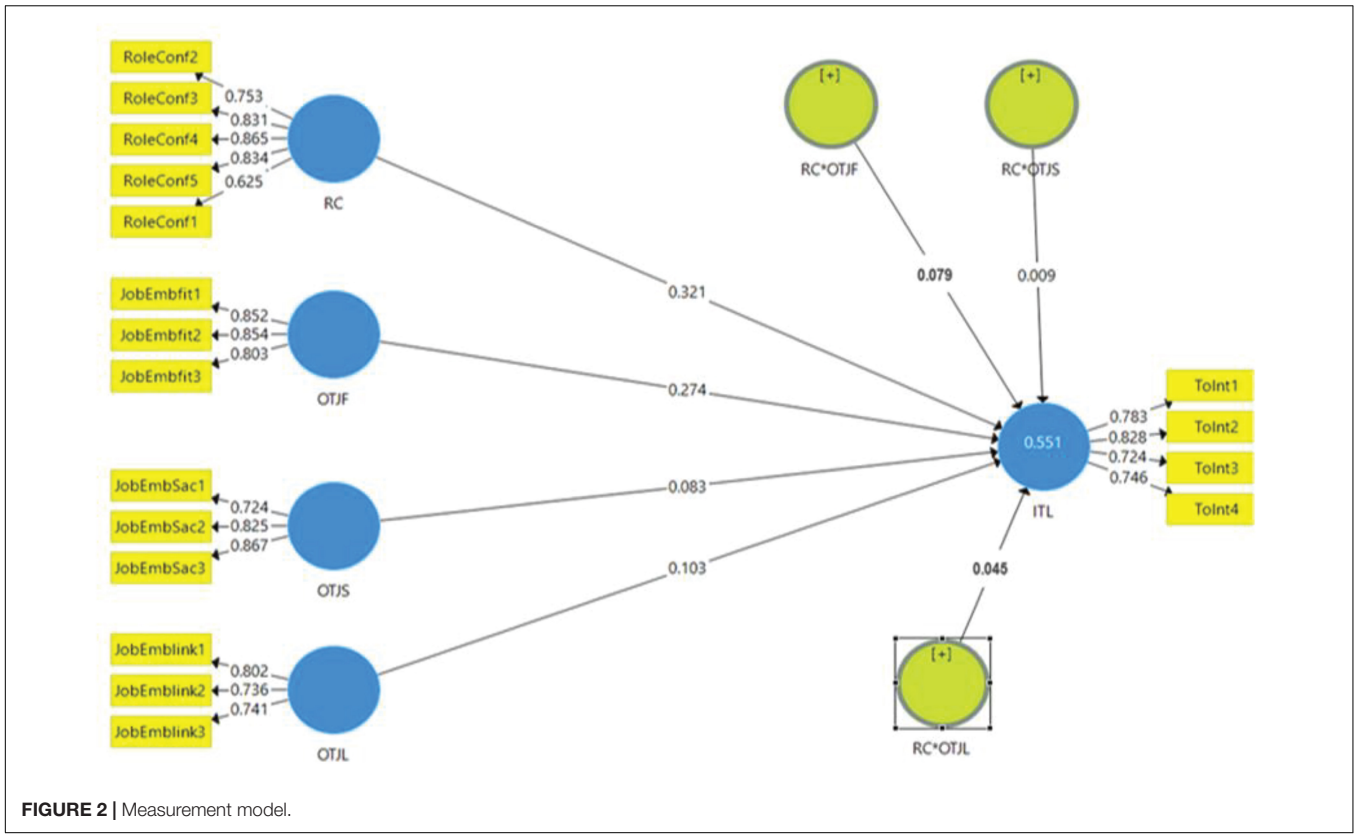

FIGURE 2 | Measurement model.

TABLE 3 | Discriminant validity (HTMT Ratios).

	ITL	OTJF	OTJL	OTJS_	RC
ITL					
OTJF	0.804				
OTJL	0.656	0.787			
OTJS_	0.632	0.711	0.877		
RC	0.696	0.582	0.369	0.449	

validity, the AVE estimation of every construct is produced using the Smart-PLS algorithm, as shown in **Table 3**.

The values that lie in the off-diagonal are smaller than the average variance's square root (highlighted on the diagonal), supporting the scales' satisfactory discriminant validity. Consequently, the outcome affirmed that the Fornell and Larcker (1981b) model is met.

Structural Model

The structural model reflects the paths hypothesized in the research model and is assessed based on multicollinearity, coefficient of determination R^2, predictive relevance Q^2, and the paths' significance (see **Figure 3**). The goodness of the model is determined by the structural path's strength, determined by the R^2 value for the dependent variable (Hair et al., 2014). All the VIFs were below five; thus, this confirms that the structural model results are not negatively affected by collinearity. Furthermore, following the thumb rules, the R^2 values of intention to leave (0.551) exceed the minimum value of 0.1 suggested by Falk and Miller (1992), confirming a satisfactory predictability level. Furthermore, the Q^2 value of the endogenous construct is considerably above zero, thus providing support for the model's predictive relevance regarding the endogenous latent variables.

Next, to assess the four hypotheses developed we ran a bootstrapping of 5,000 subsamples. First, we assessed the direct relationships before looking at the moderation effects. The results revealed a significant relationship between role conflict and intention to leave ($\beta = 0.32$, $p < 0.01$, BCI LL = 0.169 and BCI UL = 0.463) which gives positive support for H1 of our study. The moderation hypotheses of the job embeddedness in the path between role conflict and intention to leave (H2, H3, and H4) are tested using the two-stage continuous moderation analysis (Hair et al., 2017). The moderating effect of RC × OTJF → ITL ($\beta = 0.047$, $p < 0.01$, BCI LL = −0.193 and BCI UL = 0.298), RC × OTJL → ITL ($\beta = 0.089$, $p < 0.01$, BCI LL = −0.417 and BCI UL = 0.061), and RC × OTJS → ITL ($\beta = 0.023$, $p < 0.01$, BCI LL = −0.115 and BCI UL = 00.22) indicating the moderating effect are statistically significant at the 0.01 level. This gives support for H2, H3, and H4 of this study (see **Table 4**).

Also, for H2 the moderation graph indicates at the low level of On-the-Job Fit, there is a low impact of RC on ITL. However, increasing OTJF enhances the significant positive effect of RC on ITL (see **Figure 4A**). Moreover, the H3 moderation graph describes at the low level of the On-the-Job link there is a low impact of RC on ITL. Again, though,

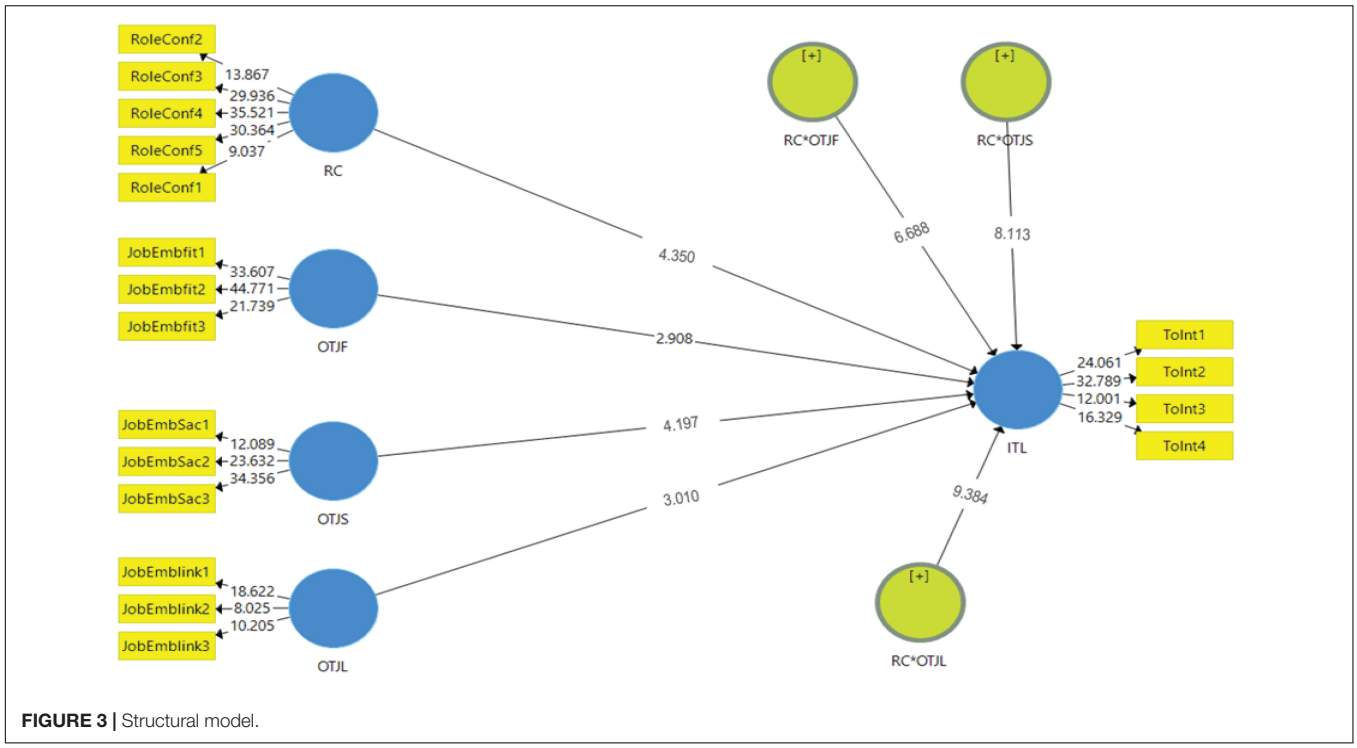

FIGURE 3 | Structural model.

TABLE 4 | Hypotheses results.

Hypothesis	Relationships	Std. Beta	Std. Error	*t*-value	*p*-value	BCI LL	BCI UL
H1	RC → ITL	0.32	0.075	4.292	0.000	0.169	0.463
H2	RC × OTJF → ITL	0.047	0.096	6.688	0.000	−0.193	0.298
H3	RC × OTJL → ITL	0.089	0.077	11.385	0.000	−0.417	0.061
H4	RC × OTJS → ITL	0.023	0.083	8.113	0.010	−0.115	0.22
Endogenous construct		R^2	Q^2				
ITL		0.551	0.295				

increasing OTJL augments the significant positive effect of RC on ITL (see **Figure 4B**). Finally, the final relationship graph shows at the low level of On the Job sacrifice, and there is a low impact of RC on ITL. Nevertheless, increasing OTJS improves the significant positive effect of RC on ITL (see **Figure 4C**).

DISCUSSION AND CONCLUSION

This present research aims to determine whether job abandonment moderates the relation between role conflict and intention to leave in the banking sector. For highly embedded employees in the banking sector, role conflict is a common occurrence. This study analyses job embeddedness in terms of employee retention. In particular, the results suggest that job embeddedness moderates the relationship between the WFC and job turnover intention. The results indicate that role conflict and job embeddedness are opposing factors that lead people to quit or remain within their banks. The results suggest that job embeddedness connects workers within the organizations (Lee et al., 2004; Jiang et al., 2012) is supported by the theory of embeddedness (Mitchell and Lee, 2001). This means that job embedding has a beneficial influence when companies minimize "dysfunctional" revenue.

In terms of the suggested hypothesis, all three moderating effects are straightforward to comprehend. Employees who have a high level of linkage embeddedness have a bank of instrumental resources at their disposal that may help them cope more effectively with the difficulties of work and family conflict. The stronger the employee's connection to the organization and the higher the linkage embeddedness, the better the employee can access and utilize a variety of existing organizational resources (Jung and Kim, 2021). Employees who are more integrated into their work will be more able to obtain inter-personal assistance from their colleagues and will be less reluctant and more effective in using existing organizational support systems due to their integration. So, employees reporting a lower connection between work and family conflict and leaving intention are more likely

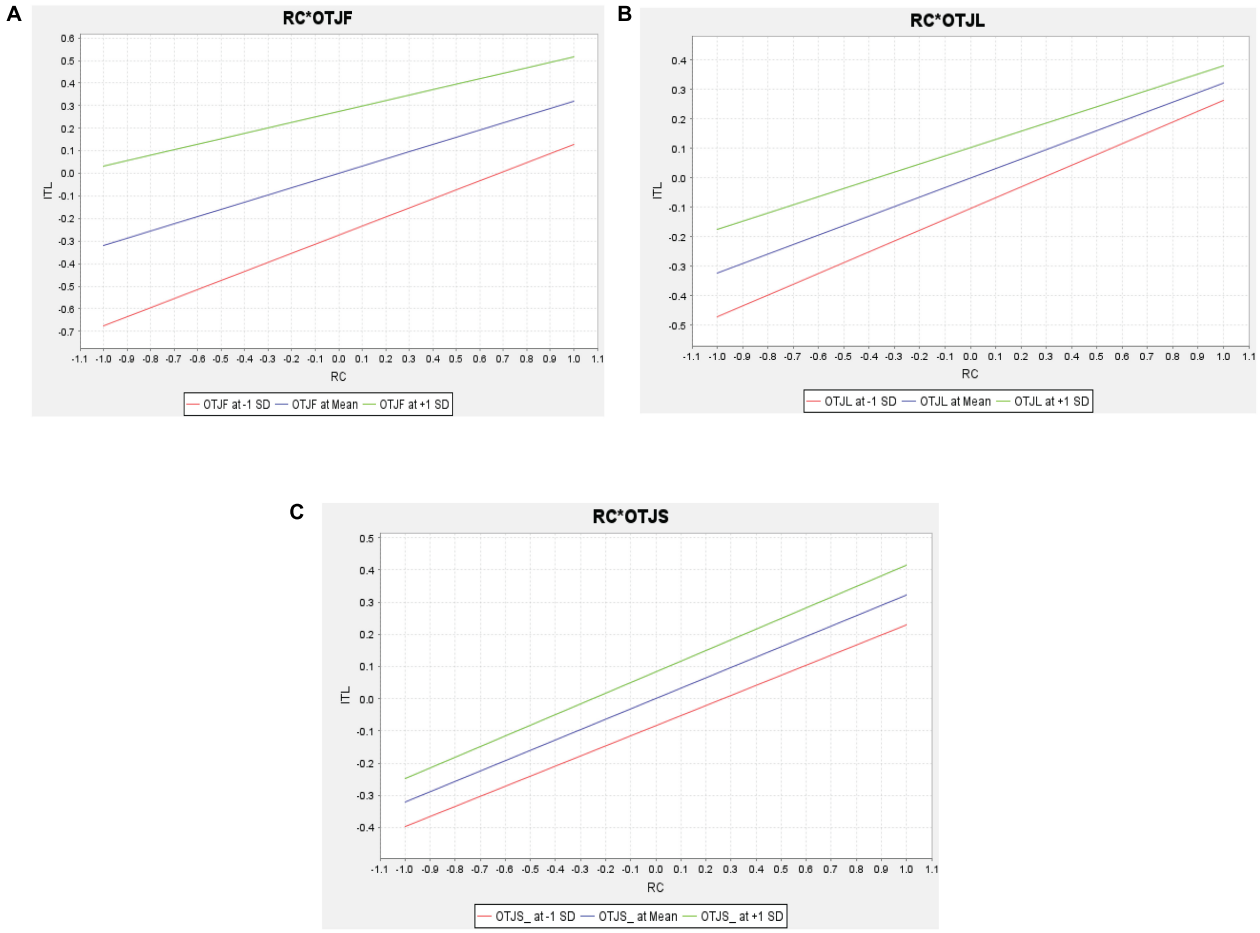

FIGURE 4 | Moderating effects.

to be those who had more significant degrees of linkage embeddedness in their job.

Burton et al. (2010) showed that the embeddedness of workers reinforced the link between the history of bullying in a workplace and resulting violence in the workplace. Theory and studies on embedding work typically indicate that job embeddedness in the workplace has beneficial effects where the needs of workers and institutions are matched. In other terms, workers are trained to use working connections, health, and compromises to delegate services in the job domain and institutions to embedded employees. Because of the limitations generated by role conflict, our results indicate that an engaged employee with a high degree of embeddedness is more likely than a low embedded working employee to feel mental fatigue, remorse, and aggression. Thus, the high degree of job-embedded employees is more likely to be adversely impacted by role conflict. By concentrating on previously untested competing factors, this research leads to sparse work on the "dark side" of work integration (Sekiguchi et al., 2008; Burton et al., 2010; Allen et al., 2016).

This research provides deep insights into the moderating role of job embeddedness between role conflict and employees' intention to leave and exposes significant shortcomings on the theory of work-building. This study also leads to limiting role conflict implementing and job embeddedness measures (Oviatt et al., 2017). In addition, the results indicate that those who are more deeply embedded in the job may improve their resource investment in the role conflict, as this relationship with turnover has been negatively impacted by a higher degree of job embeddedness. However, around the same period, these working parents became more vulnerable to mental fatigue, remorse, and hostilities because of resource drain. With these negative findings in mind and a high degree of embeddedness, this research goes beyond recent studies on the moderating impact of convergence between role conflict and turnover (Ringle et al., 2015).

THEORETICAL AND PRACTICAL IMPLICATIONS

The studies provide several implications. First of all, this paper shows that Job embeddedness has a moderating impact on the relationship between role conflict and turnover intention.

This contributes to the role conflict literature by extending the literature of job embeddedness. Essentially, the three elements of job embeddedness do not function as a unifying entity in this paper. Instead, there were differing impacts to the three components on the job. The fitness of embedding had no effect; embedding the link had an improving outcome, and embedding sacrifices had a multiplier effect. This shows no established linkage between embedded components on the job (Kiazad et al., 2014b; Bohle et al., 2017). JET researchers should therefore use the three on-the-job parts instead of combined measures such as job integration or work-based embedding. Second, this article shows the efficient justification of how job embedders moderates the impact of role conflict on the employee's intention of turnover by COR theory. This research adds to an earlier study's findings into role conflict, strain, and burnout that explains the impact of work and family conflict on the depletion and acquisition of employee resources (Ghosh et al., 2017).

In addition to that, this paper would discuss plans to establish processes to understand how work incorporation impacts perceptions and attitudes (Kiazad et al., 2014b). Finally, in connection with this study, the increasing COR research describes the influence of employee embeddedness as a form of resource abundance (Kiazad et al., 2014b; Wehner, 2016).

This study has three Practical Implications. Firstly, by improving the usage by workers of current changes in the company to minimize the impact of role conflict, the detrimental effects of role conflict will be minimized. This research indicates that workers with stronger linkage embeddedness are more capable of using interpersonal and organizational resources. The administration would enhance the efficiency of existing ameliorating arrangements to increase employee interaction, subordinates, and organization (Holtom, 2016). Finally, the design of corporate training programs, the growth relating to teamwork judgment, organizational training and professional development programs, social networks within the company, and employee recruiting schemes are used to improve employee engagement embedding (Treuren, 2019).

Secondly, introduce measures to make employees' connections to coworkers, bosses, and the company more effective. To create a relationship between employees and the company, mentorship programs may be set up. In addition, teams can have work and decision-making responsibilities expanded, in-house training and career development programs implemented, and referral systems used to hire employees. The various programs may be tailored to the preferences and requirements of different groups of employees.

Thirdly, even though workers with greater sacrifice embeddedness had fewer intentions to leave their jobs, these individuals are more sensitive to work and family conflict than employees with lower levels of sacrifice embeddedness. Therefore, at times of more conflict, management may offer extra and readily available ameliorative services to reduce the likelihood of early departure thoughts.

LIMITATIONS AND FURTHER RESEARCH

There are also limitations to this study. First, it employs cross-sectional measures and studies in social sciences to deduce the complexities of workers' behavior. Longitudinal research is required to explain the effect and the purpose of job embedding on role conflict and turnover intention. Second, the research is focused on workers' expectations and is thus susceptible to social desirability and the usual empirical biases. While the typical process bias in this study is minimal, more analysis could minimize the error of parameter estimation by having actual data on turnover or from various sources, for example, a supervisor or colleague, as the periods, have differed. Thirdly, the sample size is small ($n = 220$), which may have an issue of generalizability, leading to Type 2 errors and is also limited to the study. Finally, the limited size of the feminine cohort excluded substantial gender disparities from being investigated.

Further experiments should strive to obtain more significant balanced populations so that that gender effects can be compared. Furthermore, to determine the paper's results, a single set of data from one sector of Pakistan was used; the findings are not necessarily generalizable. Uncertain jobs inside and outside the company may be calculated to be a biased estimation. The generalizability of these results would be explained further analysis into other geographic, social, and economic contexts. This paper outlines a structure for the influence of job embeddedness and role conflict and has defined new problems to address.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

FUNDING

This work was partly supported by "National Social Science Foundation of China" (No. 19ZDA081).

REFERENCES

Aboobaker, N., Edward, M., and Pramatha, K. (2017). Work–family conflict, family–work conflict and intention to leave the organization: evidences across five industry sectors in India. *Glob. Bus. Rev.* 18, 524–536. doi: 10.1177/0972150916668696

Abrams, D., Ando, K., and Hinkle, S. (1998). Psychological attachment to the group: cross-cultural differences in organizational identification and subjective

norms as predictors of workers' turnover intentions. *Pers. Soc. Psychol. Bull.* 24, 1027–1039. doi: 10.1177/01461672982410001

Al-Ghazali, B. M. (2020). Transformational leadership, career adaptability, job embeddedness and perceived career success: a serial mediation model. *Leadersh. Organ. Dev. J.* 41, 993–1013. doi: 10.1108/LODJ-10-2019-0455

Alhmoud, A., and Rjoub, H. (2019). Total rewards and employee retention in a Middle Eastern context. *SAGE Open* 9:2158244019840118.

Allen, D. G., Peltokorpi, V., and Rubenstein, A. L. (2016). When "embedded" means "stuck": moderating effects of job embeddedness in adverse work environments. *J. Appl. Psychol.* 101:1670. doi: 10.1037/apl0000134

Amjad, A., Amjad, F., Jamil, K., and Yousaf, S. (2018). Moderating role of self-congruence: impact of brand personality on brand attachment through the mediating role of trust. *Inf. Manag. Bus. Rev.* 10, 13–22. doi: 10.22610/imbr.v10i1.2144

Amoah, V. S., Annor, F., and Asumeng, M. (2021). Psychological contract breach and teachers' organizational commitment: mediating roles of job embeddedness and leader-member exchange. *J. Educ. Adm.* 59, 634–649. doi: 10.1108/JEA-09-2020-0201

Anand, A., and Vohra, V. (2020). The impact of organisation work environment on job satisfaction, affective commitment, work-family conflict and intention to leave: a study of SMEs in India. *Int. J. Entrep. Small Bus.* 41, 173–196. doi: 10.1504/IJESB.2020.109931

Asakura, K., Asakura, T., Satoh, M., Watanabe, I., and Hara, Y. (2020). Health indicators as moderators of occupational commitment and nurses' intention to leave. *Jpn J. Nurs. Sci.* 17:e12277. doi: 10.1111/jjns.12277

Bagozzi, R. P., and Yi, Y. (1988). On the evaluation of structural equation models. *J. Acad. Mark. Sci.* 16, 74–94. doi: 10.1007/BF02723327

Baranik, L. E., and Eby, L. (2016). Organizational citizenship behaviors and employee depressed mood, burnout, and satisfaction with health and life. *Pers. Rev.* 45, 626–642. doi: 10.1108/PR-03-2014-0066

Bayarcelik, E. B., and Findikli, M. A. (2016). The mediating effect of job satisfaction on the relation between organizational justice perception and intention to leave. *Procedia Soc. Behav. Sci.* 235, 403–411. doi: 10.1016/j.sbspro.2016.11.050

Bohle, P., Knox, A., Noone, J., Mc Namara, M., Rafalski, J., and Quinlan, M. (2017). Work organisation, bullying and intention to leave in the hospitality industry. *Employee Relat.* 39, 446–458. doi: 10.1108/ER-07-2016-0149

Burton, J. P., Holtom, B. C., Sablynski, C. J., Mitchell, T. R., and Lee, T. W. (2010). The buffering effects of job embeddedness on negative shocks. *J. Vocat. Behav.* 76, 42–51. doi: 10.1016/j.jvb.2009.06.006

Chan, W. L., Ho, J. A., Sambasivan, M., and Ng, S. I. (2019). Antecedents and outcome of job embeddedness: evidence from four and five-star hotels. *Int. J. Hosp. Manag.* 83, 37–45. doi: 10.1016/j.ijhm.2019.04.011

Chin, W., Guo, Y.-L. L., Hung, Y.-J., Hsieh, Y.-T., Wang, L.-J., and Shiao, J. S.-C. (2019). Workplace justice and intention to leave the nursing profession. *Nurs. Ethics* 26, 307–319. doi: 10.1177/0969733016687160

Chin, W. W., Marcolin, B. L., and Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Inf. Syst. Res.* 14, 189–217. doi: 10.1287/isre.14.2.189.16018

Cho, Y.-N., Rutherford, B. N., Friend, S. B., Hamwi, G. A., and Park, J. (2017). The role of emotions on frontline employee turnover intentions. *J. Mark. Theory Pract.* 25, 57–68. doi: 10.1080/10696679.2016.1235960

Coetzer, A., Inma, C., Poisat, P., Redmond, J., and Standing, C. (2018). Job embeddedness and employee enactment of innovation-related work behaviours. *Int. J. Manpow.* 39, 222–239. doi: 10.1108/IJM-04-2016-0095

Dai, Y.-D., Zhuang, W.-L., and Huan, T.-C. (2019). Engage or quit? The moderating role of abusive supervision between resilience, intention to leave and work engagement. *Tour. Manag.* 70, 69–77. doi: 10.1016/j.tourman.2018.07.014

de Oliveira, D. R., Griep, R. H., Portela, L. F., and Rotenberg, L. (2017). Intention to leave profession, psychosocial environment and self-rated health among registered nurses from large hospitals in Brazil: a cross-sectional study. *BMC Health Serv. Res.* 17:21. doi: 10.1186/s12913-016-1949-6

Degbey, W. Y., Rodgers, P., Kromah, M. D., and Weber, Y. (2021). The impact of psychological ownership on employee retention in mergers and acquisitions. *Hum. Resour. Manag. Rev.* 31:100745. doi: 10.1016/j.hrmr.2020.100745

Del Pino, H. E., Steers, W. N., Lee, M., McCuller, J., Hays, R. D., and Harawa, N. T. (2021). Measuring gender role conflict, internalized stigma, and racial and sexual identity in behaviorally bisexual Black men. *Arch. Sex. Behav.* doi: 10.1007/s10508-021-01925-w

Díaz-Fúnez, P. A., Salvador-Ferrer, C. M., García-Tortosa, N., and Mañas-Rodríguez, M. A. (2021). Are job demands necessary in the influence of a transformational leader? The moderating effect of role conflict. *Int. J. Environ. Res. Public Health* 18:3630.

Domínguez Aguirre, L. R. (2019). The mediating effects of external factors on intention to leave and organizational factors of hotel industry. *Contaduría Adm.* 64, 1–18.

Dunnan, L., Jamil, K., Abrar, U., Ali, S., Awan, F. H., and Ali, S. (2020a). "Digital generators and consumers buying behavior," in *Proceedings of the 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET)*, Sukkur. doi: 10.1109/iCoMET48670.2020.9073931

Dunnan, L., Jamil, K., Abrar, U., Arain, B., Guangyu, Q., and Awan, F. H. (2020b). "Analyzing the green technology market focus on environmental performance in Pakistan," in *Proceedings of the 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET)*, Sukkur. doi: 10.1109/iCoMET48670.2020.9074084

Eby, S. L., Anderson, T. M., Mayemba, E. P., and Ritchie, M. E. (2014). The effect of fire on habitat selection of mammalian herbivores: the role of body size and vegetation characteristics. *J. Anim. Ecol.* 83, 1196–1205. doi: 10.1111/1365-2656.12221

Falk, R. F., and Miller, N. B. (1992). *A Primer for Soft Modeling*. Akron, OH: University of Akron Press.

Fasbender, U., Van der Heijden, B. I., and Grimshaw, S. (2019). Job satisfaction, job stress and nurses' turnover intentions: the moderating roles of on-the-job and off-the-job embeddedness. *J. Adv. Nurs.* 75, 327–337. doi: 10.1111/jan.13842

Felps, W., Mitchell, T. R., Hekman, D. R., Lee, T. W., Holtom, B. C., and Harman, W. S. (2009). Turnover contagion: how coworkers' job embeddedness and job search behaviors influence quitting. *Acad. Manag. J.* 52, 545–561. doi: 10.5465/amj.2009.41331075

Fornell, C., and Larcker, D. F. (1981a). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 39–50. doi: 10.1177/002224378101800104

Fornell, C., and Larcker, D. F. (1981b). Structural equation models with unobservable variables and measurement error: algebra and statistics. *J. Mark. Res.* 18, 382–388. doi: 10.1177/002224378101800313

Frye, W. D., Kang, S., Huh, C., and Lee, M. J. M. (2020). What factors influence Generation Y's employee retention in the hospitality industry?: An internal marketing approach. *Int. J. Hosp. Manag.* 85, 102352. doi: 10.1016/j.ijhm.2019.102352

Furtado, L., Sobral, F., and Peci, A. (2016). Linking demands to work-family conflict through boundary strength. *J. Manage. Psychol.* 31, 1327–1342. doi: 10.1108/JMP-11-2015-0408

Gefen, D., and Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: tutorial and annotated example. *Commun. Assoc. Inf. Syst.* 16:5. doi: 10.17705/1CAIS.01605

Ghosh, D., Sekiguchi, T., and Gurunathan, L. (2017). Organizational embeddedness as a mediator between justice and in-role performance. *J. Bus. Res.* 75, 130–137. doi: 10.1016/j.jbusres.2017.02.013

Grzywacz, A. (2020). Indonesia's (inter) national role as a Muslim democracy model: effectiveness and conflict between the conception and prescription roles. *Pac. Rev.* 33, 728–756. doi: 10.1080/09512748.2019.1585387

Gul, R. F., Liu, D., Jamil, K., Baig, S. A., Awan, F. H., and Liu, M. (2021). Linkages between market orientation and brand performance with positioning strategies of significant fashion apparels in Pakistan. *Fashion Textiles* 8, 1–19. doi: 10.1186/s40691-021-00254-9

Gyensare, M. A., Anku-Tsede, O., Sanda, M.-A., and Okpoti, C. A. (2016). Transformational leadership and employee turnover intention. *World J. Entrep. Manag. Sustain. Dev.* 12, 243–266. doi: 10.1108/WJEMSD-02-2016-0008

Hair, J. F. Jr., Sarstedt, M., Hopkins, L., and Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *Eur. Bus. Rev.* 26, 106–121. doi: 10.1108/EBR-10-2013-0128

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., and Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *J. Acad. Mark. Sci.* 45, 616–632. doi: 10.1007/s11747-017-0517-x

Henseler, J., Hubona, G., and Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Ind. Manag. Data Syst.* 116, 2–20. doi: 10.1108/IMDS-09-2015-0382

Hobfoll, S. E. (2011). Conservation of resource caravans and engaged settings. *J. Occup. Organ. Psychol.* 84, 116–122.

Holland, P., Tham, T. L., Sheehan, C., and Cooper, B. (2019). The impact of perceived workload on nurse satisfaction with work-life balance and intention to leave the occupation. *Appl. Nurs. Res.* 49, 70–76. doi: 10.1016/j.apnr.2019.06.001

Holtom, B. C. (2016). *Job Embeddedness, Employee Commitment, and Related Constructs Handbook of Employee Commitment*. Cheltenham: Edward Elgar Publishing.

Iannucci, C., and MacPhail, A. (2018). One Teacher's experience of teaching physical education and another school subject: an inter-role conflict? *Res. Q. Exerc. Sport* 89, 235–245. doi: 10.1080/02701367.2018.1446069

Jamil, K., Hussain, Z., Gul, R. F., Shahzad, M. A., and Zubair, A. (2021a). The effect of consumer self-confidence on information search and share intention. *Inf. Discov. Deliv*. doi: 10.1108/IDD-12-2020-0155

Jamil, K., Liu, D., Gul, R. F., Hussain, Z., Mohsin, M., Qin, G., et al. (2021b). Do remittance and renewable energy affect CO2 emissions? An empirical evidence from selected G-20 countries. *Energy Environ.* doi: 10.1177/0958305X211029636

Jiang, K., Liu, D., McKay, P. F., Lee, T. W., and Mitchell, T. R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation. *J. Appl. Psychol.* 97:1077. doi: 10.1037/a0028610

Jung, N., and Kim, M. (2021). Assessing work-family conflict experienced by chinese parents of young children: validation of the Chinese version of the work and family conflict scale. *Child Psychiatry Hum. Dev.* doi: 10.1007/s10578-021-01236-0

Jyoti, J., and Rani, A. (2019). Role of burnout and mentoring between high performance work system and intention to leave: moderated mediation model. *J. Bus. Res.* 98, 166–176. doi: 10.1016/j.jbusres.2018.12.068

Karatepe, O. M. (2012). The effects of coworker and perceived organizational support on hotel employee outcomes: the moderating role of job embeddedness. *J. Hosp. Tour. Res.* 36, 495–516. doi: 10.1177/1096348011413592

Karatepe, O. M., and Shahriari, S. (2014). Job embeddedness as a moderator of the impact of organisational justice on turnover intentions: a study in Iran. *Int. J. Tour. Res.* 16, 22–32. doi: 10.1002/jtr.1894

Karim, M. F. (2017). Role conflict and the limits of state identity: the case of Indonesia in democracy promotion. *Pac. Rev.* 30, 385–404. doi: 10.1080/09512748.2016.1249908

Kiazad, K., Kraimer, M., and Seibert, S. (2014a). A job embeddedness perspective on responses to psychological contract fulfillment. *Acad. Manag. Annu. Meet. Proc.* 2014, 12362–12362. doi: 10.5465/ambpp.2014.12362abstract

Kiazad, K., Seibert, S. E., and Kraimer, M. L. (2014b). Psychological contract breach and employee innovation: a conservation of resources perspective. *J. Occup. Organ. Psychol.* 87, 535–556. doi: 10.1111/joop.12062

Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling*, 4th Edn. New York, NY: Guilford Press.

Kock, N. (2015). Common method bias in PLS-SEM: a full collinearity assessment approach. *Int. J. E Collab.* 11, 1–10. doi: 10.4018/ijec.2015100101

Lee, S. (2018). Employee turnover and organizational performance in US federal agencies. *Am. Rev. Public Adm.* 48, 522–534. doi: 10.1177/0275074017715322

Lee, S. E., MacPhee, M., and Dahinten, V. S. (2020). Factors related to perioperative nurses' job satisfaction and intention to leave. *Jpn J. Nurs. Sci.* 17:e12263. doi: 10.1111/jjns.12263

Lee, T. W., Mitchell, T. R., Sablynski, C. J., Burton, J. P., and Holtom, B. C. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Acad. Manag. J.* 47, 711–722. doi: 10.5465/20159613

Lo, W. Y., Chien, L. Y., Hwang, F. M., Huang, N., and Chiou, S. T. (2018). From job stress to intention to leave among hospital nurses: a structural equation modelling approach. *J. Adv. Nurs.* 74, 677–688. doi: 10.1111/jan.13481

Loi, R., Hang-Yue, N., and Foley, S. (2006). Linking employees' justice perceptions to organizational commitment and intention to leave: the mediating role of perceived organizational support. *J. Occup. Organ. Psychol.* 79, 101–120. doi: 10.1348/096317905X39657

Lyu, Y., and Zhu, H. (2019). The predictive effects of workplace ostracism on employee attitudes: a job embeddedness perspective. *J. Bus. Ethics* 158, 1083–1095. doi: 10.1007/s10551-017-3741-x

MacIntosh, E. W., and Doherty, A. (2010). The influence of organizational culture on job satisfaction and intention to leave. *Sport Manag. Rev.* 13, 106–117. doi: 10.1016/j.smr.2009.04.006

Mahomed, F. E., and Rothmann, S. (2020). Strength use, training and development, thriving, and intention to leave: the mediating effects of psychological need satisfaction. *S. Afr. J. Psychol.* 50, 24–38. doi: 10.1177/0081246319849030

Mansour, S., and Tremblay, D.-G. (2016). How the need for "leisure benefit systems" as a "resource passageways" moderates the effect of work-leisure conflict on job burnout and intention to leave: a study in the hotel industry in Quebec. *J. Hosp. Tour. Manag.* 27, 4–11. doi: 10.1016/j.jhtm.2016.02.002

Mansour, S., and Tremblay, D.-G. (2018). Work–family conflict/family–work conflict, job stress, burnout and intention to leave in the hotel industry in Quebec (Canada): moderating role of need for family friendly practices as "resource passageways". *Int. J. Hum. Resour. Manag.* 29, 2399–2430. doi: 10.1080/09585192.2016.1239216

Meriläinen, M., Nissinen, P., and Kõiv, K. (2019). Intention to leave among bullied university personnel. *Int. J. Educ. Manag.* 33, 1686–1704. doi: 10.1108/IJEM-01-2018-0038

Mihail, P. V. K. D. M. (2017). Linking innovative human resource practices, employee attitudes and intention to leave in healthcare services. *Employee Relat.* 39, 34–53. doi: 10.1108/ER-11-2015-0205

Minamizono, S., Nomura, K., Inoue, Y., Hiraike, H., Tsuchiya, A., Okinaga, H., et al. (2019). Gender division of labor, burnout, and intention to leave work among young female nurses in Japan: a cross-sectional study. *Int. J. Environ. Res. Public Health* 16:2201. doi: 10.3390/ijerph16122201

Mitchell, T. R., and Lee, T. W. (2001). The unfolding model of voluntary turnover and job embeddedness: foundations for a comprehensive theory of attachment. *Res. Organ. Behav.* 23, 189–246. doi: 10.1016/S0191-3085(01)23006-8

Mohsin, M., Zhu, Q., Naseem, S., Sarfraz, M., and Ivascu, L. (2021). Mining industry impact on environmental sustainability, economic growth, social interaction, and public health: an application of semi-quantitative mathematical approach. *Processes* 9:972. doi: 10.3390/pr9060972

Naseem, S., Fu, G. L., Mohsin, M., Aunjam, M. S., Rafiq, M. Z., Jamil, K., et al. (2020a). Development of an inexpensive functional textile product by applying accounting cost benefit analysis. *Ind. Textila* 71, 17–22. doi: 10.35530/IT.071.01.1692

Naseem, S., Fu, G. L., Mohsin, M., Rehman, M. Z.-U., and Baig, S. A. (2020b). Semi-quantitative environmental impact assessment of khewra salt mine of Pakistan: an application of mathematical approach of environmental sustainability. *Min. Metall. Explor.* 37, 1185–1196. doi: 10.1007/s42461-020-00214-9

Naseem, S., Mohsin, M., Hui, W., Liyan, G., and Penglai, K. (2021). The investor psychology and stock market behavior during the initial era of COVID-19: a study of China, Japan, and the United States. *Front. Psychol.* 12, 16. doi: 10.3389/fpsyg.2021.626934

Netemeyer, R. G., Boles, J. S., and McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *J. Appl. Psychol.* 81:400. doi: 10.1037/0021-9010.81.4.400

Oviatt, D. P., Baumann, M. R., Bennett, J. M., and Garza, R. T. (2017). Undesirable effects of working while in college: work-school conflict, substance use, and health. *J. Psychol.* 151, 433–452. doi: 10.1080/00223980.2017.1314927

Özçelik, G., and Cenkci, T. (2014). Moderating effects of job embeddedness on the relationship between paternalistic leadership and in-role job performance. *Procedia Soc. Behav. Sci.* 150, 872–880.

Peachey, J. W., Burton, L. J., and Wells, J. E. (2014). Examining the influence of transformational leadership, organizational commitment, job embeddedness,

and job search behaviors on turnover intentions in intercollegiate athletics. *Leadersh. Organ. Dev. J.* 35, 740–755.

Purohit, B., and Vasava, P. (2017). Role stress among auxiliary nurses midwives in Gujarat, India. *BMC Health Serv. Res.* 17:69. doi: 10.1186/s12913-017-2033-6

Ramayah, T., Cheah, J., Chuah, F., Ting, H., and Memon, M. (2018). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using smartPLS 3.0 An Updated Guide and Practical Guide to Statistical Analysis*. London: Pearson.

Ringle, C., Wende, S., and Becker, J.-M. (2015). SmartPLS 3. SmartPLS GmbH, Boenningstedt. *J. Serv. Sci. Manag.* 10.

Samadi, L., Bagheri, M. S., Sadighi, F., and Yarmohammadi, L. (2020). An investigation into EFL instructors' intention to leave and burnout: exploring the mediating role of job satisfaction. *Cogent Educ.* 7:1781430.

Sánchez-Hernández, M. I., Gismera-Tierno, E., Labrador-Fernández, J., and Fernández-Fernández, J. L. (2020). Encountering suffering at work in health religious organizations: a partial least squares path modeling case-study. *Front. Psychol.* 11:1424. doi: 10.3389/fpsyg.2020.01424

Sarfraz, M., Mohsin, M., Naseem, S., and Kumar, A. (2021). Modeling the relationship between carbon emissions and environmental sustainability during COVID-19: a new evidence from asymmetric ARDL cointegration approach. *Environ. Dev. Sustain.*

Sasso, L., Bagnasco, A., Catania, G., Zanini, M., Aleo, G., Watson, R., et al. (2019). Push and pull factors of nurses' intention to leave. *J. Nurs. Manag.* 27, 946–954. doi: 10.1111/jonm.12745

Sekiguchi, T., Burton, J. P., and Sablynski, C. J. (2008). The role of job embeddedness on employee performance: the interactive effects with leader–member exchange and organization-based self-esteem. *Pers. Psychol.* 61, 761–792. doi: 10.1111/j.1744-6570.2008.00130.x

Sender, A., Rutishauser, L., and Staffelbach, B. (2018). Embeddedness across contexts: a two-country study on the additive and buffering effects of job embeddedness on employee turnover. *Hum. Resour. Manag. J.* 28, 340–356.

Silva, M. R. A., de Amorim Carvalho, J. C., and Dias, A. L. (2019). *Determinants of Employee Retention: A Study of Reality in Brazil Strategy and Superior Performance of Micro and Small Businesses in Volatile Economies*. Hershey, PA: IGI Global, 44–56.

Stamolampros, P., Korfiatis, N., Chalvatzis, K., and Buhalis, D. (2019). Job satisfaction and employee turnover determinants in high contact services: insights from Employees' Online reviews. *Tour. Manag.* 75, 130–147. doi: 10.1016/j.tourman.2019.04.030

Stewart, J. L., and Wiener, K. K. K. (2021). Does supervisor gender moderate the mediation of job embeddedness between LMX and job satisfaction? *Gend. Manag. Int. J.* 36, 536–552. doi: 10.1108/GM-07-2019-0137

Sun, R., and Wang, W. (2017). Transformational leadership, employee turnover intention, and actual voluntary turnover in public organizations. *Public Manag. Rev.* 19, 1124–1141. doi: 10.1080/14719037.2016.1257063

Treuren, G. J. (2019). Employee embeddedness as a moderator of the relationship between work and family conflict and leaving intention. *Int. J. Hum. Resour. Manag.* 30, 2504–2524. doi: 10.1080/09585192.2017.1326394

Wehner, L. E. (2016). Inter-role conflict, role strain and role play in Chile's relationship with Brazil. *Bull. Lat. Am. Res.* 35, 64–77. doi: 10.1111/blar.12413

Wendling, E., Kellison, T. B., and Sagas, M. (2018). A conceptual examination of college athletes' role conflict through the lens of conservation of resources theory. *Quest* 70, 28–47.

Yamaguchi, Y., Inoue, T., Harada, H., and Oike, M. (2016). Job control, work-family balance and nurses' intention to leave their profession and organization: a comparative cross-sectional survey. *Int. J. Nurs. Stud.* 64, 52–62. doi: 10.1016/j.ijnurstu.2016.09.003

Yousaf, M. R., Jamil, K., Roman, M., Shabbir Ch, M., and Shahid, A. (2020). Impact of training, job rotation and managerial coaching on employee commitment in context of BankingSector. *Sukkur IBA J. Manag. Bus.* 7, 60–72.

Zainal Badri, S. K., and Wan Mohd Yunus, W. M. A. (2021). The relationship between academic vs. family/personal role conflict and Malaysian students' psychological wellbeing during COVID-19 lockdown. *J. Furth. High. Educ.* 2021, 1–13. doi: 10.1080/0309877X.2021.1884210

Zhang, L., Fan, C., Deng, Y., Lam, C. F., Hu, E., and Wang, L. (2019). Exploring the interpersonal determinants of job embeddedness and voluntary turnover: a conservation of resources perspective. *Hum. Resour. Manag. J.* 29, 413–432. doi: 10.1111/1748-8583.12235

Zhang, Y., Wu, X., Wan, X., Hayter, M., Wu, J., Li, S., et al. (2019). Relationship between burnout and intention to leave amongst clinical nurses: the role of spiritual climate. *J. Nurs. Manag.* 27, 1285–1293.

Zimmerman, R. D., Swider, B. W., and Boswell, W. R. (2019). Synthesizing content models of employee turnover. *Hum. Resour. Manag.* 58, 99–114. doi: 10.1002/hrm.21938

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

frontiers in Psychology

ORIGINAL RESEARCH
published: 22 November 2021
doi: 10.3389/fpsyg.2021.782488

Gaining a Better Understanding of the Types of Organizational Culture to Manage Suffering at Work

Jordi Assens-Serra[1], Maria Boada-Cuerva[2], María-José Serrano-Fernández[2] and Esteban Agulló-Tomás[3]*

[1] Department of Strategy, Leadership and People, EADA Business School, Barcelona, Spain, [2] Human Factor, Organizations and Markets (FHOM), Faculty of Business and Economics, Universitat Rovira i Virgili (URV), Tarragona, Spain, [3] Faculty of Psychology, Universidad de Oviedo, Oviedo, Spain

Organizational culture is a central concept in research due to its importance in organizational functioning and suffering of employees. To better manage suffering, it is necessary to better understand the intrinsic characteristics of each type of culture and also its relationships with the environment. In this study, we used the multiple regression analysis to analyze the capacity of eight environment variables, five business strategies, and eight organizational competencies to predict the presence of Clan, Market, and Hierarchy cultures (Cameron and Quinn, 1999) in a subsample of Spanish managers (n_1 = 362) and a subsample of Peruvian managers (n_2 = 1,317). Contrary to what most of the literature suggests, we found almost no relationship between the environmental variables and the culture types. Strategy and competencies, in contrast, do have a significant predictive capacity, showing 9 links with the Clan culture, 7 with the Hierarchy culture, and 10 with the Market culture. In conclusion, this study has found the important characteristics of the types of organizational culture that could be useful to better manage the suffering of employees.

Keywords: organizational culture, suffering at work, job (un)satisfaction, intrinsic variables, extrinsic variables, clan culture, market culture, hierarchy culture

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Alejandro Vega-Muñoz, Universidad Autónoma de Chile, Chile
Luis Araya-Castillo, Andres Bello University, Chile

****Correspondence:***
Jordi Assens-Serra
jassens@eada.edu

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *24 September 2021*
Accepted: *26 October 2021*
Published: *22 November 2021*

Citation:
Assens-Serra J, Boada-Cuerva M, Serrano-Fernández M-J and Agulló-Tomás E (2021) Gaining a Better Understanding of the Types of Organizational Culture to Manage Suffering at Work. Front. Psychol. 12:782488. doi: 10.3389/fpsyg.2021.782488

INTRODUCTION

Organizational culture is a central concept in research due to its importance in organizational functioning (Giorgi et al., 2015) and suffering of employees (Gill, 2019). According to the study by Schein (2010), the organizational culture is a pattern of basic values and presuppositions that are shared and learned by a group while resolving the problems of external adaptation and internal integration. A well-established framework for studying culture is the model suggested by Cameron and Quinn (1999) which defines four culture archetypes, namely, Clan, Adhocracy, Market, and Hierarchy. Each culture represents a different set of values and presuppositions. All organizations have all four types but in different proportions. This is a typological model because it aims to identify archetypes using different effectiveness criteria. As shown in **Figure 1**, the cultures are represented in four quadrants and ordered into two dimensions. The vertical dimension

moves from flexibility, discretion, and dynamism to stability, order, and control, while the horizontal dimension moves from internal orientation and integration to external orientation and differentiation.

Research suggests that each culture has a different capacity to avoid suffering and create well-being in employees. The Clan culture is similar to an extended family. It is a very personal place characterized by mentoring, teamwork, participation, and trust (Cameron and Quinn, 2006). Employees in organizations with Clan culture are more satisfied with their jobs and have more behaviors aimed at benefiting peers and companies (Lopez-Martin and Topa, 2019). Clan culture improves the satisfaction of respect needs (Zavyalova and Kucherov, 2010) and is also negatively associated with conflict (McClure, 2010). Thus, there are different characteristics in Clan culture that could have an effect of reducing suffering. The Market culture is very results-oriented. People are very competitive, and market leadership is a key (Cameron and Quinn, 2006). Workers in these organizations perceive their health as worse than average (Lopez-Martin and Topa, 2019) despite this culture creates the conditions for the satisfaction of self-affirmation needs (Zavyalova and Kucherov, 2010). Therefore, Market culture has characteristics that could increase suffering in employees. The Hierarchy culture is characterized by stability, formal rules and policies, strong focus on internal processes, efficiency, control, smooth operations, and low-cost production (Cameron and Quinn, 2006). It is associated with employee demotivation (Adler and Borys, 1996; Cameron and Quinn, 2006) and conflict (McClure, 2010). It also has a significant risk of creating human dysfunctions that harm customer involvement (Naor et al., 2008) and market orientation (Gebhardt et al., 2006). Nevertheless, if the organizational culture is oriented toward rules, it favors the satisfaction of cooperation and safety needs (Zavyalova and Kucherov, 2010), and employees report a better health status (Lopez-Martin and Topa, 2019). Therefore, the Hierarchy culture appears to have characteristics that could both increase and decrease suffering at work. In conclusion, there is a link between organizational culture and suffering at work, but, to better manage suffering, there is the need to understand, in greater depth, the extrinsic and intrinsic characteristics of each organizational culture.

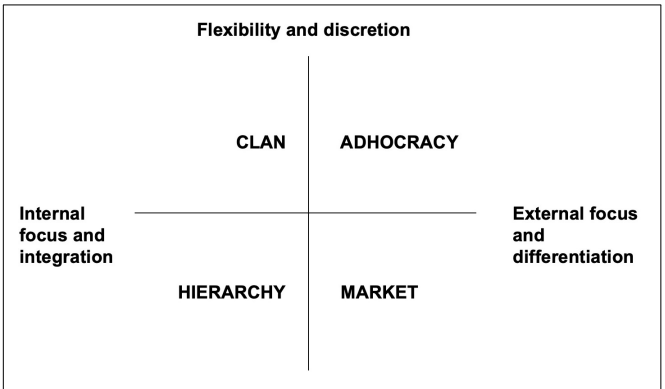

FIGURE 1 | The culture model as suggested by Cameron and Quinn (1999, 2006).

There is widespread agreement in academia that, to survive, the organizational culture needs to be adapted to the environment (Denison et al., 2003; Schein, 2010; Bayraktar et al., 2017; De Clercq et al., 2018). The environment can be measured using extrinsic variables such as market turbulence, technological turbulence, and competitive intensity, which can all move from a stable to a turbulent, aggressive state. Quinn and Cameron (1983) and Schein (2010) noted that the literature on the contingent model of organizational adaptation affirms that companies in changing environments need to have organic and adaptable cultures and structures. Nevertheless, at present, the relationships between the culture and the environment remain unclear.

Another area that needs more research is the internal configuration of each culture, which can be measured using intrinsic variables. These variables are mainly the business strategy and the organizational competencies, which are both developed by founders and leaders of an organization (Berson et al., 2008; O'Reilly et al., 2014) with the aim of making the organization more competitive. What leaders pay attention to, reward, monitor, and talk about focuses the attention and efforts of their followers (Schein, 2010; Braunscheidel and Suresh, 2018). These intrinsic variables have the presuppositions and values of a company embedded within them and make the culture robust (Schein, 2010; Denison et al., 2014; Zohar and Polachek, 2014).

The business strategy of a company refers to the decisions taken by its leaders to achieve a competitive advantage in its market. Mintzberg and Quinn (1995) said that there must be a plan that defines the action to be taken in different situations for the purposes of achieving defined objectives. The business strategy must be proactively articulated with a pattern of actions and behaviors that are aligned with company values and reflect the ideology and philosophy of a company. It must also position the organization in a context and in relation to its environment and stakeholders (Prajogo, 2016). The strategy is, therefore, one of the most important decisions made by the founders and leaders, who will aim to align the culture with it (Slater et al., 2010; Madero Gómez and Barboza, 2015; Marshall, 2018; Barros and Fischmann, 2020).

Organizational competencies, in contrast, are certain capacities the company has that combine knowledge and skills and are necessary for obtaining a competitive advantage (King et al., 2001). They include market orientation, competitor orientation, and type of innovation. Barney (1991) referred to them as a set of internal knowledge-based resources and capabilities. He also noted that they have to be valuable, rare, inimitable, and lack substitutes. Some researchers have empirically shown several relationships between cultures, strategies, and competencies (Olson et al., 2005; Slater et al., 2010), but the intrinsic characteristics of each culture are still not clear. In summary, which cultures are better adapted to each environment and the characteristics of each culture are not well-documented in the literature, which is a matter of concern for practitioners and academics alike.

The goal of this study was to determine which extrinsic and intrinsic variables can predict the presence of the Clan, Market, and Hierarchy organizational cultures (Cameron and Quinn, 1999). Links between each culture and the extrinsic variables could help us understand which cultures are better adapted to each environment. Links with the intrinsic variables could give us information about the business strategies and organizational competencies that characterize each culture. A better understanding of the variables of each organizational culture could be useful to mitigate the suffering of employees. We also compared the results for a Spanish and a Peruvian sample to determine the differences that could enrich our understanding of the cultures. We analyzed some hypotheses from the scientific literature, but the study was also exploratory and aimed to find new links between each culture and the extrinsic and intrinsic variables.

Related to the extrinsic variables, Quinn and Cameron (1983) and Schein (2010) noted that the literature on the contingent model of organizational adaptation states that companies in changing environments need to have organic and adaptable cultures. More specifically, Cameron et al. (2006) used their model to explain how the culture adapts to the environment. In a study that analyzed responses from over 80,000 professionals from more than 3,000 companies of the United States, they found that the Market culture, because it is externally oriented, is the most capable of surviving in an ever-changing environment. Meanwhile, the Clan and Hierarchy cultures, which are internally oriented, are better adapted to stable environments. Accordingly, the following hypotheses are proposed:

Hypothesis C1: the presence of the Clan culture can be predicted by a state of stability in the extrinsic variables.

Hypothesis M1: the presence of the Market culture can be predicted by a state of turbulence in the extrinsic variables.

Hypothesis H1: the presence of the Hierarchy culture can be predicted by a state of stability in the extrinsic variables.

Related to the business strategy, Slater et al. (2010), in an empirical study carried out mainly with marketing managers in the United States, determined some links between the cultures and the strategy. First, competitiveness in the Clan culture is based on very competent, motivated human capital that differentiates the company from competitors. Second, the Market culture focuses on getting results. To do this, it analyzes the market leaders and tries to aggressively compete with them. Third, the Hierarchy culture competes with excellent systems and processes by trying to lower the costs and positioning their offer according to the competitors. These links were also suggested by Cameron et al. (2006). Based on the earlier discussion, the following hypotheses are proposed:

Hypothesis C2: the presence of the Clan culture can be predicted by the Differentiated defender strategy.

Hypothesis M2: the presence of the Market culture can be predicted by the Analyzer defender strategy.

Hypothesis H2: the presence of the Hierarchy culture can be predicted by the Low-cost defender strategy.

Hypothesis H3: the presence of the Hierarchy culture can be predicted by the Analyzer defender strategy.

Related to the intrinsic variables, the same study (Slater et al., 2010) also suggested some links between the cultures and different organizational competencies. First, the Clan culture can be very close to the market and deliver an excellent service thanks to motivated human capital. Its organization is also adaptable and flexible. Second, the Market culture is externally oriented and, to get results, focuses on clients and competitors. Third, the Hierarchy culture uses its systems and processes to provide a better service and better prices than its competitors. It, therefore, continuously needs to benchmark its position. Again, these links were previously suggested by Cameron et al. (2006). In light of these discussions, the following hypotheses have been postulated:

Hypothesis C3: the presence of the Clan culture can be predicted by Market orientation.

Hypothesis C4: the presence of the Clan culture can be predicted by the Speed of organizational change.

Hypothesis M3: the presence of the Market culture can be predicted by Market orientation.

Hypothesis M4: the presence of the Market culture can be predicted by Competitor orientation.

Hypothesis H4: the presence of the Hierarchy culture can be predicted by Competitor orientation.

MATERIALS AND METHODS

Participants

A total of 1,679 managers participated in this study. This study has two different subsamples: one Spanish (n_1 = 362; 69.9% men and 30.1% women; average age = 42.2 years) and one Peruvian (n_2 = 1,317; 67.5% men and 32.5% women; average age = 35.3 years). Most of the study participants have university studies, and they work in a variety of industries and company sizes.

Measures

Organizational Culture

We assessed culture using the Organizational Culture Assessment Instrument (OCAI; Cameron et al., 2006). The questionnaire was translated and adapted into Spanish (Assens-Serra, 2018) using the exploratory factor analysis (EFA) with a Spanish sample (n_1 = 246) and the confirmatory factor analysis (CFA) with a Latin-American sample (n_2 = 510). The result reduced the four-factor internal structure to a three-factor structure that retains the Clan, Market, and Hierarchy factors (i.e., reducing the number of items in each from six to four) but completely excludes the Adhocracy factor. The study gave rise to a three-factor

instrument in Spanish called OCAI-12. CFA shows acceptable indicators (TLI = 0.93, CFI = 0.94, RMSEA = 0.07). Reliabilities are also good (α = 0.74 for Clan, α = 0.79 for Market, and α = 0.71 for Hierarchy). Due to that our study independently analyzes the Clan, the Market, and the Hierarchy cultures, the need of excluding the *ad hoc* type does not influence the quality of our results. There is another study in a different context in which the researcher could not retain a factor (i.e., the Market culture) and also used a reduced OCAI (Karakasnaki et al., 2019). Our study represents the largest activity at present for adapting the OCAI (Cameron and Quinn, 2006) into Spanish, with a Likert scale and using CFA. It shows the difficulty in adapting this scale from English into Spanish. Despite the rigor of the translation method, the different meanings of the words and concepts make it difficult the construct equivalence, and it was necessary to reduce the original OCAI to the point of completely discarding the *ad hoc* factor. Previous translations of the OCAI into Spanish only used EFA and found conflicting results. For example, Núñez et al. (2015) retained the four factors in a study with Mexican companies, but Cerpa-Noya (2018), with a sample of workers in Metropolitan Lima, retained only two factors.

The Clan factor measures the assumption that the company will succeed based on its human capital (sample item: "The management style in the organization is characterized by teamwork, consensus, and participation"). The Market factor measures the assumption that there is a need to compete aggressively to get business results (sample item: "The organization is very results-oriented. A major concern is with getting the job done. People are very competitive and achievement-oriented"). The Hierarchy factor measures the assumption that success comes with stable, predictable, and efficient formal rules and policies (sample item: "The management style in the organization is characterized by the security of employment, conformity, predictability, and stability in relationships").

Responses were made on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Extrinsic Variables

The study used eight instruments for measuring the organizational environment: Market turbulence (Narver et al., 2004), which measures the changes in the preferences and needs of customers (α = 0.69; sample item: Customers in this market are very receptive to new product ideas); Technological turbulence (Olson et al., 2005), which measures the impact of new technologies (α = 0.72; sample item: Many new product ideas have been made possible by technological advances in this industry); Competitive intensity (Jaworski and Kohli, 1993), which measures the strength of competitors (α = 0.73; sample item: There are many "promotion wars" in our industry); four scales of Competitive environment (based on the study by Porter., 2008), which measure the Power of suppliers, the Power of customers, the Threat of new entrants, and the Threat of substitute products, with each scale having one item; and finally, Speed of environmental change [based on the study by Porter (2008)], which measures how fast the seven extrinsic variables above are changing (α = 0.72; sample item: Speed of change in customers).

Intrinsic Variables

The organizational strategy was measured using the strategy-type instrument (Slater and Olson, 2000), which enables five different strategies to be identified: The Prospector strategy measures the behavior of being the first to market a new product or service concept; the Analyzer strategy measures the behavior of being early followers, monitoring prospector actions and customer responses to them; the Differentiating defender strategy focuses on providing different and superior levels of service and/or product quality; the Low-cost defender strategy focuses on producing goods or services as efficiently as possible and at the best price; and finally, the Reactor strategy does not appear to have a consistent product-market orientation and only responds to competitive pressures in the short term. The instrument uses one item to measure each strategy.

We also used the following eight instruments to measure organizational competencies: Responsive market orientation (MORTN; Deshpandé and Farley, 1998), which measures the activities of a company to discover and satisfy the expressed needs of the clients (α = 0.88; sample item: Our business objectives are driven primarily by customer satisfaction); Proactive market orientation (MOPRO; Narver et al., 2004), which measures the activities of the company to discover and satisfy the hidden and unconscious needs of the clients (α = 0.86; sample item: We continuously try to discover the additional needs of our customers of which they are unaware); Competitor orientation (Olson et al., 2005), which measures the organizational behaviors aimed at beating competitors (α = 0.90; sample item: We rapidly respond to competitive actions that threaten us); Speed of organizational change (based on Porter, 2008), which measures how quickly the organization adapts and is able to change based on the movements in the environment (α = 0.90; sample item: The organization adapts quickly to changes happening in the environment); and finally, four scales to measure Types of innovation (Cameron et al., 2006), radical innovation, incremental innovation, innovation in internal processes, and innovation in products and services, each of which has one item. All of the instruments used a 5-point Likert scale.

Table 1 provides a summary of the instruments along with the number of items and reliabilities.

Procedure

Participants were obtained through non-probabilistic sampling (Hernández et al., 2000). The data were collected between December 2016 and May 2019 through an online questionnaire. The response rate was 81% for the Spanish subsample and 87% for the Peruvian subsample.

Data Analysis

We used the IBM SPSS program (version 23.0) to carry out the stepwise multiple regressions and to calculate the reliabilities. We used multiple regressions as a way to explore, in the same study, the capacity of many variables (8 extrinsic and 13 intrinsic) to predict the presence of each type of culture. Previous studies

TABLE 1 | Summary of the instruments.

Scale	No. of items and version	Subscale (items)	Alpha C
Scale of culture			
OCAI. Organizational Culture Assessment Instrument (Cameron and Quinn, 2006)	English (24 items)	F1.- Clan (6 items)	0.74
		F2.- Adhocracy (6 items)	0.79
		F3.- Market (6 items)	0.71
		F4.- Hierarchy (6 items)	0.73
	Spanish (12 items)	F1.- *Clan* (4 items)	0.74
		F2.- *Mercado* (4 items)	0.79
		F3.- *Jerarquía* (4 items)	0.71
Intrinsic scales (strategy and organizational variables)			
Strategy type (Slater and Olson, 2000)	English (5 items)	F1.- Prospector (1 item)	
		F2.- Analyzer (1 item)	
		F3.- Low-cost defender (1 item)	
		F4.- Differentiated defender (1 item)	
		F5.- Reactive (1 item)	
	Spanish (5 items)	F1.- *Prospectora* (1 item)	
		F2.- *Analizadora* (1 item)	
		F3.- *Defensiva* low-cost (1 item)	
		F4.- *Defensiva diferenciadora* (1 item)	
		F5.- *Reactiva* (1 item)	
MORTN. Responsive market orientation (Deshpandé and Farley, 1998)	English (10 items)	F1.- Responsive market orientation	0.88
	Spanish (10 items)	F1.- *Orientación a Mercado* Responsive	0.88
MOPRO. Proactive market orientation (Narver et al., 2004)	English (8 items)	F1.- Proactive market orientation	0.88
	Spanish (7 items)	F1.- *Orientación a Mercado Proactiva*	0.86
Competitor orientation (Olson et al., 2005)	English (8 items)	F1.- Competitor orientation	0.90
	Spanish (8 items)	F1.- *Orientación a Competidores*	0.90
Velocidad de Cambio de la Organización	Spanish (4 items)	F1.- *Velocidad de Cambio de la Organización*	0.87
Tipo de Innovación	Spanish (4 items)	F1.- *Radical en Productos* (Radical in products)	–
		F2.- *Incremental en Productos* (Incremental in products)	
		F3.- *Radical en Procesos* (Radical in processes)	
		F4.- *Incremental en Procesos* (Incremental in processes)	
Extrinsic scales (environment variables)			
Market turbulence (Narver et al., 2004)	English (8 items)	F1.- Market turbulence	0.69
	Spanish (7 items)	F1.- *Turbulencia de Mercado*	0.69
Technological turbulence (Olson et al., 2005)	English (8 items)	F1.- Technological turbulence	0.94
	Spanish (7 items)	F1.- *Turbulencia Tecnológica*	0.72
Competitive intensity (Jaworski and Kohli, 1993)	English (8 items)	F1.- Competitive intensity	0.81
	Spanish (6 items)	F1.- *Intensidad competitiva*	0.73
Entorno Competitivo	Spanish (4 items)	F1.- *Poder de negociación de proveedores* (Bargaining power of suppliers)	–
		F2.- *Poder de negociación de clientes* (Bargaining power of buyers)	
		F3.- *Amenaza entrada nuevos competidores* (Threat of new entrants)	
		F4.- *Amenaza de productos o servicios substitutivos* (Threat of substitute products)	
Velocidad de Evolución del Entorno	Spanish (7 items)	F1.- *Velocidad de Evolución del Entorno* (speed of environment change)	0.72

in the literature conducted in different contexts have shown the benefits of using multiple regressions (An et al., 2011; Naranjo-Valencia et al., 2011; Hwang, 2019).

RESULTS

The predictive study for the Clan culture with the Spanish subsample (n_1 = 362) can explain 34% of the variance with the following six predictive variables and percentages of explained variance: Speed of organizational change (22%), MORTN (7%), MOPRO (2%), Reactor strategy (1%), Analyzer strategy (1%), and Incremental innovation in internal processes (1%). The study with the Peruvian subsample (n_2 = 1,317) can also explain 34% of the variance with the following seven predictive variables: MORTN (24%), Speed of change (6%), Incremental innovation in products and services (2%), Prospector strategy (1%), Analyzer

strategy (1%), Reactor strategy (<1% with a negative sign), and Market turbulence (<1%).

The results show that the Clan culture, in both the Spanish and Peruvian subsamples, is mainly characterized by its capacity to change and adapt quickly (Speed of organizational change) and its ability to respond to the present desires of clients (MORTN). There is one extrinsic variable, i.e., Market turbulence, in the Peruvian subsample that has a small predictive capacity but a positive correlation. Thus, there is no indication that the Clan culture is more common in stable environments.

Tables 2, **3** show the models and coefficients of the stepwise multiple regressions.

The predictive study for the Market culture with the Spanish subsample (n_1 = 362) can explain 18% of the variance with the following three predictive variables: Competitor orientation (13%), Prospector strategy (4%), and Low-cost strategy (1%). The study with the Peruvian subsample (n_2 = 1,317) can explain 32% of the variance with the following eight predictive variables: MORTN (24%), Radical innovation in products and services (3%), Low-cost strategy (2%), Incremental innovation in products and services (1%), Competitive intensity (1%), Market turbulence (1% and negative sign), Speed of organizational change (<1%), and Reactor strategy (<1%).

Unexpectedly, the results show that the predictors of Market culture are very different in the two subsamples. In the Spanish case, the Market culture is mainly characterized by the Competitor orientation and the Prospector strategy, but in the Peruvian case, it is characterized by the Responsive client orientation (MORTN). Only the Low-cost strategy is shared at a low percentage, suggesting that this culture varies greatly in its internal characteristics. Contrary to what most of the literature suggests, no extrinsic variable appears as a predictor in the Spanish subsample. In the Peruvian subsample, however, there is a 1% predictive capacity for Competitive intensity and another 1%, but with a negative sign, for Market turbulence. This suggests that Market

TABLE 2 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): clan culture (Spanish subsample n_1 = 362).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2\ Adjusted}$	R^{Change}	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.47	0.22	0.22	0.22	104.56	0.000					
Model-2	0.54	0.29	0.29	0.07	73.80	0.000					
Model-3	0.56	0.31	0.31	0.02	54.52	0.000					
Model-4	0.57	0.33	0.32	0.01	44.05	0.000					
Model-5	0.59	0.34	0.33	0.01	37.18	0.000					
Model-6	0.59	0.35	0.34	0.01	32.03	0.000					
Speed of org. change							0.20	0.06	0.20	3.61	0.000
MORTN							0.08	0.03	0.17	2.86	0.004
MOPRO							0.10	0.04	0.15	2.61	0.009
Reactor strategy							–0.43	0.13	–0.15	–3.21	0.001
Analyzer strategy							0.34	0.14	0.10	2.37	0.019
Incremental innovation internal processes							0.39	0.18	0.11	2.11	0.035

TABLE 3 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): clan culture (Peruvian subsample n_2 = 1,317).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2Adjusted}$	R^{Change}	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.49	0.24	0.24	0.24	426.35	0.000					
Model-2	0.55	0.30	0.30	0.06	287.58	0.000					
Model-3	0.57	0.32	0.32	0.02	206.23	0.000					
Model-4	0.57	0.33	0.33	0.01	158.39	0.000					
Model-5	0.58	0.33	0.34	0.01	130.63	0.000					
Model-6	0.58	0.34	0.34	0.00	111.58	0.000					
Model-7	0.58	0.34	0.34	0.00	97.06	0.000					
MORTN							0.10	0.01	0.22	7.24	0.000
Speed of org. change							0.20	0.03	0.19	6.11	0.000
Incremental innovation products-services							0.41	0.10	0.13	4.07	0.000
Prospector strategy							0.35	0.09	0.10	3.80	0.000
Analyzer strategy							0.32	0.07	0.11	4.39	0.000
Reactor strategy							–0.25	0.07	–0.09	–3.66	0.000
Market turbulence							0.09	0.03	0.07	2.63	0.009

culture could be quite common in Peru when competition increases but less common when customer preferences are changing.

Tables 4, **5** show the models and coefficients of the stepwise multiple regressions.

Finally, the predictive study for the Hierarchy culture with the Spanish subsample (n_1 = 362) can explain 12% of the variance with the following three predictive variables: Low-cost strategy (6%), MORTN (5%), and Incremental innovation in internal processes (1%). The study with the Peruvian subsample (n_2 = 1,317) can explain 23% of the variance with the following seven predictive variables: MORTN (17%), Incremental innovation in internal processes (2%), Low-cost strategy (2%), Competitor orientation (1%), Prospector strategy (1%), Threat of new entrants (<1%), and Radical innovation in internal processes (<1%).

The results show that the Hierarchy culture, in both the Spanish and Peruvian subsamples, is mainly characterized by its interest in the present needs of the clients (MORTN), the Low-cost strategy, and Incremental innovation in internal processes. There is one extrinsic variable in the Peruvian subsample with a small predictive capacity but with a positive correlation: Threat of new entrants. Thus, there is no indication that the Clan culture is more common in stable environments.

Tables 6, **7** show the models and coefficients of the stepwise multiple regressions.

TABLE 4 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): market culture (Spanish subsample n_1 = 362).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2\ Adjusted}$	R^{Change}	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.36	0.13	0.13	0.13	54.46	0.000					
Model-2	0.42	0.17	0.17	0.04	37.58	0.000					
Model-3	0.43	0.18	0.18	0.01	27.03	0.000					
Competitor orientation							0.10	0.02	0.24	4.53	0.000
Prospector strategy							0.76	0.16	0.25	4.66	0.000
Low-cost strategy							0.35	0.15	0.11	2.25	0.025

TABLE 5 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): market culture (Peruvian subsample n_2 = 1,317).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2Adjusted}$	R^{Change}	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.49	0.24	0.24	0.24	411.06	0.000					
Model-2	0.52	0.27	0.27	0.03	249.44	0.000					
Model-3	0.54	0.29	0.29	0.02	182.74	0.000					
Model-4	0.55	0.30	0.30	0.01	142.91	0.000					
Model-5	0.56	0.31	0.31	0.01	117.73	0.000					
Model-6	0.56	0.31	0.32	0.01	100.20	0.000					
Model-7	0.56	0.32	0.32	0.00	87.46	0.000					
Model-8	0.57	0.32	0.32	0.00	77.58	0.000					
MORTN							0.01	0.01	0.28	9.13	0.000
Disruptive innovation in products and services							0.30	0.09	0.12	3.47	0.001
Low-cost strategy							0.34	0.06	0.13	5.62	0.000
Incremental innovation in products and services							0.28	0.09	0.10	3.00	0.003
Competitive intensity							0.12	0.02	0.13	4.59	0.000
Market turbulence							–0.09	0.03	–0.08	–2.62	0.009
Speed of organizational change							0.08	0.03	0.09	2.73	0.006
Strategy reactor							–0.14	0.06	–0.06	–2.46	0.014

TABLE 6 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): hierarchy culture (Spanish subsample n_1 = 362).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2Adjusted}$	R^{Change}	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.25	0.06	0.06	0.06	23.42	0.000					
Model-2	0.34	0.11	0.11	0.05	23.07	0.000					
Model-3	0.35	0.12	0.12	0.01	16.95	0.000					
Low-cost strategy							0.73	0.14	0.25	5.14	0.000
MORTN							0.07	0.02	0.18	3.23	0.001
Incremental innovation internal processes							0.34	0.16	0.11	2.07	0.039

TABLE 7 | Summary of the models, predictive variables, and coefficients of regression analysis (stepwise method): hierarchy culture (Peruvian subsample n_2 = 1,317).

Models and variables	Models						Coefficients				
	R	R^2	$R^{2Adjusted}$	R Change	F	Sig.	B	SE	β	*t*	Sig.
Model-1	0.41	0.17	0.17	0.17	263.39	0.000					
Model-2	0.44	0.20	0.19	0.02	160.47	0.000					
Model-3	0.46	0.21	0.21	0.02	118.96	0.000					
Model-4	0.47	0.22	0.22	0.01	93.94	0.000					
Model-5	0.48	0.23	0.23	0.01	76.96	0.000					
Model-6	0.48	0.23	0.23	0.00	65.04	0.000					
Model-7	0.48	0.23	0.23	0.00	56.50	0.000					
MORTN							0.07	0.01	0.20	5.25	0.000
Incremental innovation internal processes							0.31	0.10	0.11	3.19	0.001
Low-cost strategy							0.34	0.07	0.12	5.06	0.000
Competitor orientation							0.37	0.01	0.11	2.71	0.007
Prospector strategy							0.19	0.08	0.07	2.35	0.019
Threat of new competitors							0.14	0.07	0.05	2.19	0.034
Radical innovation internal processes							0.20	0.09	0.07	2.08	0.038

Tables 8–10 provide a summary of the predictive variables for each culture. They are ordered by the value of the R Change, from highest to lowest and comparing the two subsamples. The matching variables for the two subsamples in each table are highlighted in bold. This comparison of the results between the Spanish and Peruvian subsamples shows a high level of agreement between the Clan and Hierarchy cultures. However, for the Market culture, the results only have the Low-cost strategy variable in common, with less predictive capacity.

DISCUSSION

Summary and Discussion of the Results

The objective of this study was to determine which extrinsic and intrinsic variables can predict the presence of the Clan, Market, and Hierarchy organizational cultures (Cameron and Quinn, 1999). We also compared the results from a Spanish (n_1 = 362) and a Peruvian subsample (n_2 = 1,317). The links between the extrinsic variables and the cultures could help us to understand which cultures are better adapted to each environment. The links between the intrinsic variables and the cultures, in contrast, could give us information about which business strategies and organizational competencies are the characteristics of each culture. In addition, the differences in the results for the two subsamples could enrich our understanding of the characteristics of each culture. By gaining a better understanding of the variables of each type of organizational culture, we could better manage the suffering of employees.

TABLE 8 | Summary of the predictive variables for the Clan culture, sorted by the value of the R Change, from highest to lowest.

SPAIN n_1 = 362	PERU n_2 = 1,317
Speed of org. change $\Delta R^2 = 0.22$ (β = 0.20)	**MORTN** $\Delta R^2 = 0.24$ (β = 0.22)
MORTN $\Delta R^2 = 0.07$ (β = 0.17)	**Speed of org. change** ΔR2 = 0.06 (β = 0.19)
MOPRO $\Delta R^2 = 0.02$ (β = 0.15)	Incremental innovation in products and services ΔR2 = 0.02 (β = 0.13)
Reactor strategy $\Delta R^2 = 0.01$ (β = –0.15)	Prospector strategy $\Delta R^2 = 0.01$ (β = 0.10)
Analyzer strategy $\Delta R^2 = 0.01$ (β = 0.10)	**Analyzer strategy** $\Delta R^2 = 0.01$ (β = 0.11)
Incremental innovation in internal processes $\Delta R^2 = 0.01$ (β = 0.11)	**Reactor strategy** $\Delta R^2 = 0.00$ (β = –0.09)
	Market turbulence $\Delta R^2 = 0.00$ (β = 0.07)
Explained variance 34%	Explained variance 34%

The matching variables are highlighted in bold.

TABLE 9 | Summary of the predictive variables for the Market culture, sorted by the value of the R Change, from highest to lowest.

SPAIN n_1 = 362	PERU n_2 = 1,317
Competitor orientation $\Delta R^2 = 0.13$ (β = 0.24)	MORTN $\Delta R^2 = 0.24$ (β = 0.28)
Prospector strategy $\Delta R^2 = 0.04$ (β = 0.25)	Radical innovation in products and services $\Delta R^2 = 0.03$ (β = 0.12)
Low-cost strategy $\Delta R^2 = 0.01$ (β = 0.11)	**Low-cost strategy** $\Delta R^2 = 0.02$ (β = 0.13)
	Incremental innovation in products and services $\Delta R^2 = 0.01$ (β = 0.10)
	Competitive intensity $\Delta R^2 = 0.01$ (β = 0.13)
	Market turbulence $\Delta R^2 = 0.01$ (β = –0.08)
	Speed of organizational change $\Delta R^2 = 0.00$ (β = 0.09)
	Reactor strategy $\Delta R^2 = 0.00$ (β = –0.07)
Explained variance 18%	Explained variance 32%

The matching variables are highlighted in bold.

TABLE 10 | Summary of the predictive variables for the Hierarchy culture, sorted by the value of the R Change, from highest to lowest.

SPAIN n_1 = 362	PERU n_2 = 1,317
Low-cost strategy $\Delta R^2 = 0.06$ ($\beta = 0.25$)	**MORTN** $\Delta R^2 = 0.17$ ($\beta = 0.20$)
MORTN $\Delta R^2 = 0.05$ ($\beta = 0.18$)	**Incremental innovation internal processes** $\Delta R^2 = 0.02$ ($\beta = 0.11$)
Incremental innovation internal processes $\Delta R^2 = 0.01$ ($\beta = 0.11$)	**Low-cost strategy** $\Delta R^2 = 0.02$ ($\beta = 0.12$)
	Competitor orientation $\Delta R^2 = 0.01$ ($\beta = 0.11$)
	Prospector strategy $\Delta R^2 = 0.01$ ($\beta = 0.07$)
	Threat of new entrants $\Delta R^2 = 0.00$ ($\beta = 0.05$)
	Radical innovation internal processes $\Delta R^2 = 0.00$ ($\beta = 0.07$)
Explained variance 12%	Explained variance 23%

The matching variables are highlighted in bold.

Hypotheses M1, C1, and H1 focus on the relationships between cultures and the environment. Quinn and Cameron (1983); Cameron et al. (2006), and Schein (2010) have suggested that the Market culture is the most capable of surviving in an ever-changing environment, while the Clan culture and the Hierarchy culture are better adapted to stable environments. Hypothesis M1 is partially fulfilled in the Peruvian subsample. Our study demonstrates that Competitive intensity has some predictive capacity in the Peruvian subsample as far as the Market culture is concerned. This is consistent with the study by Cameron et al. (2006). Unexpectedly, we also found that Market turbulence has some predictive capacity in the Peruvian subsample, but with a negative sign. This suggests that the Market culture could be fairly common in Peru when competition is strong but less common when customer preferences are changing. Nevertheless, the two predictive capacities are small and do not appear in the Spanish subsample. Hypotheses C1 and H1 are not fulfilled. Our study found no extrinsic variable with an inverse relationship with either the Clan culture or the Hierarchy culture. Therefore, we found nothing to support the idea that the two cultures are more common in stable environments.

Hypotheses C2, M2, H2, and H3 focus on the relationships between cultures and business strategy, based on an empirical study carried out by Slater et al. (2010). Hypothesis C2 is not fulfilled. We found no support for the idea that the presence of the Clan culture can be predicted by a Differentiated defender strategy. Thus, human capital does not appear as a source of strategic differentiation. Nevertheless, our results did find some predictive capacity in the Reactor and Analyzer strategies in both Spain and Peru, as well as in the Prospector strategy in Peru. Hypothesis M2, which states that the presence of the Market culture can be predicted by the Analyzer defender strategy, is not fulfilled. Nevertheless, our results found some predictive capacity in the Low-cost strategy in both Spain and Peru, being this consistent with the findings of Nase and Arkesteijn (2018) in the global research on corporate real state. We also found some predictive capacity in the Prospector strategy in Spain and the Reactor strategy in the Peruvian subsample. This suggests that the Market culture can use a different mix of strategies to compete. Hypothesis H2, which states that the presence of the Hierarchy culture can be predicted by the Low-cost defender strategy, is fulfilled. Our results found a relevant predictive capacity in the Low-cost strategy in both the Spanish and Peruvian subsamples, supporting the idea that the Hierarchy culture uses the excellence of its processes to lower costs (Slater et al., 2010; Nase and Arkesteijn, 2018).

Hypothesis H3 states that the presence of the Hierarchy culture can be predicted by the Analyzer defender strategy. This hypothesis is not fulfilled.

Hypotheses C3, C4, M3, M4, and H4 focus on the relationships between cultures and organizational competencies, also based on the empirical research carried out by Slater et al. (2010). Hypothesis C3 states that the presence of the Clan culture can be predicted by Market orientation. Our results show that this hypothesis is fulfilled insofar as MORTN has a relevant predictive capacity in the two subsamples. This is consistent with the findings of various researchers (Jaworski and Kohli, 1993; Cameron et al., 2006; Iglesias et al., 2011). Hypothesis C4 is also fulfilled. In fact, the presence of the Clan culture can be predicted by the Speed of organizational change in both subsamples. Thus, we have support for the idea that the Clan culture is capable of changing and adapting quickly. This is consistent with the findings of Cameron et al. (2006) and Goncalves et al. (2020). Hypothesis M3 states that the presence of the Market culture can be predicted by Market orientation. This is fulfilled in the Peruvian subsample, for which we found a relevant predictive capacity in MORTN. Unexpectedly, we did not find the same link in the Spanish subsample, contrary to the theory of Cameron et al. (2006). This suggests that the Market culture may have very different competencies depending on certain circumstances that are as yet unknown. Hypothesis M4 states that the presence of the Market culture can be predicted by Competitor orientation. This is only fulfilled in the Spanish subsample, for which our results show some predictive capacity. Unexpectedly, we did not find this link in the Peruvian subsample, which again evidences high variability in Market culture competencies. Finally, Hypothesis H4 states that the presence of the Hierarchy culture can be predicted by Competitor orientation. This is fulfilled in the Peruvian subsample and shows some capacity to observe competitors in order to benchmark costs and prices. Unexpectedly, our results found a relevant predictive capacity in MORTN and Incremental innovation in internal processes in both subsamples. We also found a small predictive capacity in Radical innovation in internal processes in the Peruvian subsample. In line with the theory of Slater et al. (2010), the Hierarchy culture, therefore, seems to be oriented toward the present needs of clients and also seems capable of improving internal processes. Karakasnaki et al. (2019), in the recent research in the shipping industry,

gave support to the relationship between Hierarchy culture and MORTN, finding that "the more hierarchical lines of authority and standardization of procedures are evident in an organization, the stronger the perceptions that employees care about the needs of the customers." Both MORTN and Incremental innovation in internal processes are consistent with the Low-cost strategy, as mentioned earlier. The presence of MORTN in the Hierarchy culture could have a motivational effect on employees since satisfying customers could give meaning to their work (Jaworski and Kohli, 1993) and result in high levels of organizational commitment (Pinho et al., 2014). In the same way, participating in the processes of Incremental innovation could also be beneficial for employees.

When we compared the Spanish and Peruvian subsamples for the Clan culture, which is internally oriented (Cameron and Quinn, 1999), both showed high agreement in their main predictive variables, these being Speed of organizational change and MORTN. Both subsamples also showed a high level of agreement in the predictors of the Hierarchy culture, which are Low-cost strategy, Incremental innovation in internal processes, and MORTN. This suggests that both cultural archetypes are robust and stable. In contrast, in the Market culture, we found very different predictors in the two subsamples. This suggests that companies could develop many different configurations of business strategies and organizational competencies while maintaining the characteristic external orientation of the culture and a strong focus on results, thus having different effects on the suffering and well-being of employees.

Limitations and Suggestions for Future Research

This study has certain limitations. We would also like to make some suggestions for future research: First, our data were obtained using the non-probabilistic sampling of Spanish and Peruvian managers. We recommend that the research should be extended to cover other employee profiles and other countries. Second, our study could not include the Adhocracy culture (Cameron and Quinn, 1999) in the regression analysis because this factor was totally excluded from the translation and adaptation of the OCAI into Spanish. Future studies should design a new scale for measuring this culture, which is characterized by its capacity for innovation. Third, unlike the Clan and Hierarchy cultures, the Market culture showed very different predictors when Spain and Peru were compared, for reasons that remain unknown to us. More research is necessary to discover how this cultural archetype acquires different intrinsic factors in different countries. Such research could include the analysis of differences in the cultural and economic contexts of each country. Fourth, complementary studies should investigate the links between the intrinsic variables of each organizational culture and suffering of employees. Finally, the complementary studies should extend the sample to specific industries. Isolating the particular characteristics of each business environment could help us to understand how a culture adapts to its own specific extrinsic factors.

CONCLUSION

This study enables the following conclusions to be reached: First, the eight extrinsic variables that were analyzed showed a very less predictive capacity for the Clan, Market, and Hierarchy cultures that we have studied based on the model suggested by Cameron and Quinn (1999). This is an important contribution to this study because, even though there is an agreement in academia that the business environment has a decisive influence on the survival of a company, this study found no pattern to suggest that specific cultures are more likely to be found in particular environments. In conclusion, in all the environments, the three types of culture could influence suffering at work. Second, 11 of the intrinsic variables that were researched have a relevant predictive capacity for the Clan and Hierarchy cultures in both the Spanish and Peruvian subsamples. These results supply valuable information about the business strategy and organizational competencies of these three cultural archetypes, providing stronger empirical support for previous research. Specifically, the main characteristics found in the Clan culture are MORTN and Speed of organizational change. This is, therefore, a culture that is committed to its customers and can change and adapt quickly. By giving meaning to the work, MORTN could create synergies with the human approach that characterizes the Clan culture, helping to reduce suffering at work. The main characteristics of the Hierarchy culture, in contrast, are Low-cost strategy, Incremental innovation in internal processes, and MORTN. This is, therefore, a culture that competes by lowering its costs and prices, constantly improving its internal processes to achieve this, and is also committed to its customers. MORTN and participating in the processes of Incremental innovation could be beneficial in reducing suffering at work by giving meaning to work and allowing employees to use their ingenuity. Finally, 10 of the intrinsic variables have a relevant predictive capacity for the Market culture; however, unexpectedly, these are very different in the two subsamples. The main characteristics found in the Spanish subsample are the Competitor orientation and the Prospector strategy, whereas, in the Peruvian subsample, they are MORTN and Radical innovation in products and services. Only the Low-cost strategy is shared by the two subsamples. This is another important contribution of this study and suggests that the Market culture may have different internal configurations while maintaining its characteristically strong focus on results and aggressive competitiveness, thus potentially having very different effects on suffering at work.

In conclusion, there is a link between organizational culture and suffering at work, and this study has found important characteristics of each type of organizational culture that could be useful to better manage the suffering of employees.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

JA-S, MB-C, and EA-T contributed to the conceptualization. JA-S, M-JS-F, and EA-T contributed to the methodology. JA-S, MB-C, M-JS-F, and EA-T contributed to the writing—original draft preparation. All authors have read and agreed to the published version of the manuscript.

REFERENCES

Adler, P., and Borys, B. (1996). Two types of bureaucracy: enabling and coercive. *Adm. Sci. Q.* 41, 61–89. doi: 10.1016/j.healthpol.2008.09.007

An, J. Y., Yom, Y. H., and Ruggiero, J. S. (2011). Organizational culture, quality of work life, and organizational effectiveness in Korean university hospitals. *J. Transcult. Nurs.* 22, 22–30. doi: 10.1177/1043659609360849

Assens-Serra, J. (2018). *Cultura Organizacional: Una Investigación Psicométrica, Predictiva y Transcultural, en Empresas Españolas y Latinoamericanas*. Doctoral dissertation. Spain: Universitat de Vic

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *J. Manag.* 17, 99–120. doi: 10.1177/014920639101700108

Barros, L. A. M. D., and Fischmann, A. (2020). Strategy code: indicators of organisational alignment for obtaining strategy implementation effectiveness. *Int. J. Bus. Excell.*, 21, 37–63.

Bayraktar, C. A., Hancerliogullari, G., Cetinguc, B., and Calisir, F. (2017). Competitive strategies, innovation, and firm performance: an empirical study in a developing economy environment. *Technol. Anal. Strateg. Manag.* 29, 38–52. doi: 10.1080/09537325.2016.1194973

Berson, Y., Oreg, S., and Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *J. Organ. Behav.* 29, 615–633.

Braunscheidel, M. J., and Suresh, N. C. (2018). "Cultivating supply chain agility: managerial actions derived from established antecedents," in *Supply Chain Risk Management* ed. Y. Khojasteh (Springer: Singapore), 289–309. doi: 10.1007/978-981-10-4106-8_17

Cameron, K. S., and Quinn, R. E. (1999). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. Hoboken, NJ: John Wiley and Sons.

Cameron, K. S., and Quinn, R. E. (2006). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. Hoboken, NJ: John Wiley and Sons.

Cameron, K. S., Quinn, R. E., DeGraff, J., and Thakor, A. V. (2006). *Competing Values Leadership: Creating Value in Organizations*. Northampton, MA: Edward Elgar Publishing Limited.

Cerpa-Noya, J. (2018). *Propiedades Psicométricas del Organizational Culture Assessment Instrument (OCAI) en Colaboradores de Lima Metropolitana*. Lima: Universidad de Lima

De Clercq, D., Thongpapanl, N., and Voronov, M. (2018). Sustainability in the face of institutional adversity: market turbulence, network embeddedness, and innovative orientation. *J. Bus. Ethics* 148, 437–455. doi: 10.1007/s10551-015-3004-7

Denison, D. R., Haaland, S., and Goelzer, P. (2003). "Corporate culture and organizational effectiveness: is there a similar pattern around the world?," in *Advances in Global Leadership*, eds J. S. Osland, M. E. Mendenhall and B. S. Reiche. (Bingley: Emerald Group Publishing Limited).

Denison, D. R., Nieminen, L., and Kotrba, L. (2014). Diagnosing organizational cultures: a conceptual and empirical review of culture effectiveness surveys. *Eur. J. Work Organ. Psychol.* 23, 145–161. doi: 10.1080/1359432x.2012.713173

Deshpandé, R., and Farley, J. U. (1998). Measuring market orientation: generalization and synthesis. *J. Market Focused Manag.* 2, 213–232.

Gebhardt, G. F., Carpenter, G. S., Sherry, and John, F. (2006). Creating a market orientation: a longitudinal, multifirm, grounded analysis of cultural transformation. *J. Mark.* 70, 37–55. doi: 10.1509/jmkg.70.4.37

Gill, M. J. (2019). The significance of suffering in organizations: understanding variation in workers' responses to multiple modes of control. *Acad. Manag. Rev.* 44, 377–404. doi: 10.5465/amr.2016.0378

Giorgi, S., Lockwood, C., and Glynn, M. A. (2015). The many faces of culture: making sense of 30 years of research on culture in organization studies. *Acad. Manag. Ann.* 9, 1–54. doi: 10.5465/19416520.2015.1007645

Goncalves, D., Bergquist, M., Bunk, R., and Alänge, S. (2020). Cultural aspects of organizational agility affecting digital innovation. *J. Entrep. Manag. Innov.* 16, 13–46. doi: 10.7341/20201641

Hernández, R., Fernández, C., and Baptista, P. (2000). *Metodología de la Investigación*. México: McGraw-Hill.

Hwang, E. (2019). Effects of the organizational culture type, job satisfaction, and job stress on nurses' happiness: a cross-sectional study of the long-term care hospitals of South Korea. *Jpn. J. Nurs. Sci.* 16, 263–273. doi: 10.1111/jjns.12235

Iglesias, O., Sauquet, A., and Montaña, J. (2011). The role of corporate culture in relationship marketing. *Eur. J. Mark.* 45, 631–650. doi: 10.1108/03090561111111361

Jaworski, B., and Kohli, A. (1993). Market orientation: antecedents and consequences. *J. Mark.* 57, 53–70. doi: 10.2307/1251854

Karakasnaki, M., Psomas, E., and Bouranta, N. (2019). The interrelationships among organizational culture and service quality under different levels of competitive intensity: an application in the shipping industry. *Int. J. Qual. Serv. Sci.* 11, 217–234. doi: 10.1108/ijqss-10-2017-0096

King, A. W., Fowler, S. W., and Zeithaml, C. P. (2001). Managing organizational competencies for competitive advantage: the middle-management edge. *Acad. Manag. Executive* 15, 95–106. doi: 10.5465/ame.2001.4614966

Lopez-Martin, E., and Topa, G. (2019). Organizational culture and job demands and resources: their impact on employees' wellbeing in a multivariate multilevel model. *Int. J. Environ. Res. Public Health* 16:3006. doi: 10.3390/ijerph16173006

Madero Gómez, S. M., and Barboza, G. A. (2015). Interrelationship of culture, labor flexibility, strategic alignment, innovation and firm performance. *Contad. Adm.* 60, 735–756. doi: 10.1016/j.cya.2014.08.001

Marshall, S. J. (2018). "Strategic planning as sense-making," in *Shaping the University of the Future* (Springer: Singapore), 413–416. doi: 10.1007/978-981-10-7620-6_19

McClure, R. E. (2010). The influence of organizational culture and conflict on market orientation. *J. Bus. Industrial Mark.* 25, 514–524. doi: 10.1108/08858621011077745

Mintzberg, H., and Quinn, J. (1995). *The Strategy Process*, 1st Edn. Hoboken, NJ: Prentice Hall.

Naor, M., Goldstein, S. M., Linderman, K. W., and Schroeder, R. G. (2008). The role of culture as driver of quality management and performance: infrastructure versus core quality practices. *Decis. Sci.* 39, 671–702. doi: 10.1111/j.1540-5915.2008.00208.x

Naranjo-Valencia, J. C., Jiménez-Jiménez, D., and Sanz-Valle, R. (2011). Innovation or imitation? the role of organizational culture. *Manag. Decis.* 49, 55–72. doi: 10.1108/00251741111094437

Narver, J. C., Slater, S. F., and MacLachlan, D. (2004). Responsive and proactive market orientation and new product success. *J. Product Innov. Manag.* 21, 334–344. doi: 10.1111/j.0737-6782.2004.00086.x

Nase, I., and Arkesteijn, M. (2018). Corporate real estate strategies and organizational culture. *J. Corporate Real Estate* 20, 154–176. doi: 10.1108/jcre-10-2017-0035

Núñez, R., Alberto, M., Mercado Salgado, P., and Banegas Rivero, R. A. (2015). *Relación entre Cultura Organizacional (flexible y rígida) y Capital Intelectual. Conciencia Tecnológica, 49*. Mexico: Instituto Tecnológico de Aguascalientes

O'Reilly, C. A., Caldwell, D. F., Chatman, J. A., and Doerr, B. (2014). The promise and problems of organizational culture: CEO personality, culture,

and firm performance. *Group Organ. Manag.* 39, 595–625. doi: 10.1177/1059601114550713

Olson, E. M., Slater, S. F., Hult, G., and Tomas, M. (2005). The performance implications of fit among business strategy, marketing organization structure, and strategic behavior. *J. Mark.* 69, 49–65. doi: 10.1509/jmkg.69.3.49.66362

Pinho, J. C., Rodrigues, A. P., and Dibb, S. (2014). The role of corporate culture, market orientation and organisational commitment in organisational performance: the case of non-profit organisations. *J. Manag. Dev.* 33, 374–398. doi: 10.1108/jmd-03-2013-0036

Porter, M. E. (2008). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York, NY: Simon and Schuster.

Prajogo, D. I. (2016). The strategic fit between innovation strategies and business environment in delivering business performance. *Int. J. Prod. Econ.* 171, 241–249. doi: 10.1016/j.ijpe.2015.07.037

Quinn, R. E., and Cameron, K. (1983). Organizational life cycles and shifting criteria of effectiveness: some preliminary evidence. *Manag. Sci.* 29, 33–51. doi: 10.1287/mnsc.29.1.33

Schein, E. (2010). *Organizational Culture and Leadership*, 4th Edn. San Francisco, CA: John Wiley and Son.

Slater, S. F., and Olson, E. (2000). Strategy type and performance: the influence of sales force management. *Strateg. Manag. J.* 21, 813–829. doi: 10.1002/1097-0266(200008)21:8<813::aid-smj122>3.0.co;2-g

Slater, S. F., Olson, E. M., and Hult, G. T. M. (2010). Worried about strategy implementation? Don't overlook marketing's role. *Bus. Horiz.* 53, 469–479. doi: 10.1016/j.bushor.2010.04.001

Zavyalova, E., and Kucherov, D. (2010). Relationship between organizational culture and job satisfaction in Russian business enterprises. *Hum. Resour. Dev. Int.* 13, 225–235. doi: 10.1080/13678861003703740

Zohar, D., and Polachek, T. (2014). Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: a randomized field study. *J. Appl. Psychol.* 99:113. doi: 10.1037/a0034096

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 03 December 2021
doi: 10.3389/fpsyg.2021.787221

Workplace Violence Against Doctors in Bangladesh: A Content Analysis

Shirmin Bintay Kader[1], Md. Marufur Rahman[2,3], Md. Khaledul Hasan[1], Md. Mohibur Hossain[4], Jobaida Saba[5], Sophia Kaufman[6,7], Enryka Christopher[8] and Kamrun Nahar Koly[1]*

[1]Health Systems and Population Studies Division, International Center for Diarrheal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh, [2]Center for Medical Biotechnology, Management Information System, Directorate General of Health Services, Dhaka, Bangladesh, [3]Department of Oncology and Metabolism, The Medical School, University of Sheffield, Sheffield, United Kingdom, [4]Department of Oncology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh, [5]Department of Public Health and Informatics, Jahangirnagar University, Dhaka, Bangladesh, [6]Department of Social Anthropology, Harvard University, Cambridge, MA, United States, [7]Departments of History and Philosophy of Science, Sociology and Social Anthropology, Sidney Sussex College, University of Cambridge, Cambridge, United Kingdom, [8]Department of Psychiatry, Boston Children's Hospital and Harvard Medical School, Boston, MA, United States

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Marcos Maynar Mariño, University of Extremadura, Spain
Maria Clara Oliveira, University of Minho, Portugal

***Correspondence:**
Md. Khaledul Hasan
khaledul.hasan@icddrb.org;
mithun.ru10@gmail.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *30 September 2021*
Accepted: *03 November 2021*
Published: *03 December 2021*

Citation:
Kader SB, Rahman MM, Hasan MK, Hossain MM, Saba J, Kaufman S, Christopher E and Koly KN (2021) Workplace Violence Against Doctors in Bangladesh: A Content Analysis. Front. Psychol. 12:787221. doi: 10.3389/fpsyg.2021.787221

Workplace violence in healthcare settings is a common global problem, including in Bangladesh. Despite the known presence of workplace violence in healthcare environments of developing countries, there is limited understanding of factors that lead to hospital violence in Bangladesh. This study aims to explore factors that influence incidents of violence against healthcare professionals in Bangladesh, as reported by doctors *via* social media forum. Content analysis was conducted on 157 reported incidents documented on "Platform," the online social media most used by medical students and doctors in Bangladesh. Posts by doctors detailing experiences of physical or verbal violence at their workplace between July 2012 and December 2017 were included in this study. The majority of reported incidents were reported by male doctors (86%) and from government hospitals (63.7%). Findings showed that primary healthcare centers experienced more violence than secondary and tertiary facilities. This may largely be due to insufficient human and other resources in primary care settings to meet patient demand and expectations. Most of the events happened at night (61%), and as a result, entry-level doctors such as emergency duty doctors and intern doctors were commonly affected. Six themes were identified as vital factors in workplace violence against doctors: patients' perspectives, delayed treatment, power practice, death declarations, extreme violence, and care-seeking behaviors. Most incidents fell under the categories of delayed treatment and power practice at 26.8 and 26.1%, respectively. This study identified possible factors for reported violence in hospital settings. To address and reduce these incidents, hospital administrators should be aware of risk factors for violent behavior and design appropriate measures to prevent workplace violence. Further qualitative and quantitative research is needed to appropriately address the consequences of violence on healthcare workers and implement measures to mitigate these events.

Keywords: doctors, workplace violence, patient behavior, content analysis, Bangladesh

INTRODUCTION

Workplace violence (WPV) in healthcare settings is becoming a global problem that traverses geographic borders and is indiscriminate of levels of care (Fernandes et al., 1999; Kowalenko et al., 2005; Behnam et al., 2011; Wu et al., 2012; Arnetz et al., 2015; Kumar et al., 2016; Abdellah and Salama, 2017). The National Institute for Occupational Safety and Health (NIOSH) has addressed WPV as any violent act (either physical or verbal) that is directed toward a person at work or while on duty (NIOSH, 2002).

WPV is a global phenomenon that extends to both developed and developing countries (Wiskow, 2003). According to a national survey conducted in the United States (US), 78% of emergency department doctors confirmed that they were the target of workplace violence. Among reported incidents, 75% were categorized as verbal assault, 21% were physical assault, 5% were confrontations outside of the hospital facility, and 2% were cases of abuse or harassment (Behnam et al., 2011). Another US-based study revealed that nearly 75% of interviewed doctors had faced verbal threats at least once in the past twelve months (Kowalenko et al., 2005). Additionally, a study conducted by the British Medical Association (BMA) in the United Kingdom (UK) found that one-third of the doctors interviewed had faced WPV in the past year (Pitcher, 2008). The Indian Medical Association also reported that up to 75% of doctors faced some sort of violence in their workplace (Reddy et al., 2019; Dora et al., 2020). Besides, any suffering related to the workplace can demotivate the healthcare providers, affecting the quality of care (Sánchez-Hernández et al., 2020).

The Bureau of Labor Statistics (BLS) reported that in the United States, health workers faced WPV at a rate four times higher than non-health workers (BLS, 2012). A nationwide survey identified verbal abuse as the most common act of violence committed against doctors or other hospital staff in the United States, followed by physical assaults (Kowalenko et al., 2005; Behnam et al., 2011). Gerberich et al. (2004) suggest that in the United States, only 15% of violent events that occur within the health sector are reported (Gerberich et al., 2004). The nature of WPV in developing countries is similar; most doctors have experienced verbal and physical abuse from patients' relatives (Kumar et al., 2016; Abdellah and Salama, 2017). More than 75% of doctors working in a tertiary hospital in New Delhi, India, reported that experiencing a violent incident impacted their mental state and disrupted their everyday lives (Kumar et al., 2016). A study conducted in Pakistan found that 73.8% of healthcare workers in public sector hospital settings were exposed to aggression and violence (Imran et al., 2013). Not only do hospitals and administrators often ignore violence taking place in their organizations, but doctors also avoid sharing their experiences, resulting in fewer reports filed, which further administrative ignorance (Arnetz et al., 2015).

In lower-middle-income countries like Bangladesh, doctors, nurses, and other healthcare workers often encounter multiple experiences of physical or verbal abuse in their workplace. According to the WHO, the doctor-patient and nurse–patient ratios in Bangladesh are very low, with only 3.05 doctors and 1.07 nurses per population of 10,000 (WHO, 2021). Healthcare staffs are subsequently overburdened, with the average consultation time being less than a minute for outpatients. Access to essential services is also limited (Irving et al., 2017). More than 24% of patients experience a treatment delay of up to 4 h in hospitals (Ali et al., 2013). Due to insufficient funds, 34% of the ideal number of staff posts in the health sector are vacant (Fahim et al., 2019). Frustrations with the healthcare system are commonplace due to low financial and human resources, which doctors are often blamed for. There have been many cases where a patient's family or friends act violently toward the doctor when a patient dies (Naik, 2013; Kumar and Roy, 2019).

In 2020, a doctor in Bangladesh was murdered by a patient's family member. The family member accused the doctor of malpractice when the patient died under the doctor's care (Prothomalo, 2020). Although a few researchers have started to address the issue of WPV in non-western contexts, no studies have yet been conducted to investigate the nature, causes, or impacts of WPV within Bangladesh (Khan et al., 2010; Hossain et al., 2018). The current study aimed to compile incidents of WPV shared by Bangladeshi doctors in an existing large social media forum for doctors, called "Platform." Findings from this study can help generate information on catalysts of WPV and guide policies and interventions to prevent such events. Ensuring a safer workplace for frontline health workers in Bangladesh will contribute to a safer society.

MATERIALS AND METHODS

Data Collection

For data collection, we scrutinized the posts on an online forum called Platform, a social media for registered doctors of Bangladesh to share medical science and public health content. Imran et al. elaborately described the organizational structure of Platform; it is a non-governmental, non-profit forum that is open to all medical doctors and medical students of Bangladesh (Hasan et al., 2018). The social experiences that doctors have while working in the field of medical science are shared across this forum. We performed a retrospective scanning from January 2018 to March 2018. During the scanning in the Platform social media forum, initially, we only considered the reported news/posts regarding any kind of violence, including physical assault, verbal abuse, and hospital vandalism at any healthcare setting of Bangladesh. Later, one of our co-authors separated only those reports, which had the complete elaboration of the reported events. We also have cross-checked the incidence with the published news on daily newspaper portals and pulled additional information if needed to ensure the validity of the data.

Abbreviations: WPV, Workplace violence; NIOSH, National institute for occupational safety and health; US, United States; BMA, British medical association; UK, United Kingdom; BLS, Bureau of labor statistics; WHO, World health organization; UH&FPO, Upazila health and family planning officer; COPD, Chronic obstructive pulmonary disease; PHC, Primary healthcare; UHC, Upazila health complex; UHFWC, Union health and family welfare center; CC, Community clinic.

We retrieved and reviewed a total of 642 Platform posts reported from July 2012 to December 2017. Among those, 273 posts were related to unpleasant incidents that occurred at healthcare facilities. From these unpleasant incidents, 162 described a WPV incident in detail, written by the doctors who experienced them. Duplicated posts were identified and excluded, leaving 157 posts for the final dataset. All posts were translated to English, and a data analyst removed all personal information to maintain participants' confidentiality.

Data Analysis

This study used conventional content analysis (Hsieh and Shannon, 2005) on the selected 157 posts that reported a violent event. Posts were reviewed repeatedly for familiarization of response patterns (Hsieh and Shannon, 2005). A data-driven inductive approach supported thematic content analysis (Boyatzis, 1998). Two research staff conducted all coding using MS excel and frequently met to review and discuss coding schema to ensure a robust quality of data interpretation. After coding was completed, a third researcher, who was blind to previous coding and sub-coding, reassessed the analysis.

RESULTS

Among the 157 total incidents, the male and female doctor's ratio was 86% (135) and 14% (22), respectively (**Table 1**). In these 157 incidents, we found that a total of 165 doctors got injured from different levels of healthcare facility centers. Among these doctors, we observed that the entry-level doctors like intern doctors and emergency medical officers were injured mostly due to WPV (**Figure 1**). We found that sharp cutting injury, multiple fractures, and head injury occurred mostly. We also found that even a few fatal injuries like "died on duty" were reported in three cases (**Figure 2**). Most of the reported incidents occurred at night (61%), and the rest of the reported incidents occurred in the evening (27%) and morning (13%; **Figure 3**).

Six major themes were identified (patients' perspective, delayed treatment, power practice, death declarations, extreme violence, and care-seeking behavior). More than half of the events occurred within two themes: delayed treatment (27%) and power practice (26%). The least number of events were identified under extreme violence, which included murder and sexual assault. Private healthcare facilities made up 36.7% of the locations of reported events, while the rest were from government-funded health systems. In terms of facility levels, more than half of reported incidents took place in primary healthcare facilities, 18% were reported from secondary healthcare facilities, and 27% of the reported events occurred in tertiary healthcare facilities (**Table 2**).

TABLE 1 | Sex distribution of the doctors reported the events at different level of hospitals in Bangladesh.

Sex	Primary level (%)	Secondary level (%)	Tertiary level (%)	Total (%)
Male	77 (49)	20 (13)	38 (24)	135 (86)
Female	10 (6)	8(5)	4 (3)	22 (14)
Total	87 (55)	28 (18)	42 (27)	157 (100)

Patients' Perspectives

We explored reasons speculated by doctors for contributing to patients' or patient parties' aggressive behavior against healthcare providers. About 12% of the reviewed data included posts that mention patient dissatisfaction with their proposed treatment plan as the likely catalyst for aggressive behavior. The majority of the posts posited that patient death following intravenous or intramuscular drug injection triggered the patients' family or friends to act violent, as they misattributed the death to the administration of drugs by the doctor.

In the words of one doctor from a primary healthcare center:

> *"When the patient came to me, his condition was so critical. I could not manage that patient at our facility. So, I suggested they (relatives of the patient) take him to a district-level hospital immediately, but they refused and forced me to manage the patient in that condition. I felt helpless but attempted to stabilize the patient with an injection. Immediately after, his condition improved slightly, so I requested that they take him to a secondary-level hospital, but they still refused. Unfortunately, the patient died a few moments later. They (relatives of the patient) became very violent and broke our hospital and the residence of our Upazila Health and Family Planning Officer (UHandFPO). They chased our staff and a few of them were injured"* (Case 23, Male doctor).

In some of these patient death cases, the patients' party specifically accuse the doctor of medical malpractice. One incident report from a primary healthcare setting read:

> *"A mother who underwent a caesarean section died the next morning after her surgery. The gynaecologist was accused of prescribing the wrong medication and injection. The relatives of the patient claimed that the mother died after getting the dose. Only the baby survived"* (Case 11, Male doctor).

The general public's limited understanding of the risks medical procedures carries often leaves surviving family or friends with little clarity about how such tragedies could occur to their loved ones. Grief counselling is rarely provided, patient advocates are nonexistent, and even legitimate concerns about malpractice are often overlooked with healthcare resources already strained. It is within this context that patient deaths can create confusion, which lead to subsequent violent acts.

Delayed Treatment

More than a quarter (26.8%) of the 157 reported violent events were attributed to delayed treatment. In 22 of 42 reports (52.4%), doctors noted that the violence occurred after referring the patient

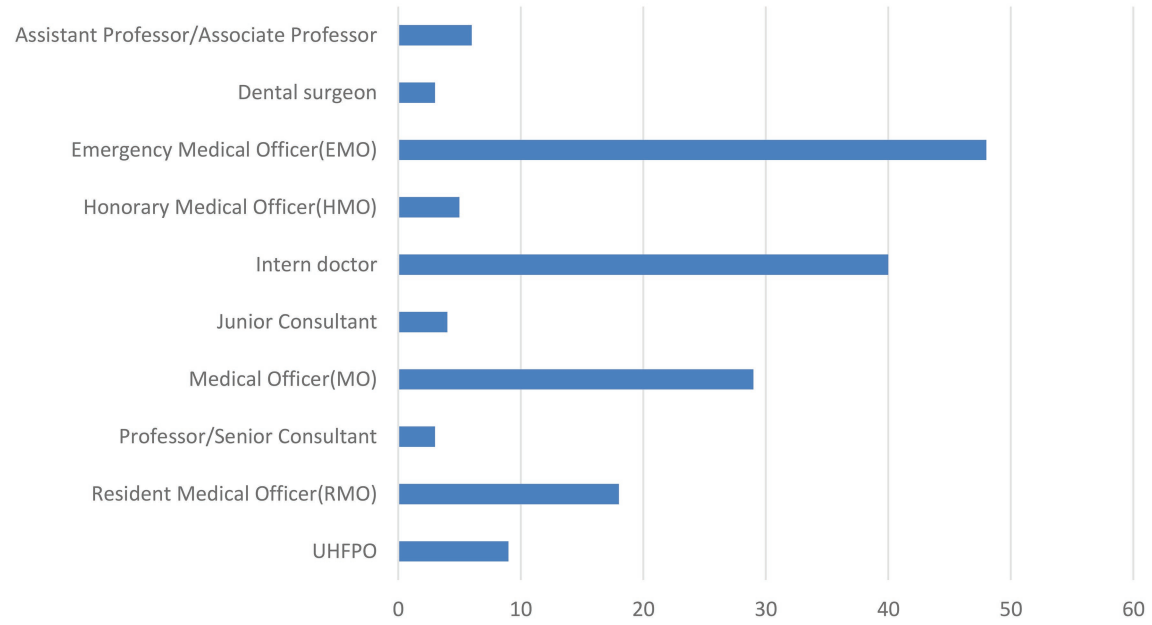

FIGURE 1 | Different level of injured doctors during the violence.

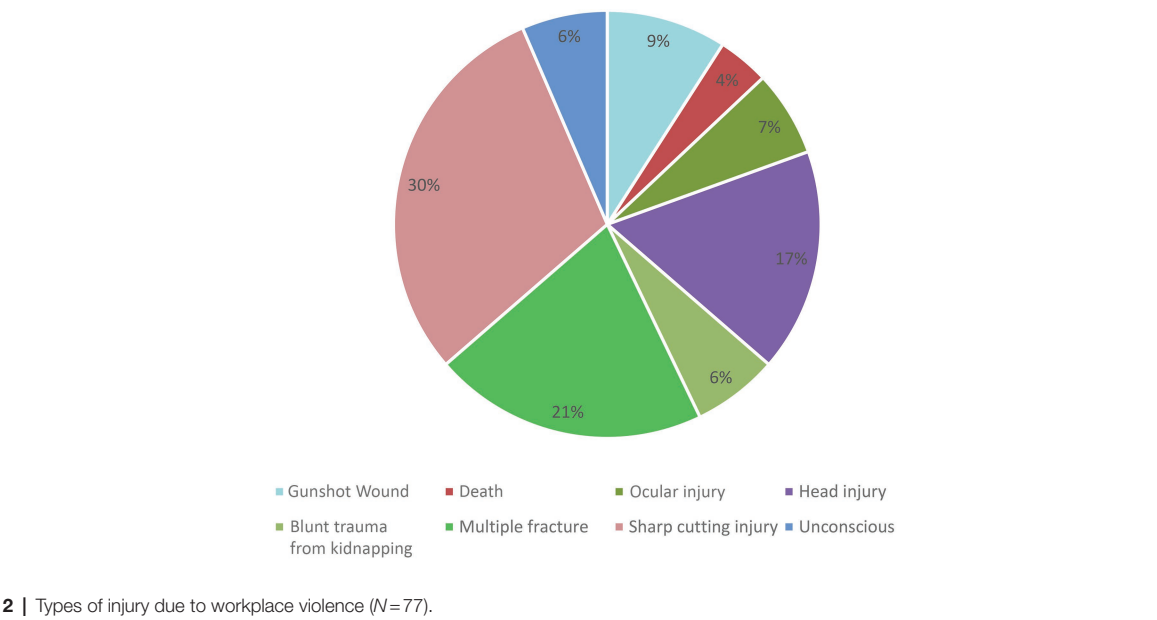

FIGURE 2 | Types of injury due to workplace violence ($N = 77$).

to higher-level healthcare centers (i.e., from the primary to secondary or tertiary level or from the secondary to tertiary level). In analyzing these specific cases, researchers identified a pattern of violence triggered by patients dying on their way to the referred hospital. Upon taking a closer look at these specific reports, we found that it was common for family members to be hesitant to decide whether or not to take their loved ones to the referred hospital. Some doctors expressed their belief that this hesitancy was partly due to the patients' party assuming that healthcare professionals were avoiding duties and could do more to help. A handful of doctors noted that they were accused of transferring the patient to their own private practice to charge more money, which also contributed to hesitancy in following referral instructions. Another major cause of a referral delay noted in the doctors' reports was due to logistical obstacles, such as a lack of accessible transportation at night. In almost all cases in which friends or relatives refused to take the patient to a higher-level healthcare facility, doctors were pressured to provide treatment as best they could.

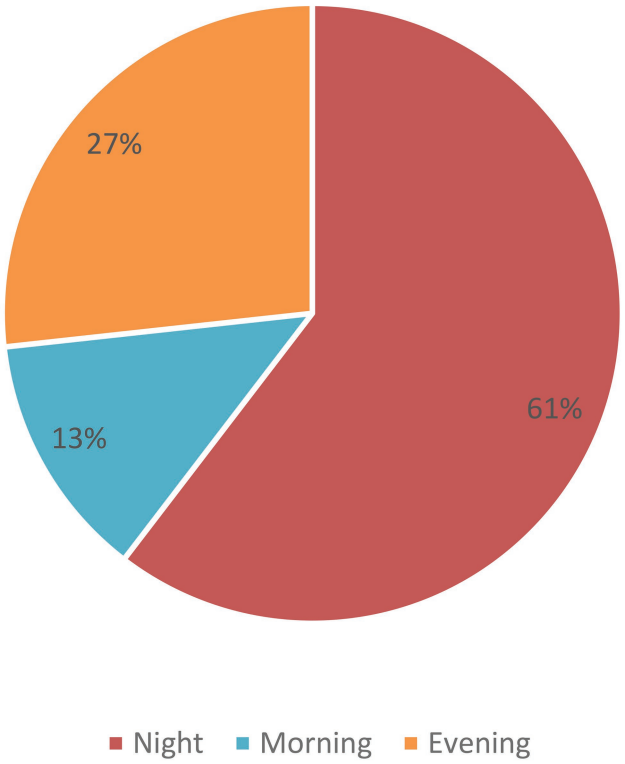

FIGURE 3 | Distribution of the workplace violence according to the duty roaster of hospitals.

TABLE 2 | Distribution of the violent incidents at different level of hospitals in Bangladesh.

Theme	No. of incidents (%)	Primary level (%)	Secondary level (%)	Tertiary level (%)
Patients' perspectives	19 (12)	13 (68)	3 (16)	3 (16)
Delayed treatment	42 (27)	24 (57)	11 (26)	7 (17)
Power practice	41(26)	24 (59)	9 (22)	8 (20)
Death declaration	28 (18)	11 (39)	2 (7)	15 (54)
Extreme violence	8 (5)	3 (38)	0 (0)	5 (63)
Care-seeking behavior	19 (12)	12 (63)	3 (16)	4 (21)
Total	157 (100)	87 (55)	28 (18)	42 (27)

One primary healthcare doctor reported:

> *"Our doctors referred a cardiac patient to the district level hospital in the late evening, but the relatives of the patient spent a few hours deciding. The patient had died by that time. After that, they blamed the doctors for the patient's death and vandalised our emergency department with the help of some locals. Two of our doctors were injured and lots of valuable instruments were damaged. Later, the police came to control the situation"* (Case 137, Male doctor).

According to the doctors' posts, the remaining incidents of treatment delay occurred as the patients themselves were unsatisfied with the triage and wait times assigned. Doctors in these cases noted they were busy treating other patients when those who had been waiting became agitated.

> *"The doctor was providing treatment to a patient at the emergency unit. At the same time, a guardian of a child patient became very aggressive as he was not getting treatment and physically abused the doctor. It caused a fracture on the fifth metacarpal bone on the doctor's right hand"* (Case 129, Male doctor).

Incidents like the above illustrate how long hospital wait times, brought on by overburdened systems and too few staff, could be a contributing factor to the dissatisfaction that leads to violence committed against hospital staff and doctors.

Power Practice

"Power practice," or intimidation through the use of social or political power by patients or their party, was another common theme identified in the analysis of hospital violence reports. Of 41 reports involving some form of power practice, 21 of them (63.4%) involved the patient or patients' party trying to use their political or local administrative power to get faster treatment over others who were triaged ahead of them. A surprising finding was that extortion accounted for the power practice in six (14.6%) of the violent incidents in this category. Groups of strong youth demanded money from doctors for social events, such as funding sports or cultural programs. When these doctors refused to donate money, they faced aggression, which often resulted in hospital vandalism. Around 9.8% of the reported events (4 of 41) involving power practice occurred when doctors declined to do home visits or inpatient visits during hours they worked on the emergency ward. Several doctors also recalled asking patients' accompanying guests to vacate the area during the examination to avoid crowding. These requests also contributed to an escalation of aggressive behavior and unsafe environments in the ward. One doctor from a primary healthcare setting recalls how a request to pay a higher amount for a valid "ticket" to reserve an appointment at a hospital led to an altercation:

> *"About 30–40 people came and took part in the hospital vandalism after we did not allow them to enter the hospital without buying a ticket. All patients must buy a ticket from the counter before they can visit the doctor. It only cost BDT 3 but they wanted to buy a ticket with BDT 2 instead of BDT 3 and our staff did not allow that. So, they attacked us and looted our outdoor cash register"* (Case 68, Male doctor).

Death Declaration

In approximately 18% of the reported incidents (28), the patient's loved ones turned to violence immediately upon hearing the

death declaration. Among these events, 53.5% of the patient deaths (15 of 28) occurred due to chronic illnesses, including stroke, cardiovascular disease, and chronic obstructive pulmonary disease. Other reported cases include miscellaneous events, such as deceased patients before reaching the hospital or dying during resuscitation. Once the doctor declared death, the friends or relatives of patients became aggressive, blaming them for the death. As one of the doctors from a tertiary level hospital described:

> *"A patient died accidentally due to excessive bleeding. His sons claimed that their father died due to the negligence of the doctors. They beat an intern doctor for the death of their father. Later they were arrested by the police for this incident"* (Case 131, Male doctor).

Extreme Violence

A total of eight incidents (5%) were reported that were categorized as most extreme, including sexual assault of female doctors and murder. A majority of these incidents (5 of 8) were female doctors reporting physical and sexual assault by patients' parties. One doctor working in a secondary-level healthcare setting mentioned:

> *"One of our female intern doctors was harassed, which was sexual in nature, during her evening follow-up, by one of the patients' companions. When we objected to the sexual harassment, they became more agitated and started assaulting us physically"* (Case 16, Female doctor).

Three reports (3 of 8; 37.5%) sadly mentioned that doctors were killed. All of these incidents occurred at private hospitals. One of the reports described one such incident:

> *"A female part-time doctor was killed by strangulation by the caretaker of a private hospital during her night duty. While she was resting in her office, he knocked on the door and forcefully tried to enter the room. She could not prevent him from entering the room. Once he entered the room, he tried to rape her but failed. Then he killed her as she tried to stop him from raping her. Later the accused was arrested by the local police and after a few hearings, the court sentenced him to death for killing the doctor"* (Case 118, Female doctor).

This unfortunate case highlights the risks that hospital staff face not only from patients and patients' caretakers but also from their colleagues. The quoted statement above highlights the need for increased security, staffing, and other hospital resources.

Care-Seeking Behavior

Patients' care-seeking behavior was identified as another factor contributing to violent incidents, with around 12% (19) of incidents fitting under this theme. Patients most often became violent when they were unable to get appropriate treatments. In these situations, doctors perceived that the patients acted violently due to resource shortages, including poor hospital-related logistics, ambulance service unavailability, or lack of specialist doctors. A tertiary-level hospital doctor explained the dire consequences of not having high-level expert staff:

> *"A patient who attempted suicide by drinking poison was admitted at the hospital at dawn and died around 9 am. After that, the relatives complained that the patient died as no specialist doctor visited him and the junior doctors were not capable enough to treat him"* (Case 128, Male doctor).

In some instances, patients became violent after doctors referred them to another hospital or facility for specialized care. These incidents mostly occurred at the primary care level, which often has insufficient facilities. A doctor reported:

> *"The doctor suggested an injured patient receive a normal x-ray instead of a digital x-ray, which was not available at that facility. After that, the patient's caretakers argued with the doctor and beat him in front of the other patients. The doctor got several injuries on his face caused by broken glass from a table. The people who beat him were local politicians"* (Case 39, Male doctor).

The case above highlights the need for all facilities to offer a wide array of services. Even those with esteemed positions in society, like local politicians, resort to violence when faced with inadequate healthcare.

DISCUSSION

The current study explored the context of WPV in healthcare settings, as reported by doctors on social media. This study's findings identified occupational risks healthcare providers face that have been documented previously (Khan et al., 2010). According to the WHO, between 8 and 38% of healthcare workers face physical violence at their workplaces (Khan et al., 2010; Tian et al., 2020). Physical violence, verbal aggression, and sexual harassment are all common forms of violence against healthcare providers (Sun et al., 2017). This study included all of these forms of violence, and their potential catalysts were explored. This study's reports of violence escalated to individuals and mobs destroying hospital property and committing assault and murders, similar to another study conducted in Bangladesh (Hasan et al., 2018).

The majority of violence reported in this study occurred at primary healthcare centers, as was also found in China (Cai et al., 2019). The Bangladesh health system is well structured with three levels of healthcare facilities; The first level, primary healthcare (PHC), comprises three tiers of care, offered at the sub-district, Union (collection of a few villages), and village facilities. The second level of healthcare is the District Hospitals. Tertiary hospitals, specialized hospitals, and medical colleges

make up the third level (Islam and Biswas, 2014). Previous studies have found that up to 70% of PHC facilities lack six essential medical devices (thermometers, stethoscopes, blood pressure gauges, weighing scales, and torchlights; Fahim et al., 2019). Large patient volumes heighten risks of violence from dissatisfied patients (Khan et al., 2010; Hasan et al., 2018).

Findings suggest that the lack of resources in PHC centers led to patients being referred to secondary hospitals. Delays of treatment due to decision hesitancy or lack of transportation often result in patient death. Barriers included distance needed to travel, rural transportation issues, patient condition, and lack of understanding the gravity of the situation. A study conducted in Iran suggests that inadequate communication between doctors and patients could also contribute to delays in treatment (Najafi et al., 2017). Treatment dissatisfaction was another factor contributing to violence against doctors, similar to findings from India (Kumar and Roy, 2019). Also similar to findings from this study, a national WeChat-based survey conducted in China found a significant relationship between the announcement of a death declaration and violence against healthcare professionals (Tian et al., 2020). A nationwide study in China estimated that over 20% of WPV in healthcare was associated with the patient's death (Cai et al., 2019).

Research from Pakistan cited treatment delay as the main contributing factor in violence against doctors, accounting for 13.4% of violent incidents (Shaikh et al., 2020). This study found an even higher percentage of WPV associated with delayed treatment (27%). A lack of resources, poor logistical planning, and unavailability of appropriate staff have been identified as contributors to subpar treatment in Bangladesh (Reddy et al., 2019). In Pakistan, lack of medicines or equipment (6.2%), high patient volume (3.7%), overcrowding due to patient friends and family visiting (3.4%), and referral to other healthcare facilities (3.7%) were found to be significant causes of violence (Baig et al., 2018). Similar findings across these global studies evoke the possibility of public health authorities adopting and investing in already evidenced solutions being implemented elsewhere.

Extreme violence, including homicide and sexual assault, is a common WPV in many high-income countries like the United States and China (Mirza et al., 2012; Ambesh, 2016; Phillips, 2016). Unfortunately, our study also included five reports of sexual assault against female doctors and three murders of on-duty doctors. Lack of security measures and limited knowledge of feasible protection measures contribute to these extreme events.

This study indicates that power practice was the main contributor to violence in 26 cases. Patients and their visitors were reported to use their political power to threaten healthcare providers. Local political leaders and police causing violence in hospitals and primary health centers have also been reported in West Bengal and Maharashtra (Lancet, 2010; Baig et al., 2018; Ghosh, 2018). Political protests against government hospitals and healthcare professionals' smear campaigns for political gain are common in South Asian countries, including Pakistan, Nepal, and Sri Lanka (Khawaja and Irfan, 2011; Mirza et al., 2012; Magar, 2013; Jiao et al., 2015; Yang et al., 2019).

STRENGTHS AND LIMITATIONS

As the data for this content analysis were collected from a social media forum of registered doctors in Bangladesh, they may be prone to reporting bias and not present comprehensive accounts of the reported violent events. Additionally, reports of healthcare professionals committing violence against other healthcare workers are likely to be underreported on a forum such as this, so other means of collecting this hidden data should be explored. Patient perspectives should also be considered for future studies looking to understand the dynamics of WPV in healthcare settings. Due to the lack of proper information in the reported events, we could not retrieve the sex and socio-economic status of the people who caused the violence. The authority of the hospital and doctors mentioned that the attackers left the hospital immediately after the act, so their socio-demographic characteristics could not be identified. Another limitation of this study is the generalizability of findings, as only 157 reported cases were included in the analysis. A large-scale study that includes both patient and doctor accounts is needed to capture a fuller extent of healthcare-based workplace violence more accurately.

Despite these limitations, this study is the first of its kind in Bangladesh to explore patterns of violence against doctors in healthcare settings. Data analyzed comprised first-person narratives of WPV experienced over 6 years, a significant portion of time for a study of this nature. This study identified potential risk factors associated with hospital violence against doctors. Policymakers and hospital administrators should utilize these findings to prevent and reduce violence in the healthcare setting in Bangladesh.

CONCLUSION

Healthcare workers play an essential role in the welfare of the country. Further research for a needs-based assessment of healthcare workers should be conducted to elucidate barriers, coping mechanisms, and daily stressors that patients, patients' parties, and doctors face. Governments and local political bodies must also be involved to ensure a safe work environment for all. The following recommendations may be used as a guide to overcome currently identified barriers:

- Governmental security guards should be posted at hospital entrances. Visitor identification should also be checked during both entry and exit.
- Visitors' names and addresses should be registered and recorded at the hospital and should be cross-checked with photo identification.
- Hospital authorities should assign visitor passes to reduce crowding.
- Every hospital should have an emergency evacuation plan prepared in case of extreme violence.
- Hospital authorities should create and place emergency helplines throughout the hospital, so workers can quickly seek help if they feel unsafe.

- Training sessions on de-escalation tactics should be conducted and frequently repeated for healthcare workers.

DATA AVAILABILITY STATEMENT

All posts can be found archived in the news feed of the social media described in the methods section, Platform (https://www.platform-med.org/category/news-event/). Other relevant research data and materials may be made available upon reasonable request to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

SBK, MR, and MKH conceptualized the idea and designed the study. MR and MMH were involved in retrieving and cleaning the data. SBK analyzed data and drafted the manuscript. MKH and JS were involved in the data coding, analysis, interpretation of findings, and manuscript formatting. SK, EC, and KK guided and supported by critically reviewing the manuscript. All authors contributed to the paper and approved the final version of the manuscript.

ACKNOWLEDGMENTS

We would like to thank "Platform" of the Medical and Dental Society, a social network and voluntary organization of medical students and doctors from Bangladesh. icddr, b is grateful to the governments of Bangladesh, Canada, Sweden, and the United Kingdom for providing unrestricted support.

REFERENCES

Abdellah, R. F., and Salama, K. M. (2017). Prevalence and risk factors of workplace violence against health care workers in emergency department in Ismailia. *Egypt. Pan African Med. J.* 26, 1–8. doi: 10.11604/pamj.2017.26.21.10837

Ali, M., Ahmad, M., Rahman, L., Sultana, S., and Al-Azad, M. A. S. (2013). Problem evaluation of service recipient and service provider at out patient departments of a tertiary level hospital. *J. Armed Forces Med. Coll.* 9, 26–31. doi: 10.3329/jafmc.v9i2.21822

Ambesh, P. J. I. H. J. (2016). Violence against doctors in the Indian subcontinent: a rising bane. *Indian Heart J.* 68, 749–750. doi: 10.1016/j.ihj.2016.07.023

Arnetz, J. E., Hamblin, L., Essenmacher, L., Upfal, M. J., Ager, J., and Luborsky, M. (2015). Understanding patient-to-worker violence in hospitals: a qualitative analysis of documented incident reports. *J. Adv. Nurs.* 71, 338–348. doi: 10.1111/jan.12494

Baig, L. A., Shaikh, S., Polkowski, M., Ali, S. K., Jamali, S., Mazharullah, L., et al. (2018). Violence against health care providers: a mixed-methods study from Karachi. *J. Emerg. Med.* 54, 558–566. doi: 10.1016/j.jemermed.2017.12.047

Behnam, M., Tillotson, R. D., Davis, S. M., and Hobbs, G. R. (2011). Violence in the emergency department: a national survey of emergency medicine residents and attending physicians. *J. Emerg. Med.* 40, 565–579. doi: 10.1016/j.jemermed.2009.11.007

BLS (2012). Non-fatal occupational injuries and illnesses requiring days away from work, 2011. Available at: https://www.bls.gov/news.release/archives/osh2_11082012.pdf (Accessed January 5, 2021).

Boyatzis, R. E. (1998). *Transforming Qualitative Information: Thematic Analysis and Code Development*. United States: Sage Publications.

Cai, R., Tang, J., Deng, C., Lv, G., Xu, X., Sylvia, S., et al. (2019). Violence against health care workers in China, 2013–2016: evidence from the national judgment documents. *Hum. Res. Health* 17, 1–14. doi: 10.1186/s12960-019-0440-y

Dora, S. S. K., Batool, H., Nishu, R. I., and Hamid, P. J. C. (2020). Workplace violence against doctors in India: a traditional review. *Cureus* 12:e8706. doi: 10.7759/2Fcureus.8706

Fahim, S. M., Bhuayan, T. A., Hassan, M. Z., Abid Zafr, A. H., Begum, F., Rahman, M. M., et al. (2019). Financing health care in, Bangladesh: policy responses and challenges towards achieving universal health coverage. *Int. J. Health Plan. Manage.* 34, e11–e20. doi: 10.1002/hpm.2666

Fernandes, C. M., Bouthillette, F., Raboud, J. M., Bullock, L., Moore, C. F., Christenson, J. M., et al. (1999). Violence in the emergency department: a survey of health care workers. *CMAJ* 161, 1245–1248.

Gerberich, S. G., Church, T. R., McGovern, P. M., Hansen, H., Nachreiner, N. M., Geisser, M. S., et al. (2004). An epidemiological study of the magnitude and consequences of work related violence: the Minnesota nurses' study. *Occup. Environ. Med.* 61, 495–503. doi: 10.1136/oem.2003.007294

Ghosh, K. (2018). Violence against doctors: a wake-up call. *Indian J. Med. Res.* 148:130. doi: 10.4103/ijmr.IJMR_1299_17

Hasan, M. I., Hassan, M. Z., Bulbul, M. M. I., Joarder, T., and Chisti, M. J. (2018). Iceberg of workplace violence in health sector of Bangladesh. *BMC Res. Notes* 11:702. doi: 10.1186/s13104-018-3795-6

Hossain, M., Sultana, A., Shaha, T., Rahman, M., Hossain Nirob, M., and Yasmeen, S. (2018). Violence against health workforce in Bangladesh: a call for action. *Int. J. Med. Public Health* 5:2151. doi: 10.18203/2394-6040.ijcmph20181739

Hsieh, H.-F., and Shannon, S. (2005). Three approaches to qualitative content analysis. *Qual. Health Res.* 15, 1277–1288. doi: 10.1177/1049732305276687

Imran, N., Pervez, M. H., Farooq, R., and Asghar, A. R. (2013). Aggression and violence towards medical doctors and nurses in a public health care facility in Lahore, Pakistan: A preliminary investigation. *Khyber Med. Univ. J.* 5, 179–184.

Irving, G., Neves, A. L., Dambha-Miller, H., Oishi, A., Tagashira, H., Verho, A., et al. (2017). International variations in primary care physician consultation time: a systematic review of 67 countries. *BMJ Open* 7:e017902. doi: 10.1136/bmjopen-2017-017902

Islam, A., and Biswas, T. (2014). Health system in Bangladesh: challenges and opportunities. *Am. J. Health Res.* 2, 366–374. doi: 10.11648/j.ajhr.20140206.18

Jiao, M., Ning, N., Li, Y., Gao, L., Cui, Y., Sun, H., et al. (2015). Workplace violence against nurses in Chinese hospitals: a cross-sectional survey. *Health Serv. Res.* 5:e006719. doi: 10.1136/bmjopen-2014-006719

Khan, M. A. I., Ahasan, H. N., Mahbub, M. S., Alam, M. B., Miah, M. T., and Gupta, R. D. (2010). Violence against doctors. *J. Med.* 11, 167–169. doi: 10.3329/jom.v11i2.5465

Khawaja, A., and Irfan, H. (2011). Violence against doctors in government hospitals and the role of media. *J. Pak. Med. Assoc.* 61, 1163–1164.

Kowalenko, T., Walters, B. L., Khare, R. K., Compton, S., and Michigan College of Emergency Physicians Workplace Violence Task Force (2005). Workplace violence: a survey of emergency physicians in the state of Michigan. *Annals Emerg.* 46, 142–147. doi: 10.1016/j.annemergmed.2004.10.010

Kumar, R., and Roy, P. (2019). Violent-acts against doctors and healthcare professionals in India: call for action. *J. Family Med. Care* 8, 3457–3460. doi: 10.4103/jfmpc.jfmpc_896_19

Kumar, M., Verma, M., Das, T., Pardeshi, G., Kishore, J., and Padmanandan, A. (2016). A study of workplace violence experienced by doctors and associated risk factors in a tertiary care hospital of South Delhi India. *J. Clin. Diagn. Res.* 10, LC06–LC10. doi: 10.7860/JCDR/2016/22306.8895

Lancet (2010). Chinese doctors are under threat. *Lancet* 376:657. doi: 10.1016/S0140-6736(10)61315-3

Magar, A. (2013). Violence against doctors in Nepal. *J. Nepal. Med. Assoc.* 52, I-II. doi: 10.31729/jnma.2422

Mirza, N. M., Amjad, A. I., Bhatti, A. B. H., Shaikh, K. S., Kiani, J., Yusuf, M. M., et al. (2012). Violence and abuse faced by junior physicians in the emergency department from patients and their caretakers: a nationwide study from Pakistan. *J. Emerg. Med.* 42, 727–733. doi: 10.1016/j.jemermed.2011.01.029

Naik, S. B. (2013). Death in the hospital: breaking the bad news to the bereaved family Indian. *J. Crit Care. Med.* 17, 178–181. doi: 10.4103/0972-5229.117067

Najafi, F., Fallahi-Khoshknab, M., Ahmadi, F., Dalvandi, A., and Rahgozar, M. J. N. (2017). Human dignity and professional reputation under threat: Iranian Nurses' experiences of workplace violence. *Nurs. Health Sci.* 19, 44–50. doi: 10.1111/nhs.12297

NIOSH (2002). Violence Occupational Hazards in Hospitals. The National Institute for Occupational Safety and Health (NIOSH), CDC. Available at: https://www.cdc.gov/niosh/docs/2002-101/default.html#What%20is%20workplace%20violence (Accessed February 2, 2021).

Phillips, J. P. (2016). Workplace violence against health care workers in the United States. *N. Engl. J. Med.* 374, 1661–1669. doi: 10.1056/NEJMra1501998

Pitcher, G. (2008). "BMA survey finds one-third of doctors attacked physically or verbally in 2007. Occupational Health and Wellbeing," in *Workplace Wellbeing News and Guidance From PERSONNEL TODAY*; June 10, 2008.

Prothomalo (2020). Physician killed in attack by patient's relatives. Prothomalo. Available at: https://en.prothomalo.com/bangladesh/physician-killed-in-attack-by-patients-relatives

Reddy, I. R., Ukrani, J., Indla, V., and Ukrani, V. (2019). Violence against doctors: a viral epidemic? *Indian J. Psychiatry* 61(Suppl. 4), S782–S785. doi:10.4103/psychiatry.IndianJPsychiatry_120_19

Sánchez-Hernández, M. I., Gismera-Tierno, E., Labrador-Fernández, J., and Fernández-Fernández, J. L. (2020). Encountering suffering at work in health religious organizations: a partial least squares path modeling case-study. *Front. Psychol.* 11:1424. doi: 10.3389/fpsyg.2020.01424

Shaikh, S., Baig, L. A., Hashmi, I., Khan, M., Jamali, S., Khan, M. N., et al. (2020). The magnitude and determinants of violence against healthcare workers in Pakistan. *BMJ Glob. Health* 5:e002112. doi: 10.1136/bmjgh-2019-002112

Sun, T., Gao, L., Li, F., Shi, Y., Xie, F., Wang, J., et al. (2017). Workplace violence, psychological stress, sleep quality and subjective health in Chinese doctors: a large cross-sectional study. *BMJ Open* 7:e017182. doi: 10.1136/bmjopen-2017-017182

Tian, Y., Yue, Y., Wang, J., Luo, T., Li, Y., and Zhou, J. (2020). Workplace violence against hospital healthcare workers in China: a national WeChat-based survey. *BMJ Pub. Health* 20, 1–8. doi: 10.1186/s12889-020-08708-3

WHO (2021) Country Responses: Bangladesh. World Health Organization. Available at: https://www.who.int/workforcealliance/countries/bgd/en/ (Accessed January 15, 2021).

Wiskow, C. (2003). *Guidelines on Workplace Violence in the Health Sector. Vol. 40*. Switzerland: World Health Organization/International Labour Office.

Wu, S., Zhu, W., Li, H., Lin, S., Chai, W., and Wang, X. (2012). Workplace violence and influencing factors among medical professionals in China. *Am. J. Ind. Med.* 55, 1000–1008. doi: 10.1002/ajim.22097

Yang, S. Z., Wu, D., Wang, N., Hesketh, T., Sun, K. S., Li, L., et al. (2019). Workplace violence and its aftermath in China's health sector: implications from a cross-sectional survey across three tiers of the health system. *BMJ Open* 9:e031513. doi: 10.1136/bmjopen-2019-031513

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

PERSPECTIVE
published: 09 December 2021
doi: 10.3389/fpsyg.2021.805855

Managing and Mitigating Suffering in the Return-to-Work Process

Megan Woods[1]* *and Mandy L. Matthewson*[2]

[1] Tasmanian School of Business and Economics, College of Business and Economics, University of Tasmania, Hobart, TAS, Australia, [2] School of Psychological Sciences, College of Health and Medicine, University of Tasmania, Hobart, TAS, Australia

Each year thousands of workers experience a serious illness or injury that necessitates time off work and a subsequent re-engagement with the work environment. In Australia, workers' compensation legislation mandates the return-to-work (RTW) process is formal, structured, and negotiated between the worker, their employer, health care professionals and their RTW coordinator. How this is executed by those parties directly influences whether the RTW process is supportive and successful, or exacerbates the suffering of returning workers by causing them to feel ostracised, exposed, and vulnerable in their workplace. In this article, we examine how the RTW process can cause physical, emotional, social, and existential suffering for returning workers. We then discuss how the suffering that workers experience can be mitigated by five key factors: clarity of roles in the RTW process, alignment of worker and employer expectations, the advocacy provided by the RTW coordinator, the support provided for the worker's psychological wellbeing, and the RTW literacy of supervisors and colleagues.

Keywords: return-to-work, suffering, injury, workplace health and safety, wellbeing, workers' compensation

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Christine Randall, Griffith University, Australia
Ellen MacEachen, University of Waterloo, Canada

***Correspondence:**
Megan Woods
Megan.Woods@utas.edu.au

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *31 October 2021*
Accepted: *17 November 2021*
Published: *09 December 2021*

Citation:
Woods M and Matthewson ML (2021) Managing and Mitigating Suffering in the Return-to-Work Process. Front. Psychol. 12:805855. doi: 10.3389/fpsyg.2021.805855

INTRODUCTION

Each year thousands of workers experience illness or injury that necessitates time off work and subsequent re-engagement with their work environment. Sickness-related absence from work has a range of negative impacts on workers and their families so returning to work is often perceived as the desired end to a painful life experience. This depends, however, on the return-to-work (RTW) process being responsive and supportive to the worker and their needs. When it is not, it can extend their experience of feeling different, exposed, and vulnerable because of their health situation. Greater understanding of the suffering that workers can experience during RTW is crucial to optimising the responsiveness, empathy and support workplaces provide. In this article we examine the physical, emotional, social, and existential suffering that can arise from the RTW process. We then examine how that suffering can be mitigated by five key factors: clarity of roles in the RTW process, alignment of worker and employer expectations, the advocacy provided by the RTW coordinator, support provided for the worker's psychological wellbeing, and the RTW literacy of supervisors and colleagues.

SUFFERING

Suffering occurs when "threat or damage to one's body or self-identity" causes a person distress (Anderson, 2013, p. 10) or to feel diminished (Cassell, 2004). Physical suffering results from distress or diminishment related to one's physical being (Anderson, 2013). In a RTW context, physical

suffering can result from physical pain caused by the original injury/illness or from treatment (e.g., surgery), the physical effects of treatments (e.g., nausea caused by medications), or physical strain experienced when resuming work-related activities with impaired ability.

Mental suffering is distress or diminishment related to cognitive or affective self-identity (Anderson, 2013) and suffering caused by psychological ill-health (e.g., depression, anxiety, and post-traumatic stress disorder). It includes cognitive suffering caused by thoughts or thought processes (e.g., worries or anxieties) and suffering caused by emotional responses (Anderson, 2013). In a RTW context, mental suffering might relate to the illness/injury itself (such as fear and anxiety resulting from physical pain). It may also stem from the injury/illness's impact on the person's life and potential future, such as fears their ill-health may reduce their capacity to support themselves and their families.

Existential suffering occurs when people experience threats to their existence or struggle with the meaning of their life (Anderson, 2013). In a RTW context, existential suffering could occur when a person with a vocation or profession which comprises a large part of "who they are" is then unable, due to illness or injury, to do their work and be their professional self. For example, a medical practitioner whose illness precludes them from practicing medicine might question the meaning of their life if they cannot treat people anymore.

Social suffering is both a form of suffering and a way of understanding how social contexts shape and contribute to other forms of suffering. Indeed, (Cassell, 2004, p. 34) contends that all suffering is inherently social because "suffering exists and can only be understood in the context of others." Social suffering arises from social sources and forces, including social institutions and cultures (Anderson, 2013) such as workplaces (Sanchez-Hernandez et al., 2020). In a RTW context, social suffering can be caused or mitigated by social norms, beliefs and practices relating to work, illness, and injury (Cassell, 2004), or by workplace policies and practices which "disable" people with impaired health (Woods et al., 2019). For example, a workplace culture framing work-related injuries as the fault of the injured workers could produce social suffering resulting from stigmatisation.

SUFFERING IN THE RETURN-TO-WORK PROCESS

Noordik et al. (2011) characterise the RTW process as a dynamic and iterative problem-solving process in which the worker interacts with RTW stakeholders and their work environment to develop and apply potential solutions to barriers to full return to work. However, the barriers and social dynamics that workers encounter are all potential sources of suffering.

Suffering Experienced When Developing the Return-to-Work Plan

In Australia, workers' compensation legislation mandates that the RTW process includes development of a RTW plan (WorkSafe Tasmania, 2021). When the returning worker is judged medically fit to return to work, a RTW plan is negotiated with input from a variety of RTW stakeholders. These stakeholders include the worker, their manager, insurer, and workers' compensation representatives, the health professionals overseeing their care and the RTW coordinator (Corbiere et al., 2020). This process includes a formal assessment of the worker's support needs, and the development of workplace accommodations which can include adjustments to duties, adaptations to physical work environments, and changes to working hours (Woods, 2012). The planning process needs to identify both the factors that the worker perceives will influence their RTW, and how these can be anticipated or overcome (Corbiere et al., 2017). However, achieving this is complicated by the suffering that has already resulted from the worker's ill-health.

Illness, injury, and treatment regimens can all produce physical suffering from pain and strain, and mental suffering from fears and anxiety, such as fears about the severity of their health situation, and anxiety about pain (Standal et al., 2021). Mental and social suffering also arise from the loss of capacity to perform tasks and fulfil roles, and a change in social identity from that of a healthy, functioning person to that of a sick individual who is no longer functioning well (Standal et al., 2021). As negative impacts on the person's physical and psychological functioning become pronounced, mental, and social suffering results from the attendant damage to their self-esteem and self-confidence, family relationships, and their capacity to perform roles in their social, family, personal, and work lives (Boden et al., 2001). This in turn can fuel mental suffering caused by fear, and stress about the financial impacts of their illness/injury, such as loss of earnings and being forced to use savings, borrow money, or draw on pensions or superannuation to meet their needs (Dembe, 2001). All these forms of suffering can reduce returning workers' cognitive and emotional capacity to engage in RTW planning.

When the process of working through assessments and decisions in RTW planning highlights the worker's loss of capacity it exacerbates mental and social suffering. Questions about how their health will negatively affect their pace and quality of work, or capacity to handle work responsibilities may fuel fears that they will be unable to work as before (Dembe, 2001), causing both mental suffering related to fears about their work-related future, and social suffering resulting from a diminution of their perceived value as an employee. How these assessments and decisions are handled can also cause mental and social suffering. Workers suffer when they feel "medically misunderstood" (MacEachen et al., 2007, p. 159) or "forced" back to work and, by extension, feeling unsupported, isolated, and treated with disrespect (Kirsh and McKee, 2003). For example, when their experience is doubted and disbelieved returning workers experience mental and social suffering arising from suspicion, damaged relationships, distrust, and feelings of powerlessness (MacEachen et al., 2007).

Suffering Experienced During Re-entry to the Workplace

A returning worker re-entering their workplace can feel particularly vulnerable because workplace accommodations

and supports publicly signal their loss of capacity to those around them. The appropriateness of work adaptations, and the sensitivity with which they are handled, directly influence the degree of social and mental suffering associated with re-entry into the work environment. They can also cause physical suffering when insufficient workplace accommodations, unrealistic rehabilitation expectations and pressure to resume pre-injury work duties and work pace create untenable working conditions (Gewurtz et al., 2018) causing pain, strain, and potential secondary injuries.

Additionally, the worker's state of health may fluctuate as a function of their RTW experiences meaning the process may be prolonged and non-linear. Sometimes finding the "best fit" supports and accommodations for the individual is a process of trial and error, which can be correlated with changes in the employee's health. This exacerbates mental and social suffering when it creates uncertainty about the individual ever being able to fully return to work, and/or overextends the sympathy and supportiveness of others in the workplace. When uncertainty surrounds the outcome of their injury/illness, this can also cause a loss of coherence in their professional identity, to themselves and with others. For example, if an agricultural worker can no longer perform that work, the loss of that professional identity can cause mental, social and even existential suffering when it causes questioning about "who they are now." This is worsened when that work is a focal point of the local community and neighbours, friends, and community members are former workmates (MacEachen et al., 2007).

MITIGATING THE SUFFERING THAT WORKERS EXPERIENCE DURING THE RETURN-TO-WORK PROCESS

We examine below five factors that research evidence and our clinical experience of supporting RTW show are key to optimising RTW effectiveness and mitigating suffering for the returning worker.

Clarity of Roles in the Return-to-Work Process

When the returning worker understands the roles, rights, and responsibilities they and other stakeholders have in the RTW process, they are able to better navigate and actively engage with that process (Dean et al., 2019). Role clarity is the extent of an individual's understanding about their duties and expectations of their tasks and roles (Hinkin and Schriesheim, 2008). Role clarity can be improved when employees have the information they need to perform their duties; a sense of control over work tasks; supportive and encouraging leadership in the workplace; and clarity about the roles of others within the organisational structure (Kauppila, 2013). Good relationships and clear communication between the returning worker and other RTW stakeholders are critical for achieving role clarity.

Poorly defined or conflicting roles can exacerbate suffering during the RTW process by causing the returning worker to feel helpless and uncertain. Low role clarity can create confusion about and conflict between a worker's responsibilities, causing mental suffering associated with anxiety, depression, burnout, and job dissatisfaction (Barnett et al., 2010). Optimising role clarity can therefore mitigate both mental and social suffering that results from feeling misunderstood, unsupported, and helpless. Further, when all parties are clear about the limits of each persons' role, the individual is more likely to have realistic expectations of themselves and others involved in the RTW process. The RTW coordinator has an important role to play in this process. They can provide information and clarification on roles for all parties. They are also well placed to identify when lack of role clarity is causing suffering and problem solving needs to occur to mitigate suffering.

Alignment of Expectations in Return-to-Work Process

Positive expectations about the RTW process are a critical factor in its success (Corbiere et al., 2017) and a strong predictor of a successful RTW (Opsahl et al., 2016). RTW expectations are influenced by worker perceptions about the obstacles they will encounter during RTW, and whether those obstacles can be overcome. These expectations also form the basis for the worker's return-to-work self-efficacy (RTW-SE), which is "the belief that workers have in their ability to meet the demands of their job should they return to work" (Nieuwenhuijsen et al., 2013, p. 291). Low RTW-SE may result from overly negative or irrational perceptions of the RTW process but can also reflect a realistic evaluation of their work environment (Nieuwenhuijsen et al., 2013). It is therefore important that the returning worker's RTW-SE be considered in the RTW plan. Practitioners working with the returning worker can help by assessing self-efficacy and helping the worker to identify whether their beliefs are associated with an unrealistic return to work plan or are indicative of ailing mental health.

Aligning expectations of the worker and other parties in the RTW process reduces mental suffering by providing more certainty and transparency about what is expected and how reintegration into the workplace will be progressively implemented and supported. This helps minimise mental suffering caused by fears of being expected to do too much too soon and physical suffering that could otherwise result from physical strain or secondary injury. By ensuring all stakeholders understand what the worker is capable of, and that suitable supports are in place, it can also improve understanding and empathy for the worker and minimise social suffering.

Alignment with expectations held by co-workers is also important. Modified duties for the returning worker can produce an increased workload for co-workers. This can lead to resentment and erosion of relationships in the workplace, undermine social connectedness and, in turn, negatively impact the returning worker's psychological wellbeing (Dunstan and MacEachen, 2013; Kosny et al., 2013). This can be mitigated when

co-workers are assigned clearly defined, time limited, mutually agreeable roles in the RTW plan (Dunstan and MacEachen, 2013; Kosny et al., 2013).

Advocacy Provided by the Return-to-Work Coordinator

Return-to-work coordinators help plan and support the RTW process and may be employed at the worker's organisation, employed by insurance or workers' compensation entities, or be independent consultants (MacEachen et al., 2020). RTW coordinators have specialised knowledge of relevant policies, legal responsibilities and procedures, and can offer valuable process support by initiating the RTW process, providing timely information and support to supervisors (Lysaght and Larmour-Trode, 2008), convening regular meetings of the RTW team and acting as a conduit between team members. Research attests that RTW coordinators can shorten disability duration (Franche et al., 2005) and improve RTW rates (Dol et al., 2021) although there is emerging evidence these impacts may differ for RTW from psychological ill-health (MacEachen et al., 2020).

Return-to-work coordinators can reduce the power imbalance between the returning worker and other stakeholders in the process by providing both a voice and a buffer for the returning worker (MacEachen et al., 2007). They can advocate for the returning worker when the RTW process exceeds the returning worker's limitations (Noordik et al., 2011), which is particularly important when the RTW plan is not well supported by the workplace. When RTW coordinators can help to ensure that accommodations, supports, and work plans appropriately reflect and support worker needs, they help to minimise physical, mental, and social suffering.

Support for the Returning Worker's Psychological Wellbeing

It has long been recognised that psychological and physical states are intrinsically linked (Kirsh and McKee, 2003). Workplace injury in particular can have a serious psychosocial impact on the injured worker when it results in feelings of anxiety, depression, stress, increased conflict in the home and with family (Dembe, 2001). Support for the returning worker's psychological wellbeing is therefore crucial to minimising the negative impact on the worker of their experiences of ill-health and the RTW process. Returning workers can face challenges in protecting themselves from "overdoing it" and exceeding their current capacity due to difficulties in setting limits in demanding workplace situations (Noordik et al., 2011).

When RTW stakeholders such as supervisors, co-workers, and RTW coordinators have strong mental health literacy they reduce the mental and social suffering of returning workers by offering understanding, empathy and support for psychological wellbeing. In a RTW context, supervisors and other stakeholders need to be aware of the psychological impacts of pain and disability, especially those resulting from prolonged periods of ill-health (Dembe, 2001). They should also understand the psychological impacts of physical, mental, and social suffering the worker has experienced, especially as these relate to being forced by their ill-health (however temporarily) to adopt less valuable roles in their workplaces, families, and communities (MacEachen et al., 2007). This can be achieved by creating opportunities for workers to debrief about their experiences and suffering when planning their RTW planning and re-engaging with the workplace. Support for psychological wellbeing can also be enhanced by providing access to (and time off to attend) counselling support (Kirsh and McKee, 2003), providing mental health first aid training for RTW stakeholders, and actively promoting psychological safety in workplaces.

Return-to-Work Literacy of Supervisors and Colleagues

The RTW literacy of supervisors and colleagues directly influences the social support or social suffering experienced by returning workers. Work disability is prolonged by low social and practical support from co-workers and supervisors (Krause et al., 2001), and when returning workers are treated with indifference and disrespect by supervisors and co-workers (Gewurtz et al., 2018). Conversely, studies have found that injured workers returning to workplaces in which supervisors were sympathetic were more motivated to persist with challenging tasks and overcome difficulties when dealing with their injuries (Lysaght and Larmour-Trode, 2008).

Return-to-work literacy of supervisors is a crucial influence on the success of the RTW plan and process. Their provision of proactive supervisory support, cooperative relationships with workers, good communication, fairness, and inclusion of the worker in decisions about their work and accommodations are crucial to successful work re-entry by injured workers (Lysaght and Larmour-Trode, 2008). Their capacity to provide emotional support, information support (such as advice on RTW rules and guidelines), instrumental support (including financial support and time) and validation support (through performance feedback) are key influences on the RTW outcomes (Shaw et al., 2009). Indeed, a supervisor's "experience, knowledge, and support for accommodation[s] can be as important as standard ergonomic principles and medical restrictions" to successful accommodation of worker needs (Shaw et al., 2014, p. 756). Providing this depends, however, on supervisors also knowing how to navigate and accommodate both the worker's support needs and the organisation's operational needs.

Co-workers are also important because co-worker support has an even stronger impact on RTW than supervisor support (Haveraaen et al., 2016). Social support from co-workers to returning workers can buffer work stress and psychological strain, reduce work pressure by taking over or reducing the person's workload (Bostjancic and Koracin, 2014) and helping to improve the returning worker's resilience, self-confidence, and optimism (Haveraaen et al., 2016). All these supports reduce physical, mental, and social suffering for the returning worker.

Return-to-work literacy of supervisors, co-workers, and other stakeholders can be enhanced by raising awareness of rights, processes and supports mandated by relevant legislation and policy, and that anyone can experience work-related ill-health

(Kirsh and McKee, 2003). Education about common workplace injuries and illnesses and their impact on workers enhances RTW literacy by increasing compassion and workplace support for returning workers (Lysaght and Larmour-Trode, 2008).

CONCLUSION

Return-to-work is an interactive and fluid process that can either exacerbate or mitigate the physical, mental, existential, and social suffering that ill-health causes workers to experience. The five factors detailed here can mitigate suffering but future studies could explore more fully how each factor influences each form of suffering, how those impacts may differ for different types of worker and workplace contexts, and how they may also differ for workers returning from physical versus psychological ill-health.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

Both authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

FUNDING

This work was funded by the University of Tasmania.

REFERENCES

Anderson, R. E. (2013). *Human Suffering and Quality of Life: Conceptualizing Stories and Statistics*. Dordrecht: Springer.

Barnett, K., Hordacre, A. L., Spoehr, J., and Parnis, E. (2010). *The role of the workplace in return to work: Discussion Paper*. Adelaide: Australian Institute for Social Research.

Boden, L., Biddle, E., and Spieler, E. (2001). Social and economic impacts of workplace illness and injury: current and future directions for research. *Am. J. Ind. Med.* 40, 398–402. doi: 10.1002/ajim.10013

Bostjancic, E., and Koracin, N. (2014). Returning to work after suffering burnout syndrome: perceived changes in personality, views, values and behaviours connected with work. *Psiholgija* 47, 131–147.

Cassell, E. J. (2004). *The Nature of Suffering and the Goals of Medicine*. Oxford: Oxford University Press.

Corbiere, M., Mazaniello, M., Bastien, M.-F., and Wathieu, E. (2020). Stakeholders' role and actions in the return-to-work process of workers on sick-leave due to common mental disorders: a scoping review. *J. Occup. Rehabil.* 30, 1–39. doi: 10.1007/s10926-019-09861-2

Corbiere, M., Negrini, A., Durand, M.-J., St-Arnaud, L., Briand, C., Fassier, J.-B., et al. (2017). Development of the return-to-work obstacles and self-efficacy scale (ROSES) and validation with workers suffering from a common mental disorder or musculoskeletal disorder. *J. Occup. Rehabil.* 27, 329–341.

Dean, A. M., Matthewson, M., Buultjens, M., and Murphy, G. (2019). Scoping review of claimants' experiences within Australian workers' compensation systems. *Aust. Health Rev.* 43, 457–465. doi: 10.1071/AH17244

Dembe, A. (2001). The social consequences of occupational injuries and illnesses. *Am. J. Ind. Med.* 40, 403–417.

Dol, M., Varatharajan, S., Neiterman, E., McKnight, E., Crouch, M., McDonald, E., et al. (2021). Systematic review of the impact on return to work of return-to-work coordinators. *J. Occup. Rehabil.* 31, 675–698. doi: 10.1007/s10926-021-09975-6

Dunstan, D. A., and MacEachen, E. (2013). Bearing the brunt: co-workers' experiences of work reintegration processes. *J. Occup. Rehabil.* 23, 44–54. doi: 10.1007/s10926-012-9380-2

Franche, R.-L., Cullen, K., Clarke, J., Irvin, E., Sinclair, S., and Frank, J. (2005). Workplace-based return-to-work interventions: a systematic review of the quantitative literature. *J. Occup. Rehabil.* 15, 607–631. doi: 10.1007/s10926-005-8038-8

Gewurtz, R. E., Premji, S., and Holness, D. L. (2018). The experiences of workers who do not successfully return to work following a work-related injury. *Work* 61, 537–549. doi: 10.3233/WOR-182824

Haveraaen, L. A., Skarpass, L. S., Berg, J. E., and Aas, R. W. (2016). Do psychological job demands, decision control and social support predict return to work three months after a return-to-work (RTW) programme? The rapid-RTW cohort study. *Work* 53, 61–71. doi: 10.3233/WOR-152216

Hinkin, T. R., and Schriesheim, C. A. (2008). An examination of "nonleadership": From laissez-faire leadership to leader reward omission and punishment omission. *J. App. Psy.* 93, 1234–1248. doi: 10.1037/a0012875

Kauppila, O. (2013). So, what am I supposed to do? A multilevel examination of role clarity. *J. Manage. Stud.* 51, 737–763.

Kirsh, B., and McKee, P. (2003). The needs and experiences of injured workers: a participatory research study. *Work* 21, 221–231.

Kosny, A., Lifshen, M., Pugliese, D., Majesky, G., Kramer, D., Steenstra, I., et al. (2013). Buddies in bad times? the role of co-workers after a work-related injury. *J. Occup. Rehabil.* 23, 438–449. doi: 10.1007/s10926-012-9411-z

Krause, N., Frank, J. W., Dasinger, L. K., Sullivan, T. J., and Sinclair, S. J. (2001). Determinants of disability and return-woto-work after work-rleated injur and illness: challenges for future research. *Am. J. Ind. Med.* 40, 464–484. doi: 10.1002/ajim.1116

Lysaght, R. M., and Larmour-Trode, S. (2008). An exploration of social support as a factor in the return-to-work process. *Work* 30, 255–266.

MacEachen, E., Kosny, A., and Ferrier, S. (2007). Unexpected barriers in return to work: Lessons learned from injured worker peer support groups. *Work* 29, 155–164.

MacEachen, E., McDonald, E., Neiterman, E., McKnight, E., Malachowski, C., Crouch, M., et al. (2020). Return to work for mental ill-health: a scoping review exploring the impact and role of return-to-work coordinators. *J. Occup. Rehabil.* 30, 455–465. doi: 10.1007/s10926-020-09873-3

Nieuwenhuijsen, K., Noordik, E., van Dijk, F., and van der Klink, J. J. (2013). Return to work perceptions and actual return to work in workers with common mental disorders. *J. Occup. Rehabil.* 23, 290–299. doi: 10.1007/s10926-012-9389-6

Noordik, E., Nieuwenhuijsen, K., Varekamp, I., van der Klink, J. J., and van Dijk, F. (2011). Exploring the return-to-work process for workers partially returned to work and partially on long-term sick leave due to common mental disorders: a qualitative study. *Disabil. Rehabil.* 33, 1625–1635. doi: 10.3109/09638288.2010.541547

Opsahl, J., Eriksen, H. R., and Tveito, T. H. (2016). Do expectancies of return to work and Job satisfaction predict actual return to work in workers with long lasting LBP? *BMC Musculoskelet Disord.* 17:481–491. doi: 10.1186/s12891-016-1314-2

Sanchez-Hernandez, M., Gismera-Tuerno, E., Labrador-Fernandez, J., and Fernandez-Fernandez, J. (2020). Encountering suffering at work in health religious organizations: a partial least squares path modelling case-study. *Front. Psychol.* 11:1–8. doi: 10.3389/fpsyg.2020.01424

Shaw, L., MacAhonic, P., Lindsay, R., and Brake, P. (2009). Evaluating the support needs of injured workers in managing occupational transitions after injury. *Work* 32, 477–490. doi: 10.3233/WOR-2009-0858

Shaw, W. S., Kristman, V. L., Williams-Whitt, K., Soklaridis, S., Huang, Y. H., Cote, P., et al. (2014). The Job Accommodation Scale (JAS): psychometric evaluation of a new measure of employer support for temporary

job modifications. *J. Occ. Rehab.* 24, 755–765. doi: 10.1007/s10926-014-9508-7

Standal, K., Solbakken, O. A., Rugkåsa, J., Martinsen, A. R., Halvorsen, M. S., Abbass, A., et al. (2021). Why service users choose medication-free psychiatric treatment: a mixed-method study of user accounts. *Patient Pref. Adher.* 15, 1647–1660. doi: 10.2147/PPA.S308151

Woods, M. (2012). "Planning a comeback," in *Management: The Essentials (2nd edition)*, eds S. Robbins, D. DeCenzo, M. Coulter, and M. Woods (Frenches Forest: Pearson).

Woods, M., Macklin, R., Dawkins, S., and Martin, A. (2019). Mental illness, social suffering and structural antagonism in the labour process. *Work Emp. Soc.* 33, 948–996.

WorkSafe Tasmania (2021). *Guideline for preparing return to work plans and injury management plans.* Available online at: https://worksafe.tas.gov.au/__data/assets/pdf_file/0008/542681/G-020-Guide-for-RTW-and-IM-plans.pdf (accessed October 30, 2021).

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 13 December 2021
doi: 10.3389/fpsyg.2021.788035

Can Trait Mindfulness Improve Job Satisfaction? The Relationship Between Trait Mindfulness and Job Satisfaction of Preschool Teachers: The Sequential Mediating Effect of Basic Psychological Needs and Positive Emotions

Zhanmei Song†, Baocheng Pan and Youli Wang†*

School of Education, Wenzhou University, Wenzhou, China

Objective: This study aims to explore the relationship between basic psychological needs and positive emotions of preschool teachers between trait mindfulness and job satisfaction.

Methods: Three hundred and ninety-eight preschool teachers were tested with mindfulness attention awareness scale, basic psychological needs scale, positive emotion scale, and job satisfaction scale.

Results: Preschool teachers trait mindfulness can predict job satisfaction ($\beta = 0.265$, $p < 0.001$). Preschool teachers trait mindfulness has an indirect impact on job satisfaction through basic psychological needs ($\beta = 0.059$, $p = 0.002$), and preschool teachers trait mindfulness has an indirect impact on job satisfaction through positive emotions ($\beta = 0.123$, $p < 0.001$). In addition, basic psychological needs and positive emotions play a sequential intermediary role between preschool teachers trait mindfulness and job satisfaction ($\beta = 0.017$, $p < 0.001$).

Conclusion: Basic psychological needs and positive emotions play a sequential mediating role between preschool teachers trait mindfulness and job satisfaction, and this sequential mediating effect accounts for a high proportion of the total effect.

Keywords: preschool teachers, trait mindfulness, job satisfaction, basic psychological needs, positive emotions

OPEN ACCESS

Edited by:
Živile Stankeviciute, Kaunas University of Technology, Lithuania

Reviewed by:
Antonio Hernández-Mendo, University of Malaga, Spain
Ramunė Čiarnienė, Kaunas University of Technology, Lithuania

****Correspondence:***
Baocheng Pan
panbaochengedu@126.com

†These authors have contributed equally to this work and share first authorship

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *01 October 2021*
Accepted: *19 November 2021*
Published: *13 December 2021*

Citation:
Song Z, Pan B and Wang Y (2021) Can Trait Mindfulness Improve Job Satisfaction? The Relationship Between Trait Mindfulness and Job Satisfaction of Preschool Teachers: The Sequential Mediating Effect of Basic Psychological Needs and Positive Emotions. Front. Psychol. 12:788035. doi: 10.3389/fpsyg.2021.788035

INTRODUCTION

Teachers' job satisfaction has become an important topic of concern in the international community, because job dissatisfaction may directly lead to teachers' resignation (Darling-Hammond, 2003; Liu, 2007; Skaalvik and Skaalvik, 2011). In fact, teacher job satisfaction has been recognized as a decisive factor in the improvement of teaching quality in schools with retained teachers (Huang, 2001). Teaching is a profession with a high attrition rate, and

schools struggle to retain talented teachers (Milner and Hoy, 2003). In the United States, up to 25% of new teachers leave the teaching field before the third year, and nearly 40 percent leave the teaching profession within the first 5 years (Hoy and Woolfolk, 1993; Milner and Hoy, 2003; Smith and Ingersoll, 2004). In Britain, far more teachers leave than stay until retirement (Macdonald, 1999). There is also a shortage of high-quality teachers in China (Skaalvik and Skaalvik, 2011). Most distressing of all, there is evidence that many talented teachers leave teaching early (Heyns, 1988).

One of the core problems leading to teacher turnover is teachers' job satisfaction (Co-investigator, 2002; Coleman, 2012; Nichols, 2018). For teachers with high job satisfaction, there will be less turnover intention; on the contrary, teachers with low job satisfaction will have higher turnover intention. In particular, preschool teachers face higher vocational pressure (Jeon et al., 2019; Kim et al., 2020; Lawrence et al., 2020), need higher emotional investment (Zinsser et al., 2013; Krzewina, 2014) and work investment (Fu, 2015). Therefore, they may have higher job burnout (Clipa and Boghean, 2015; Wells, 2015; Terzic-Supic et al., 2020) and higher turnover intention (Noble and Macfarlane, 2005). Even for some teachers who remain on the job, not having high levels of job satisfaction can lead to inefficiency and burnout, unintentionally harming classrooms and schools (Soetan and Oyetayo, 2019). Therefore, preschool teachers' job satisfaction has become a key topic that must be paid attention to.

Teachers' job satisfaction is related to many factors. Caprara et al. (2003), for example, hold that efficacy belief serves as a determinant of teachers' job satisfaction. Mertler (2001) believes that teacher motivation affects job satisfaction. Sergiovanni (1967) believes that teachers' job satisfaction is closely related to achievement motivation. All these studies are carried out from the internal factors of teachers themselves. Other studies attempt to study the factors affecting teachers' job satisfaction from external factors. For example, Lee and Park (2015) research found that organizational justice and commitment of kindergarten teachers had a significant impact on job satisfaction. Hossain et al. (2012) conducted an empirical study on 41 teachers in 10 daycare centers and found that teachers' job satisfaction was positively correlated with their interaction with children and colleagues, resources, and training. Other studies have shown that teachers' job satisfaction is related to their leader's style (Menon, 2014; Falokun, 2017).

However, these studies do not involve the field of metacognition, especially for preschool teachers, the impact of trait mindfulness on job satisfaction is even less. Teacher's job satisfaction is the teacher's emotional reaction to his or her job or teaching role (Zembylas and Papanastasiou, 2004; Skaalvik and Skaalvik, 2010). As a kind of emotional reaction, it must be related to the teacher's own metacognition. Mindfulness has been shown to improve happiness (Hwang et al., 2017; Czerwinski et al., 2020; Tarrasch et al., 2020) and job satisfaction (Hülsheger et al., 2013; Andrews et al., 2014; Vinothkumar et al., 2016). However, few studies have investigated the relationship between preschool teachers trait mindfulness and job satisfaction. Through empirical research, this study explores the relationship between preschool teachers trait mindfulness and their job satisfaction in the field of metacognition and internal factors, which has an important theoretical contribution.

LITERATURE REVIEW AND THEORETICAL HYPOTHESES

Trait Mindfulness and Job Satisfaction

Mindfulness is defined as the subconscious with an observational, non-judgmental stance (Brown and Ryan, 2003; Bishop et al., 2004; Brown et al., 2007; Zeidan et al., 2015). Individuals who are mindful tend to show steady attention, noticing and accepting their immediate responses to thoughts, feelings, and physical stimuli, including their own internal bodily sensations (Khanna and Greeson, 2013). The ability to stay in the moment and be aware of your thoughts and feelings while suspending judgment improves self-regulation and reduces reactivity (Hölzel et al., 2011; Schussler et al., 2016). Mindfulness is actually an individual state of consciousness. Although awareness and attention to current events and experiences are endowed with the characteristics of the human organism, these characteristics can vary considerably from highly lucid and sensitive states to low levels, such as habitual, automatic, unconscious, or dulled thoughts or actions (Wallace, 1999).

At the trait level, mindfulness refers to the cross-situational and relatively stable individual differences in the tendency to be in a state of mindful consciousness (Brown et al., 2007; Grossman, 2011). Research has shown that mindfulness, while varying between individuals, has characteristics with similar characteristics that can be reliably assessed using a number of self-reported measures designed for untrained respondents (Walach et al., 2006; Feldman et al., 2007; Brown et al., 2011). In a growing number of studies, researchers are using these self-reported measures to show a meaningful association between individual naturally occurring trait mindfulness and mental health in non-clinical samples with no experience of meditation or mindfulness training (Weinstein et al., 2009; Niemiec et al., 2010; Bowlin and Baer, 2012; Kiken and Shook, 2012). In the workplace, trait mindfulness is also gaining a lot of attention among organizational scientists (Reb et al., 2014). Some scholars have suggested that mindfulness allows organizations to perform more reliably (Weick et al., 1999; Weick and Sutcliffe, 2006) and perform better in high-speed environments (Dane, 2011). Other studies have shown that trait mindfulness is positively correlated with task performance (Reb et al., 2014; Jahanzeb et al., 2020). Trait mindfulness also helps employees self-regulate their behavior (Lyvers et al., 2014; Kadziolka et al., 2016) to enhance happiness (Reb et al., 2014; Jin et al., 2020; Liu et al., 2021) and higher task performance (Glomb et al., 2018).

According to affective event theory, trait mindfulness may be positively correlated with job satisfaction (Weiss and Cropanzano, 1996). Work events are a proximate source of employees emotional reactions, which in turn predict job satisfaction (Hülsheger et al., 2013). School teaching is one of the professions that requires particularly high levels of emotion regulation skills, which are necessary to successfully manage

challenging student behavior and deal with their own emotional reactions (Skinner and Beers, 2016). Studies have shown a significant link between mindfulness skills, teacher occupational health and well-being, and classroom practice among preschool teachers (Jennings, 2015). In addition, trait mindfulness fosters self-determined behavior that is aligned with an individual needs and values (Deci and Ryan, 1985; Brown and Ryan, 2003). Trait mindfulness may have a positive effect on job satisfaction by promoting self-determination behavior (Glomb et al., 2011).

Based on this, the following hypotheses are proposed in this study:

H1: Trait mindfulness of preschool teachers is positively correlated with job satisfaction.

Trait Mindfulness, Basic Psychological Needs, and Job Satisfaction

An integral part of self-determination theory is the concept of three basic psychological needs (Deci and Ryan, 2000; Ryan and Deci, 2000), namely, autonomy, competence, and relevance. Those whose basic psychological needs are met tend to have higher intrinsic motivation (Klassen et al., 2012). The relationship between the satisfaction of basic needs and happiness has been widely demonstrated in general and specific areas of life and in general social contexts (Piccolo et al., 2005; Demir and Özdemir, 2010; Sapmaz et al., 2012). In the workplace, meeting basic needs has also been shown to be associated with successful job performance by positive psychological regulation (Baard et al., 2004), enhancing positive emotions, reducing negative emotions (Tong et al., 2009), and increasing job engagement (Van Den Broeck et al., 2008). In the field of education, research has shown that the satisfaction of teachers basic needs is associated with both positive and negative aspects of well-being and classroom outcomes, such as job commitment and burnout (Abós Catalán et al., 2018), work enthusiasm (Aldrup et al., 2017), and teaching behavior (Korthagen and Evelein, 2016).

Studies have shown that mindfulness may enhance a personal receptivity to events and experiences (Brown and Ryan, 2012). When people are aware of their own internal basic psychological needs, self-involvement is less likely to dominate the internal interactions of the individual mind. In this situation, people are more likely to act autonomously (Scott Rigby et al., 2014; Schultz et al., 2015). In addition, people who are focused on the present moment are likely to be fully aware of both the internal and external world. This provides a more autonomous, less controlling, or defensive base state in which the individual can fully participate (Chang et al., 2015). At this point, the individual is more able to view feedback as information rather than control because the individual is less likely to feel self-involved in feedback. Therefore, mindfulness can enhance autonomy and competence through feedback (Scott Rigby et al., 2014; Schultz et al., 2015). At the same time, in the field of teaching, such attentional limitations and motivational selective bias may hinder the receptivity to positive teaching behaviors of teachers, and these events and experiences can satisfy teachers basic psychological needs (Li et al., 2019).

Meeting basic psychological needs is seen as a key determinant of experiencing the good life (Deci and Ryan, 2000). Experiencing the good life is one of the meanings of teachers' work. Many teachers find personal satisfaction and happiness in their work (Klassen and Chiu, 2010). According to Locke (1976), job satisfaction can be defined as "a pleasant or positive emotional state resulting from an evaluation of one's work or work experience." Pietsch et al. (2019) believes that job satisfaction is a personal multidimensional psychological response to work, including cognitive (evaluation), emotional (or emotional), and behavioral components. Studies show that when the basic psychological needs of individuals are satisfied, there will be higher job satisfaction (Arshadia, 2010). In particular, a study of teachers shows that teachers' job satisfaction is significantly correlated with basic psychological needs (Wininger and Birkholz, 2013).

In conclusion, this study proposes hypotheses:

H2: Basic psychological needs mediate the relationship between trait mindfulness and job satisfaction.
H2a: Trait mindfulness is positively correlated with basic psychological needs.
H2b: Basic psychological needs are positively correlated with job satisfaction.

Trait Mindfulness, Positive Emotion, and Job Satisfaction

Emotions arise when a person notices a situation, evaluates it as related to his or her needs, values or goals, and responds to the situation with loosely coupled changes in subjective experience, behavior, and physiological fields (Scherer, 2000). In previous studies, negative emotions have been widely concerned, but the research on positive emotions has increased exponentially in the past two decades (Quoidbach et al., 2015). More and more studies show that positive emotions help people deal with stress (Wichers et al., 2008; Avey et al., 2011; Curtin, 2016) and psychological capital (Azab et al., 2018; Carmona-Halty et al., 2021). Positive emotions have always been regarded as an important part of mental health (Taylor and Brown, 1988).

At the same time, researchers found that positive emotions are positively correlated with the quality of social interaction (Sroufe et al., 1985; Denham et al., 1990; McDowell and Parke, 2005), and inducing positive emotions can promote prosocial behavior (Rosenhan et al., 1974). In school settings, research evidence has shown that teachers' emotional expression will have an important impact on students. Teachers express anger at students' failure due to lack of effort (Graham, 1984; Graham, 1990; Clark, 1997; Clark and Artiles, 2000), and sympathize or pity for students' failure due to lack of ability. The emotional expression of these teachers will affect students' attribution to the causes of success and failure (Graham, 1984; Weiner, 2000). If teachers can control their emotions and use positive emotions to express their expectations and requirements, it will lead to students positive attribution.

Emotion regulation and emotion control have been repeatedly proposed as the central mechanism in the theoretical research of mindfulness (Roemer and Orsillo, 2003; Bishop et al., 2004; Hayes and Feldman, 2004; Glomb et al., 2011). The basic purpose of mindfulness training is to improve the trainees positive emotion and produce ideal results. Studies have shown that trait mindfulness can predict lower levels of daily negative effects (Brown and Ryan, 2003; Weinstein et al., 2009), more effective emotional regulation (Baer et al., 2006), and higher happiness (Weinstein et al., 2009). The laboratory research conclusion also shows that mindfulness is related to reducing the subjective or physiological response to emotional stressors (Arch and Craske, 2006; Wolgast et al., 2011). Keng and Tong (2016) empirical research also shows that there is a negative correlation between trait mindfulness and negative emotional instability. People with higher trait mindfulness have higher concentration, which makes them less inclined to use maladaptive strategies as coping mechanisms (Hamilton et al., 2006), which helps to weaken their response to daily stressors.

Job satisfaction is closely related to emotion. First of all, from the definition of job satisfaction itself, job satisfaction is considered to be people positive or negative evaluation and judgment of work (Weiss, 2002). More specifically, job satisfaction is a pleasant or positive emotional state due to the evaluation of work (Locke, 1976). Secondly, the research shows that positive emotion and negative emotion can explain the change of employee job satisfaction. Employees who tend to be happy (positive emotions) are more likely to have higher job satisfaction than employees who tend to experience discomfort (negative emotions; Staw and Ross, 1985; Staw et al., 1986; Duffy et al., 1998).

According to the expansion and construction theory of positive emotion (Fredrickson, 1998), positive emotion is the adaptive function of evolution to establish lasting resources. It will produce novel and extensive ideas and actions. This state will have a positive impact on job satisfaction. For schools, teachers are one of the important teachers in school organizations (Hattie, 2003). Especially for teachers in the classroom environment, "emotional contagion" effect is particularly important. Frequent positive emotions are transferred from teachers to students (Frenzel et al., 2009). Positive emotion is associated with internal motivation and the ideal image of "enthusiastic teacher." Under this positive emotion, the teacher is good at motivating his or her students to maximize their potential (Kunter and Holzberger, 2014).

Therefore, we propose hypotheses:

H3: Positive emotion plays an intermediary role between trait mindfulness and job satisfaction.
H3a: Trait mindfulness is positively correlated with positive emotions.
H3b: Positive emotion is positively correlated with job satisfaction.

Basic Psychological Needs and Positive Emotions

The satisfaction of basic needs is closely related to positive psychological adjustment (Baard et al., 2004), enhancing positive emotions and reducing negative emotions (Tong et al., 2009). In the school education environment, the satisfaction of teachers basic needs can not only affect students motivation and academic performance (Reeve et al., 1999), but also promote students perception of autonomy support in order to obtain a better learning experience (Jang et al., 2009).

At the same time, Klassen et al. (2012) research shows that there is also a close relationship between the satisfaction of teachers basic psychological needs and their work input and emotion in the educational workplace. The research results of Katz and Shahar (2015) also show that teachers who teach out of interest and fun and teachers who pay attention to their work (autonomous machine) tend to think that autonomous students are more beneficial to their learning.

Teachers' positive and negative emotions are very important to educational results, because they affect teachers' efficiency by affecting students cognition, emotion, and motivation (Sutton and Wheatley, 2003). According to the self-determination theory (Ryan and Deci, 2000), teachers basic psychological needs are met, often have internal motivation, and produce positive emotions.

In conclusion, we put forward the following hypotheses:

H4: Basic psychological needs are positively correlated with positive emotions.
H5: Basic psychological needs and positive emotions sequentially mediate the relationship between trait mindfulness and job satisfaction.

Basic psychological needs and positive emotions sequentially mediate the relationship between trait mindfulness and job satisfaction, as shown in **Figure 1**. In addition, the conceptual model also puts forward the assumptions in the study.

MATERIALS AND METHODS

Participants

In this study, a convenient random sampling method was used to sample kindergartens in Jinan City, Shandong Province, China. The kindergarten teachers participating in this survey are all full-time in-service teachers, and a total of 398 preschool teachers participated in the survey. Among them, 33 were male teachers, accounting for 8.30%, and 365 were female teachers, accounting for 91.70% (see **Table 1** for details). The formal implementation is in charge of preschool education interns who have received unified training. After communicating and agreeing with the person in charge of the kindergarten, the questionnaire was distributed online for collection. Each test adopts uniform guidelines and emphasizes the confidentiality of the survey to ensure the validity and authenticity of the questionnaire. A total of 445 questionnaires were distributed and 420 were actually returned. For questionnaires with accurate data, we use the direct elimination method. In the end, 398 valid questionnaires were recovered, with an effective recovery rate of 89.44%. Ethical review and approval were waived for this study by

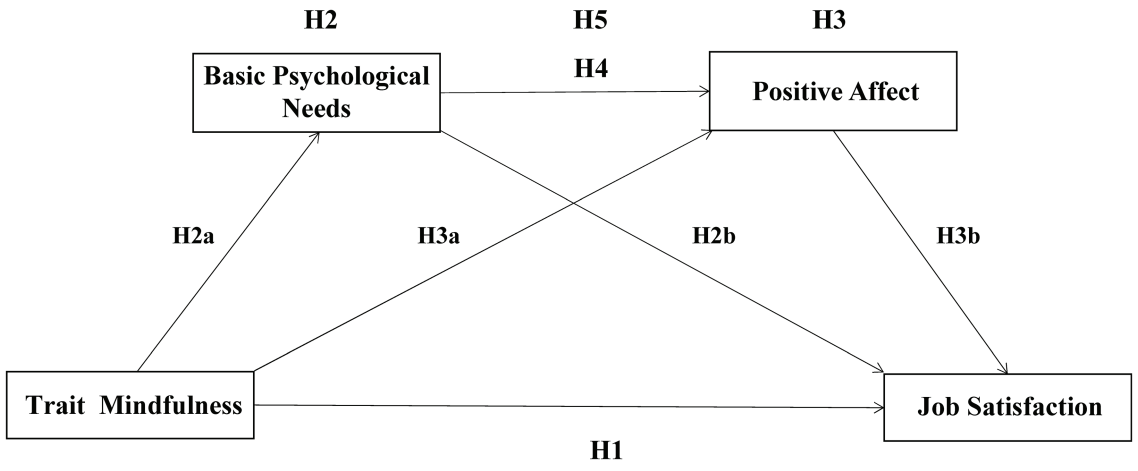

FIGURE 1 | Theoretical hypotheses.

TABLE 1 | Social demographic features of participants ($N = 398$).

Variables		Percentages
Gender	Male	8.30%
	Female	91.70%
Age	25–27	83.92%
	28–30	6.78%
	31–33	5.78%
	34–36	3.52%
Educational Background	Junior college	72.10%
	Undergraduate course	27.90%
Kindergarten Site	Rural kindergarten	29.90%
	Township kindergarten	35.20%
	City kindergarten	34.90%
Kindergarten Nature	Private kindergarten	51.30%
	Public kindergarten	48.70%

the Research Ethics Committee of the Wenzhou University according to the guidelines of the Declaration of Helsinki, as the study involving questionnaire survey did not involve personal privacy issues, yet issues on psychological or physical harms to participants.

Measures

Mindfulness Attention Awareness Scale

Trait mindfulness adopts the mindfulness attention awareness scale compiled by Brown and Ryan (2003), which contains 15 questions. This scale has been proved to have good reliability and validity in Chinese population (Black et al., 2012). A sample item was "I could be experiencing some emotion and not be conscious of it until sometime later." The instruction requires the subjects to select the most suitable description level in each item according to the actual situation in the recent week (including the day). Survey questionnaire was measured with 6-point Likert scale for measuring (1 = almost always and 6 = almost never). High scores reflect a high level of awareness and attention to the present in an individual daily life. In this study, Cronbach's α value was 0.947.

Basic Psychological Needs Scale

The basic psychological needs scale was compiled by Deci and Ryan (2000). This scale has proved to have good reliability and validity in China (Tian et al. 2016). There are 21 items in the scale, of which 9 items are reverse scoring questions, including capacity needs (6 items), relationship needs (8 items), and autonomy needs (7 items). These projects include the statement: "I often feel weak." The scale has seven grades (1 = totally disagree and 7 = totally agree). In this study, Cronbach's α was 0.957, and the Cronbach's α value of three dimensions was 0.898, 0.887, and 0.910, respectively.

Positive Emotion Scale

This study used the positive emotion subscale in the positive negative emotion scale compiled by Watson et al. (1988). The scale contains 10 questions. This scale has been proved to have good reliability and validity in China and is widely used (Huang et al., 2003). The scale consists of many words describing different feelings and emotions. Subjects were asked to read each item and then point out to what extent this feeling appeared. These feelings include "interested," "excited," etc. Survey questionnaire was measured with 5-point Likert scale for measuring (1 = almost none and 5 = extremely many). In this study, Cronbach's α was 0.933.

Job Satisfaction Scale

The measurement of job satisfaction adopts the job satisfaction scale compiled by Brayfield and Rothe (1951), which contains five questions. This scale has proved to have good reliability and validity in China. These items include the statement: "My job is like a hobby to me." Survey scale was measured with 7-point Likert scale for measuring (1 = totally disagree and 7 = totally agree). The higher the score, the higher the individual job satisfaction. In this survey, Cronbach's α of the scale was 0.831.

TABLE 2 | Reliability, validity statistics, and correlations.

Variable	Item Reliability	Composite Reliability		Convergent Validity		Discriminate validity	
	STD. LOADING	CR	AVE	TM	BPN	PA	JS
TM	0.543–0.816	0.951	0.564	**0.751**			
BPN	0.624–0.826	0.918	0.504	0.382	**0.71**		
PA	0.686–0.850	0.933	0.585	0.595	0.385	**0.765**	
JS	0.601–0.821	0.833	0.503	0.522	0.432	0.57	**0.709**

The diagonal in bold is the square root of AVE, and the lower triangle is the Pearson correlation of the dimension. TM, Trait Mindfulness; BPN, Basic Psychological Needs; PA, Positive Affect; and JS, Job Satisfaction.

TABLE 3 | Means, standard deviations, and correlations of the major study variables.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Gender	0.92	0.28	1								
2. Age	27.10	2.39	−0.057	1							
3. Educational Background	1.28	0.45	0.126*	−0.058	1						
4. Kindergarten Site	2.05	0.81	−0.049	−0.068	0.407**	1					
5. Kindergarten Nature	1.49	0.50	0.129**	−0.031	0.335**	0.371**	1				
6. TM	3.84	1.14	−0.079	0.05	0.019	0.207**	−0.086	1			
7. BPN	3.99	1.19	0.019	0.009	0.075	0.067	0.024	0.368**	1		
8. PA	3.02	1.00	−0.052	0.028	−0.005	0.052	−0.044	0.564**	0.361**	1	
9. JS	4.41	1.07	0.01	−0.026	−0.038	−0.011	−0.024	0.474**	0.388**	0.512**	1

*Gender is the dummy variable (0 = male and 1 = female). N = 398.*p < 0.05; **p < 0.01.*

TABLE 4 | Fit indices of the model.

Fit indices	Recommended threshold	Scores	Remarks
ML χ^2	–	906.77	–
Df	–	639	–
χ^2/df	$1 < \chi^2/df < 3$	1.419	Acceptable
CFI	> 0.9	0.969	Acceptable
TLI	> 0.9	0.966	Acceptable
RMSEA	< 0.08	0.032	Acceptable
SRMR	< 0.08	0.045	Acceptable

Statistical Methods and Analysis Ideas

In this study, SPSS 22.0 and Mplus version 8.3 were used for data analysis. SPSS was mainly used for data sorting, descriptive statistical analysis, etc. Mplus is mainly used for model inspection. Participants who lack descriptive data or many data points are processed by list deletion when running the analysis. In the analysis, teachers' gender, age, education level, the site, and nature of kindergartens are taken as control variables. Gender was dummy coded (0 = male and 1 = female).

RESULTS

Test of Common Method Deviation

Using Harman single factor test, 6 factors with characteristic roots greater than 1 were obtained. The interpretation rate of the first factor is 34.446%, which is less than the critical value of 40% (Podsakoff et al., 2003), indicating that there is no obvious common method deviation in this study.

Descriptive Statistical Analysis

In factor analysis, randomly select 1/2 of the sample ($N = 199$) from the overall data for exploratory factor analysis, and then use the other 1/2 of the samples ($N = 199$) to pass confirmatory factor analysis. Exploratory factor analysis was carried out to uncover the structure of the variables. Exploratory factor analysis convergence validity measures the extent to which the factors of a single structure are consistent. In this study, the convergence validity was evaluated using compound reliability and mean variance interpretation. Using these measures, the combined reliability (CR) of all structures should be higher than 0.6 and the average economic value (AVE) should be higher than 0.5 (Fornell and Larcker, 1981).

As shown in **Table 2**, the combined reliability of relative variable ranges from 0.833 to 0.951, while the average economic value of relative variable ranges from 0.503 to 0.585. These results reveal that the research variables are in the acceptable range.

Confirmatory factor analysis is used to evaluate the reliability and validity of the overall measurement model and the evaluation structure. In order to evaluate the validity of the measurement model, the discriminant and convergence validity were evaluated. Fornell and Larcker's (1981) methods were used to evaluate the discriminant validity. Using this method, the mean variance

TABLE 5 | The direct effect of the research paths and research model hypothesis analysis.

DV	IV	Std. Est.	*SE*	Est./*SE*	Value of *P*	R^2	Hypo and Path	Remarks
JS	TM	0.265	0.062	4.275	***	0.457	H1:TM → JS	Support
	BPN	0.210	0.061	3.443	0.001		H2b:BPN → JS	Support
	PA	0.333	0.068	4.879	***		H3b:PA → JS	Support
BPN	TM	0.406	0.051	7.926	***	0.177	H2a:BPN → BPN	Support
PA	TM	0.535	0.045	11.815	***	0.403	H3a:TM → PA	Support
	BPN	0.181	0.045	4.058	***		H4:BPN → PA	Support

****p < 0.001.*

of each study structure should be higher than the square correlation between that structure and any other structure. As shown in **Table 2**, the measurement model proves satisfactory discriminant validity. The diagonal elements in **Table 2** (in bold) are the square multiple correlations between the variables studied. As shown in the table, AVE ranges from 0.503 to 0.585, while diagonal values range from 0.709 to 0.765, indicating that diagonal variables are higher than various AVE values, indicating that all structures in this study have sufficient discriminant validity.

Table 3 lists the Pearson correlation coefficients between the main variables and their dimensions. It can be seen from **Table 1** that trait mindfulness has a significant positive correlation with basic psychological needs, positive emotions, and job satisfaction.

According to Tsui et al. (1995), the critical value of correlation level of serious multicollinearity problem generally exceeds 0.75, the correlation coefficient of each variable in this study does not exceed 0.75, and there is no serious multicollinearity problem among main variables.

Model Inspection

Mplus version 8.3 was used to fit the chain mediation model. The model fitting index was ML $\chi^2 = 906.77$, df = 639, $\chi^2/df = 1.419$, CFI = 0.969, TFI = 0.966, RMSEA = 0.032, SRMR = 0.045. All indexes are in an acceptable range, and the model is ideal. See **Table 4**.

The Significance Test of Mediating Effect

On the basis of good model fitting, the Bootstrap program of Mplus was used to repeat the sample for 5,000 times. The results show that the path coefficients between trait mindfulness and basic psychological needs, positive emotions, and job satisfaction are significant, and trait mindfulness can directly predict job satisfaction ($\beta = 0.265$, $p < 0.001$), supporting H1. Trait mindfulness can measure basic psychological needs ($\beta = 0.406$, $p < 0.001$), supporting H2a. Basic psychological needs can predict job satisfaction ($\beta = 0.210$, $p = 0.001$), supporting H2b. Trait mindfulness can predict positive emotions ($\beta = 0.535$, $p < 0.001$), supporting H3a. Positive emotions can predict job satisfaction ($\beta = 0.333$, $p < 0.001$), supporting H3b. There is a positive correlation between basic psychological needs and positive emotions ($\beta = 0.181$, $p < 0.001$), supporting H4. See **Table 5**.

Table 6 shows the indirect impact of the study path. Basic psychological needs play a mediating role between trait mindfulness and job satisfaction ($\beta = 0.059$, $p = 0.002$), the confidence interval was 95% (0.026–0.099), excluding 0, supporting H2, and the mediating effect accounted for 15.45%.

Positive emotions play a mediating role between trait mindfulness and job satisfaction ($\beta = 0.123$, $p < 0.001$), the confidence interval was 95% (0.070–0.190) excluding 0, supporting H3, and the mediating effect accounted for 32.20%.

Basic psychological needs and positive emotions play a sequential mediating role between trait mindfulness and job satisfaction ($\beta = 0.017$, $p < 0.001$), 95% confidence interval [0.008–0.033], excluding 0, supports H5, and the mediating effect accounts for 4.45%. See **Figure 2**.

DISCUSSION

This study discusses the influencing factors of preschool teachers' job satisfaction from the field of metacognition. The results support the previous research that job satisfaction is positively correlated with the satisfaction of basic psychological needs (Collie et al., 2015; Unanue et al., 2017) and positive emotions (Ziegler et al., 2012; Todorova et al., 2014). At the same time, the results of this study show that for preschool teachers, their job satisfaction is not only related to basic psychological needs and positive emotions, but also closely related to trait mindfulness. The mediating effect of trait mindfulness on job satisfaction through the sequential mediating effect of basic psychological needs and positive emotions accounts for 65.96% of the total effect, which is a very high proportion, indicating that preschool teachers trait mindfulness affects job satisfaction to a great extent. Compared with previous studies, this study has important theoretical contributions.

In addition, the research on preschool teachers trait mindfulness and job satisfaction can provide some suggestions for kindergarten education practice and management practice. Firstly, kindergartens or education management departments should improve the mindfulness level of preschool teachers by adopting mindfulness training and offering mindfulness training courses and providing social support systems. Preschool teachers are facing a high professional pressure and high emotional environment. Working in this working environment with great psychological pressure, preschool teachers must have good emotional management ability and psychological tolerance. Through mindfulness training, improving preschool teachers mental health level and their ability to accept and tolerate children's challenging and wrong

TABLE 6 | The indirect effect of the research paths.

Path	Std. Est.	*SE*	Est./*SE*	Value of *P*	Boot LLCI	Boot ULCI	The proportion of the effect
H2:TM → BPN → JS	0.059	0.019	3.167	0.002	0.026	0.099	15.45%
H3:TM → PA → JS	0.123	0.03	4.037	***	0.070	0.190	32.20%
H5:TM → BPN → PA → JS	0.017	0.006	2.74	0.006	0.008	0.033	4.45%
TOTALIND	0.199	0.036	5.455	***	0.133	0.276	52.09%
TOTAL	0.382	0.044	8.667	***	0.302	0.474	100.00%

****p* < 0.001.

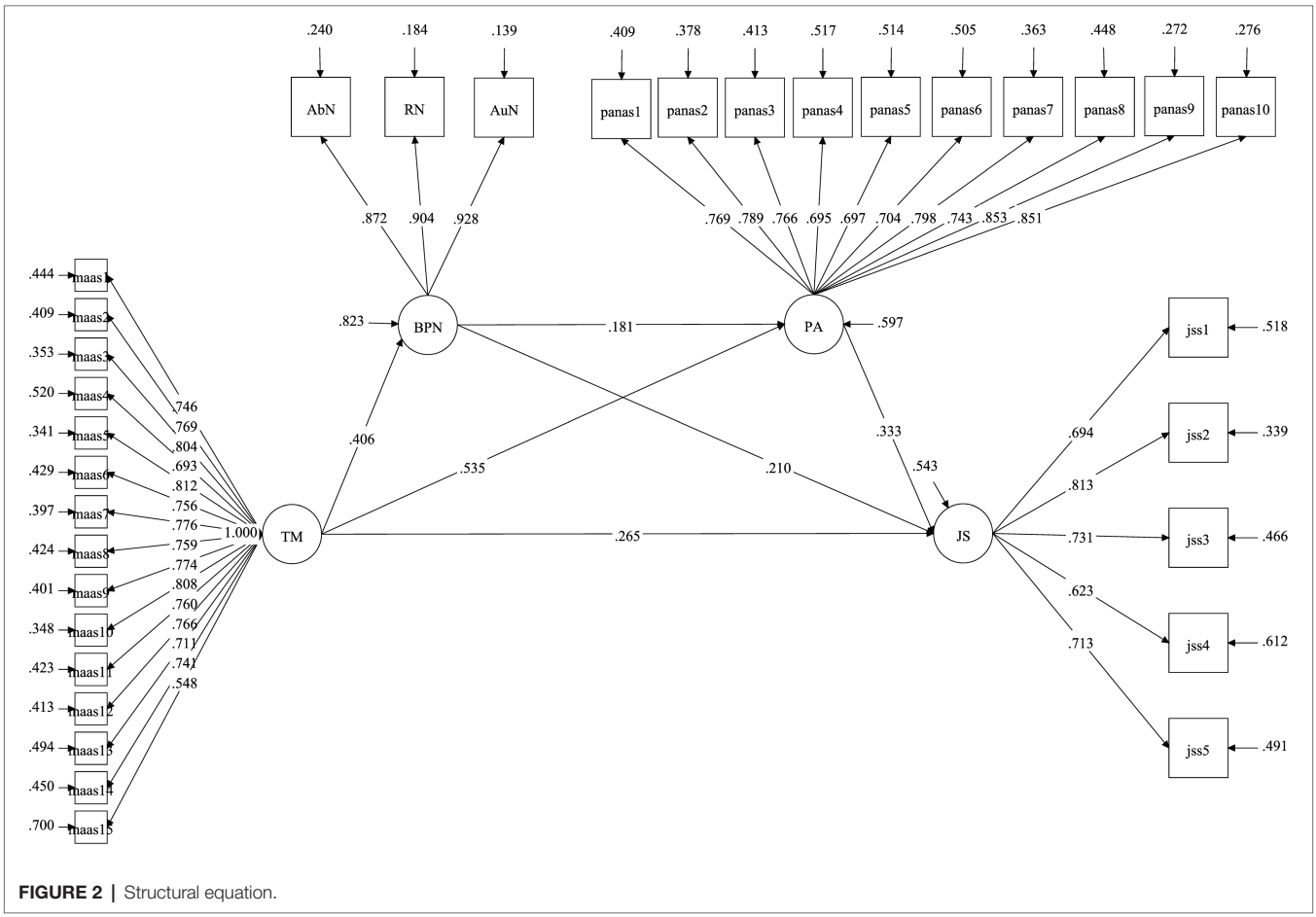

FIGURE 2 | Structural equation.

sexual behaviors, guiding preschool teachers to look at problems from a positive perspective, and providing preschool teachers with a strong social support system will effectively improve teachers job satisfaction and job happiness.

Secondly, the basic psychological needs of preschool teachers should be met. In terms of curriculum implementation and work, managers should give preschool teachers autonomy. The authorization of managers for autonomy will improve the basic psychological needs of preschool teachers to a certain extent. The leaders of early education should strengthen the trust in the competence of preschool teachers and let preschool teachers have a sense of competence. At the same time, the leaders of early education should create a good working environment for preschool teachers, which make preschool teachers have a sense of belonging. These measures will improve preschool teachers job satisfaction to a great extent.

Finally, we should let preschool teachers have positive emotions, guide preschool teachers to make positive attribution, and create a good positive psychological environment for them, so as to improve preschool teachers positive emotions. Kindergartens should establish a strong emotional support system to create an environment conducive to releasing and eliminating emotions. At the same time, kindergarten leaders encourage preschool teachers to carry out internal self-dialog and positive psychological suggestion.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Firstly, the data of this study are from self-report, and future research may consider using more objective indicators. Secondly, the method used in this study is horizontal and cannot reflect the long-term performance of the mechanism studied in this study. Especially, in an emergency context due to the COVID-19 pandemic which is having a relevant impact on the job satisfaction of kindergarten teachers. The future research should take into account the job satisfaction of kindergarten teachers during the COVID-19 pandemic. Thirdly, the study includes two mediating factors, but there should be more mediating factors in the impact of trait mindfulness on job satisfaction, such as the role of psychological elasticity, subjective well-being, and emotional intelligence in this process. Finally, this study only studies the impact of preschool teachers individual level. Future research can consider the impact of organizational factors and leadership factors on preschool teachers job satisfaction, and can carry out cross-level research.

CONCLUSION

The results of this study show that trait mindfulness is positively correlated with job satisfaction. Trait mindfulness can affect job satisfaction not only through basic psychological needs, but also through positive emotions. In addition, the most important finding of this study is that basic psychological needs and positive emotions play a sequential intermediary role between preschool teachers trait mindfulness and job satisfaction. Moreover, this sequential mediating effect accounts for a high proportion of the total effect. We believe these findings will help enrich the literature on preschool teachers job satisfaction and kindergarten management practice.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Ethics Committee of the Wenzhou University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

BP designed, prepared, and carried out the data collection process, and written the article. ZS revised the section of the analysis and discussion and corrected the entire manuscript. YW analyzed and verified the data in this article. All authors contributed to the article and approved the submitted version.

FUNDING

This work was supported by the second batch of teaching reform research projects of higher education in Zhejiang Province during the "13th Five-Year Plan" (project number: jg20190401). This project is supported by the Graduate Research and Innovation Fund of Wenzhou University.

ACKNOWLEDGMENTS

We are grateful to the Preschool Education Research Center of Wenzhou University for their support of this study.

REFERENCES

Abós Catalán, Á., Sevil Serrano, J., Julián Clemente, J. A., Martín-Albo Lucas, J., and García-González, L. (2018). Spanish validation of the basic psychological needs at work scale: A measure to predict teachers' well-being in the workplace. *Int. J. Educ. Vocat. Guid.* 18, 127–148. doi: 10.1007/s10775-017-9351-4

Aldrup, K., Klusmann, U., and Lüdtke, O. (2017). Does basic need satisfaction mediate the link between stress exposure and well-being? A diary study among beginning teachers. *Learn. Instr.* 50, 21–30. doi: 10.1016/j.learninstruc.2016.11.005

Andrews, M. C., Michele Kacmar, K., and Kacmar, C. (2014). The mediational effect of regulatory focus on the relationships between mindfulness and job satisfaction and turnover intentions. *Career Dev. Int.* 19, 494–507. doi: 10.1108/CDI-02-2014-0018

Arch, J. J., and Craske, M. G. (2006). Mechanisms of mindfulness: emotion regulation following a focused breathing induction. *Behav. Res. Ther.* 44, 1849–1858. doi: 10.1016/j.brat.2005.12.007

Arshadia, N. (2010). Basic need satisfaction, work motivation, and job performance in an industrial company in Iran. *Procedia Soc. Behav. Sci.* 5, 1267–1272. doi: 10.1016/j.sbspro.2010.07.273

Avey, J. B., Wernsing, T. S., and Mhatre, K. H. (2011). A longitudinal analysis of positive psychological constructs and emotions on stress, anxiety, and well-being. *J. Leadersh. Organ. Stud.* 18, 216–228. doi: 10.1177/1548051810397368

Azab, C., Clark, T., and Jarvis, C. B. (2018). Positive psychological capacities: the mystery ingredient in successful service recoveries? *J. Serv. Mark.* 32, 897–912. doi: 10.1108/JSM-11-2017-0407

Baard, P. P., Deci, E. L., and Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *J. Appl. Soc. Psychol.* 34, 2045–2068. doi: 10.1111/j.1559-1816.2004.tb02690.x

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., and Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment* 13, 27–45. doi: 10.1177/1073191105283504

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., et al. (2004). Mindfulness: A proposed operational definition. *Clin. Psychol. Sci. Pract.* 11, 230–241. doi: 10.1093/clipsy.bph077

Black, D. S., Sussman, S., Johnson, C. A., and Milam, J. (2012). Psychometric assessment of the mindful attention awareness scale (MAAS) Among Chinese adolescents. *Assessment* 19, 42–52. doi: 10.1177/1073191111415365

Bowlin, S. L., and Baer, R. A. (2012). Relationships between mindfulness, self-control, and psychological functioning. *Pers. Individ. Dif.* 52, 411–415. doi: 10.1016/j.paid.2011.10.050

Brayfield, A. H., and Rothe, H. F. (1951). An index of job satisfaction. *J. Appl. Psychol.* 35, 307–311. doi: 10.1037/h0055617

Brown, K. W., and Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *J. Pers. Soc. Psychol.* 84, 822–848. doi: 10.1037/0022-3514.84.4.822

Brown, K. W., and Ryan, R. M. (2012). Fostering healthy self-regulation from Within and Without: A self-determination theory perspective. *Positive Psychology in Practice* 7, 105–124. doi: 10.1002/9780470939338.ch7

Brown, K. W., Ryan, R. M., and Creswell, J. D. (2007). Mindfulness: theoretical foundations and evidence for its salutary effects. *Psychol. Inq.* 18, 211–237. doi: 10.1080/10478400701598298

Brown, K. W., West, A. M., Loverich, T. M., and Biegel, G. M. (2011). Assessing adolescent mindfulness: validation of an adapted mindful attention awareness scale in adolescent normative and psychiatric populations. *Psychol. Assess.* 23, 1023–1033. doi: 10.1037/a0021338

Caprara, G. V., Barbaranelli, C., Borgogni, L., and Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *J. Educ. Psychol.* 95, 821–832. doi: 10.1037/0022-0663.95.4.821

Carmona-Halty, M., Salanova, M., Llorens, S., and Schaufeli, W. B. (2021). Linking positive emotions and academic performance: The mediated role of academic psychological capital and academic engagement. *Curr. Psychol.* 40, 2938–2947. doi: 10.1007/s12144-019-00227-8

Chang, J. H., Huang, C. L., and Lin, Y. C. (2015). Mindfulness, basic psychological needs Fulfillment, and well-being. *J. Happiness Stud.* 16, 1149–1162. doi: 10.1007/s10902-014-9551-2

Clark, M. D. (1997). Teacher response to learning disability: A test of attributional principles. *J. Learn. Disabil.* 30, 69–79. doi: 10.1177/002221949703000106

Clark, M. D., and Artiles, A. J. (2000). A cross-national study of teachers' attributional patterns. *J. Spec. Educ.* 34, 77–89. doi: 10.1177/002246690003400203

Clipa, O., and Boghean, A. (2015). Stress factors and solutions for the phenomenon of burnout of preschool teachers. *Procedia-Soc. Behav. Sci.* 180, 907–915. doi: 10.1016/j.sbspro.2015.02.241

Co-investigator, N. (2002). Teacher attrition and mobility in urban districts-evidence from Wisconsin. *Fisc. Issues Urban Sch.* 53, 119–136.

Coleman, J. M. (2012). *Classroom Management: Whose Responsibility Is it?* California: California State University, Long Beach.

Collie, R. J., Shapka, J. D., Perry, N. E., and Martin, A. J. (2015). Teachers' psychological functioning in the workplace: exploring the roles of contextual beliefs, need satisfaction, and personal characteristics. *J. Educ. Psychol.* 108, 788–799. doi: 10.1037/edu0000088

Curtin, P. (2016). *The Use of Emotional Intelligence and Positive Emotions in Coping with Chronic Unemployment*. California: Northcentral University.

Czerwinski, N., Egan, H., Cook, A., and Mantzios, M. (2020). Teachers and mindful colouring to tackle burnout and increase mindfulness, resiliency and wellbeing. *Contemp. Sch. Psychol.* 25, 535–545. doi: 10.1007/s40688-020-00279-9

Dane, E. (2011). Paying attention to mindfulness and its effects on task performance in the workplace. *J. Manage.* 37, 997–1018. doi: 10.1177/0149206310367948

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educ. Leadersh.* 60, 9–16. doi: 10.1080/03601270390195941

Deci, E. L., and Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York, NY: Plenum.

Deci, E. L., and Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychol. Inq.* 11, 227–268. doi: 10.1207/S15327965PLI1104_01

Demir, M., and Özdemir, M. (2010). Friendship, need satisfaction and happiness. *J. Happiness Stud.* 11, 243–259. doi: 10.1007/s10902-009-9138-5

Denham, S. A., McKinley, M., Couchoud, E. A., and Holt, R. (1990). Emotional and Behavioral predictors of preschool peer ratings. *Child Dev.* 61, 1145–1152. doi: 10.2307/1130882

Duffy, M. K., Ganster, D. C., and Shaw, J. D. (1998). Positive affectivity and negative outcomes: The role of tenure and job satisfaction. *J. Appl. Psychol.* 83, 950–959. doi: 10.1037/0021-9010.83.6.950

Falokun, S. O. (2017). *Educational Leadership Style and Teacher Job Satisfaction*. Arizona: Grand Canyon University.

Feldman, G., Hayes, A., Kumar, S., Greeson, J., and Laurenceau, J. P. (2007). Mindfulness and emotion regulation: The development and initial validation of the cognitive and affective mindfulness scale-revised (CAMS-R). *J. Psychopathol. Behav. Assess.* 29, 177–190. doi: 10.1007/s10862-006-9035-8

Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 382–388. doi: 10.1177/002224378101800313

Fredrickson, B. L. (1998). What good are positive emotions? *Rev. Gen. Psychol.* 2, 300–319. doi: 10.1037/1089-2680.2.3.300

Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., and Sutton, R. E. (2009). Emotional transmission in the classroom: exploring the relationship Between teacher and student enjoyment. *J. Educ. Psychol.* 101, 705–716. doi: 10.1037/a0014695

Fu, C. S. (2015). The effect of emotional labor on job involvement in preschool teachers: verifying the mediating effect of psychological capital. *Turkish Online J. Educ. Technol.* 14, 145–156.

Glomb, T. M., Duffy, M. K., Bono, J. E., and Yang, T. (2011). Mindfulness at work. *Res. Pers. Hum. Resour. Manag.* 30, 115–157. doi: 10.1108/S0742-7301(2011)0000030005

Glomb, T. M., Duffy, M. K., Bono, J. E., and Yang, T. (2018). Mindfulness at work. Research in personnel and human resources management. *J. Pers. Soc. Psychol.*, 30, 115–167.

Graham, S. (1984). Communicating sympathy and anger to Black and white children: The cognitive (attributional) consequences of affective cues. *J. Pers. Soc. Psychol.* 47, 40–54. doi: 10.1037/0022-3514.47.1.40

Graham, S. (1990). "Communicating low ability in the classroom: bad things good teachers sometimes do" in *Attribution Theory: Applications to Achievement, Mental Health, and Interpersonal Conflict*. eds. S. Graham and V. S. Folkes (New Jersey: Lawrence Erlbaum Associates, Inc.), 17–36.

Grossman, P. (2011). Defining mindfulness by how poorly I think I pay attention During everyday awareness and other intractable problems for Psychology's (re)invention of mindfulness: comment on Brown et al. (2011). *Psychol. Assess.* 23, 1034–1040. doi: 10.1037/a0022713

Hamilton, N. A., Kitzman, H., and Guyotte, S. (2006). Enhancing health and emotion: mindfulness as a missing link between cognitive therapy and positive psychology. *J. Cogn. Psychother.* 20, 123–134. doi: 10.1891/jcop.20.2.123

Hattie, J. (2003). *Teachers Make a Difference What Is the Research Evidence?*. Ohio: Lloydia Publications.

Hayes, A. M., and Feldman, G. (2004). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clin. Psychol. Sci. Pract.* 11, 255–262. doi: 10.1093/clipsy.bph080

Heyns, B. (1988). Educational defectors: A first look at teacher attrition in the NLS-72. *Educ. Res.* 17, 24–32. doi: 10.3102/0013189X017003024

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., and Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspect. Psychol. Sci.* 6, 537–559. doi: 10.1177/1745691611419671

Hossain, Z., Noll, E., and Barboza, M. (2012). Caregiving involvement, job condition, and job satisfaction of infant-toddler child-Care teachers in the United States. *Educ. Res. Int.* 2012, 1–9. doi: 10.1155/2012/676352

Hoy, W. K., and Woolfolk, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. *Elem. Sch. J.* 93, 355–372. doi: 10.1086/461729

Huang, S. (2001). Teachers' perceptions of high school environments. *Learn. Environ. Res.* 4, 159–193. doi: 10.1023/A:1012415400807

Huang, L., Tingzhong, Y., and Ji, Z. (2003). Applicability of the positive and negative affect scale in Chinese. *Chinese Ment. Heal. J.* 17, 54–56.

Hülsheger, U. R., Alberts, H. J. E. M., Feinholdt, A., and Lang, J. W. B. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *J. Appl. Psychol.* 98:310. doi: 10.1037/a0031313

Hwang, Y. S., Bartlett, B., Greben, M., and Hand, K. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teach. Teach. Educ.* 64, 26–42. doi: 10.1016/j.tate.2017.01.015

Jahanzeb, S., Fatima, T., Javed, B., and Giles, J. P. (2020). Can mindfulness overcome the effects of workplace ostracism on job performance? *J. Soc. Psychol.* 160, 589–602. doi: 10.1080/00224545.2019.1707465

Jang, H., Reeve, J., Ryan, R. M., and Kim, A. (2009). Can self-determination theory explain what underlies the productive, satisfying learning experiences of Collectivistically oriented Korean students? *J. Educ. Psychol.* 101, 644–661. doi: 10.1037/a0014241

Jennings, P. A. (2015). Early childhood teachers' well-being, mindfulness, and self-compassion in relation to classroom quality and attitudes towards challenging students. *Mindfulness* 6, 732–743. doi: 10.1007/s12671-014-0312-4

Jeon, L., Buettner, C. K., Grant, A. A., and Lang, S. N. (2019). Early childhood teachers' stress and children's social, emotional, and behavioral functioning. *J. Appl. Dev. Psychol.* 61, 21–32. doi: 10.1016/j.appdev.2018.02.002

Jin, Y., Zhang, M., Wang, Y., and An, J. (2020). The relationship between trait mindfulness, loneliness, regulatory emotional self-efficacy, and subjective well-being. *Pers. Individ. Dif.* 154:109650. doi: 10.1016/j.paid.2019.109650

Kadziolka, M. J., Di Pierdomenico, E. A., and Miller, C. J. (2016). Trait-Like mindfulness promotes healthy self-regulation of stress. *Mindfulness* 7, 236–245. doi: 10.1007/s12671-015-0437-0

Katz, I., and Shahar, B. H. (2015). What makes a motivating teacher? Teachers' motivation and beliefs as predictors of their autonomy-supportive style. *Sch. Psychol. Int.* 36, 575–588. doi: 10.1177/0143034315609969

Keng, S. L., and Tong, E. M. W. (2016). Riding the tide of emotions with mindfulness: mindfulness, affect dynamics, and the mediating role of coping. *Emotion* 16, 706–718. doi: 10.1037/emo0000165

Khanna, S., and Greeson, J. M. (2013). A narrative review of yoga and mindfulness as complementary therapies for addiction. *Complement. Ther. Med.* 21, 244–252. doi: 10.1016/j.ctim.2013.01.008

Kiken, L. G., and Shook, N. J. (2012). Mindfulness and emotional distress: The role of negatively biased cognition. *Pers. Individ. Dif.* 52, 329–333. doi: 10.1016/j.paid.2011.10.031

Kim, J., Shin, Y., Tsukayama, E., and Park, D. (2020). Stress mindset predicts job turnover among preschool teachers. *J. Sch. Psychol.* 78, 13–22. doi: 10.1016/j.jsp.2019.11.002

Klassen, R. M., and Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: teacher gender, years of experience, and job stress. *J. Educ. Psychol.* 102, 741–756. doi: 10.1037/a0019237

Klassen, R. M., Perry, N. E., and Frenzel, A. C. (2012). Teachers' relatedness with students: An underemphasized component of teachers' basic psychological needs. *J. Educ. Psychol.* 104, 150–165. doi: 10.1037/a0026253

Korthagen, F. A. J., and Evelein, F. G. (2016). Relations between student teachers' basic needs fulfillment and their teaching behavior. *Teach. Teach. Educ.* 60, 234–244. doi: 10.1016/j.tate.2016.08.021

Krzewina, J. M. (2014). Effect of preschool classroom quality on social and language development. *Diss. Abstr. Int. Sect. A Humanit. Soc. Sci.* 74.

Kunter, M., and Holzberger, D. (2014). "Loving teaching: Research on teachers' intrinsic orientations," in *Teacher Motivation: Theory and Practice*; May 30, 2014.

Lawrence, R. C., Bulotsky-Shearer, R. J., Bichay-Awadalla, K., Futterer, J. N., and Bailey, J. (2020). Validation of the early childhood teacher experiences scale in head start. *Psychol. Sch.* 57, 1132–1154. doi: 10.1002/pits.22385

Lee, J., and Park, H. (2015). Effects of kindergarten teachers' organizational justice and commitment on job satisfaction. *J. Educ. Stud.* 46:25. doi: 10.15854/jes.2015.03.46.1.25

Li, C., Kee, Y. H., Kong, L. C., Zou, L., Ng, K. L., and Li, H. (2019). Autonomy-supportive teaching and basic psychological need satisfaction among school students: The role of mindfulness. *Int. J. Environ. Res. Public Health* 16:2599. doi: 10.3390/ijerph16142599

Liu, X. S. (2007). The effect of teacher influence at school on first-year teacher attrition: A multilevel analysis of the schools and staffing survey for 1999-2000. *Educ. Res. Eval.* 13, 1–16. doi: 10.1080/13803610600797615

Liu, G., Isbell, L. M., and Leidner, B. (2021). Quiet ego and subjective well-being: The role of emotional intelligence and mindfulness. *J. Happiness Stud.* 22, 2599–2619. doi: 10.1007/s10902-020-00331-8

Locke, E. A. (1976). The nature and causes of job satisfaction. *Handbook Ind. Org. Psychol. 1*, 1297–1349.

Lyvers, M., Makin, C., Toms, E., Thorberg, F. A., and Samios, C. (2014). Trait mindfulness in relation to emotional self-regulation and executive function. *Mindfulness* 5, 619–625. doi: 10.1007/s12671-013-0213-y

Macdonald, D. (1999). Teacher attrition: A review of literature. *Teach. Teach. Educ.* 15, 835–848. doi: 10.1016/S0742-051X(99)00031-1

McDowell, D. J., and Parke, R. D. (2005). Parental control and affect as predictors of children's display rule use and social competence with peers. *Soc. Dev.* 14, 440–457. doi: 10.1111/j.1467-9507.2005.00310.x

Menon, M. E. (2014). The relationship between transformational leadership, perceived leader effectiveness and teachers' job satisfaction. *J. Educ. Adm.* 52, 509–528. doi: 10.1108/JEA-01-2013-0014

Mertler, C. A. (2001). "Teacher motivation and job satisfaction in the new millennium," in *Annual Meeting of the Mid-Western Educational Research Association;* Chicago, IL, October 24–27, 2001; Washington, D. C.

Milner, H. R., and Hoy, A. W. (2003). A case study of an African American teacher's self-efficacy, stereotype threat, and persistence. *Teach. Teach. Educ.* 19, 263–276. doi: 10.1016/S0742-051X(02)00099-9

Nichols, F. K. (2018). *Exploring the Relationship between Principals' Leadership Style and Teachers' Job Satisfaction in the Public School Setting*. Texas: Our Lady of the Lake University.

Niemiec, C. P., Brown, K. W., Kashdan, T. B., Cozzolino, P. J., Breen, W. E., Levesque-Bristol, C., et al. (2010). Being present in the face of existential threat: The role of trait mindfulness in reducing defensive responses to mortality salience. *J. Pers. Soc. Psychol.* 99, 344–365. doi: 10.1037/a0019388

Noble, K., and Macfarlane, K. (2005). Romance or reality?: examining burnout in early childhood teachers. *Australas. J. Early Child.* 30, 53–58. doi: 10.1177/183693910503000309

Piccolo, R. F., Judge, T. A., Takahashi, K., Watanabe, N., and Locke, E. A. (2005). Core self-evaluations in Japan: relative effects on job satisfaction, life satisfaction, and happiness. *J. Organ. Behav.* 26, 965–984. doi: 10.1002/job.358

Pietsch, M., Tulowitzki, P., and Koch, T. (2019). On the differential and shared effects of leadership for learning on teachers' organizational commitment and job satisfaction: A multilevel perspective. *Educ. Adm. Q.* 55, 705–741. doi: 10.1177/0013161X18806346

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). Common method biases in Behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88, 879–903. doi: 10.1037/0021-9010.88.5.879

Quoidbach, J., Mikolajczak, M., and Gross, J. J. (2015). Positive interventions: An emotion regulation perspective. *Psychol. Bull.* 141, 655–693. doi: 10.1037/a0038648

Reb, J., Narayanan, J., and Chaturvedi, S. (2014). Leading mindfully: two studies on the influence of supervisor trait mindfulness on employee well-being and performance. *Mindfulness* 5, 36–45. doi: 10.1007/s12671-012-0144-z

Reeve, J., Bolt, E., and Cai, Y. (1999). Autonomy-supportive teachers: how they teach and motivate students. *J. Educ. Psychol.* 91, 537–548. doi: 10.1037/0022-0663.91.3.537

Roemer, L., and Orsillo, S. M. (2003). Mindfulness: A promising intervention strategy in need of further study. *Clin. Psychol. Sci. Pract.* 10, 172–178. doi: 10.1093/clipsy.bpg020

Rosenhan, D. L., Underwood, B., and Moore, B. (1974). Affect moderates self-gratification and altruism. *J. Pers. Soc. Psychol.* 30, 546–552. doi: 10.1037/h0037038

Ryan, R. M., and Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am. Psychol.* 55, 68–78. doi: 10.1037/0003-066X.55.1.68

Sapmaz, F., Doğan, T., Sapmaz, S., Temizel, S., and Tel, F. D. (2012). Examining predictive role of psychological need satisfaction on happiness in terms of self-determination theory. *Procedia-Soc. Behav. Sci.* 55, 861–868. doi: 10.1016/j.sbspro.2012.09.573

Scherer, K. R. (2000). "Psychological models of emotion" in *The Neuropsychology of Emotion*. ed. J. C. Borod (United Kingdom: Oxford University Press), 137–162.

Schultz, P. P., Ryan, R. M., Niemiec, C. P., Legate, N., and Williams, G. C. (2015). Mindfulness, work climate, and psychological need satisfaction in employee well-being. *Mindfulness* 6, 971–985. doi: 10.1007/s12671-014-0338-7

Schussler, D. L., Jennings, P. A., Sharp, J. E., and Frank, J. L. (2016). Improving teacher awareness and well-being Through CARE: a qualitative analysis of the underlying mechanisms. *Mindfulness* 7, 130–142. doi: 10.1007/s12671-015-0422-7

Scott Rigby, C., Schultz, P. P., and Ryan, R. M. (2014). "Mindfulness, interest-taking, and self-regulation: A self-determination theory perspective on the role of awareness in optimal functioning" in *The Wiley Blackwell Handbook of Mindfulness*. eds. C. T. Ngnoumen and E. J. Langer (United States: Wiley Blackwell), 216–235.

Sergiovanni, T. (1967). Factors which affect satisfaction and dissatisfaction of teachers. *J. Educ. Adm.* 5, 66–82. doi: 10.1108/eb009610

Skaalvik, E. M., and Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teach. Teach. Educ.* 26, 1059–1069. doi: 10.1016/j.tate.2009.11.001

Skaalvik, E. M., and Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: relations with school context, feeling of belonging, and emotional exhaustion. *Teach. Teach. Educ.* 27, 1029–1038. doi: 10.1016/j.tate.2011.04.001

Skinner, E., and Beers, J. (2016). "Mindfulness and teachers' coping in the classroom: A developmental model of teacher stress, coping, and everyday resilience" in *Handbook of Mindfulness in Education: Integrating Theory and Research into Practice*. eds. K. A. Schonert-Reichl and R. W. Roeser (United States: Springer-Verlag Publishing), 99–118.

Smith, T. M., and Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *Am. Educ. Res. J.* 41, 681–714. doi: 10.3102/00028312041003681

Soetan, M. K., and Oyetayo, M. O. (2019). Personality, work characteristics and job stress among teachers. *J. Emerg. Trends Educ. Res. Policy Stud.* 10, 10–17.

Sroufe, L. A., Schork, E., Motrl, F., Lawroski, N., and Lafre-Niere, P. (1985). "The Role of Affect in Social Competence," in *Emotions, cognition and behavior*; March 1, 1985.

Staw, B. M., Bell, N. E., and Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Adm. Sci. Q.* 31:56. doi: 10.2307/2392766

Staw, B. M., and Ross, J. (1985). Stability in the midst of change. A dispositional approach to job attitudes. *J. Appl. Psychol.* 70, 469–480. doi: 10.1037/0021-9010.70.3.469

Sutton, R. E., and Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educ. Psychol. Rev.* 15, 327–358. doi: 10.1023/A:1026131715856

Tarrasch, R., Berger, R., and Grossman, D. (2020). Mindfulness and compassion as key factors in improving teacher's well being. *Mindfulness* 11, 1049–1061. doi: 10.1007/s12671-020-01304-x

Taylor, S. E., and Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychol. Bull.* 103, 193–210. doi: 10.1037/0033-2909.103.2.193

Terzic-Supic, Z., Piperac, P., Maksimovic, A., Karic, S., Hacko, B., and Todorovic, J. (2020). Burnout among preschool teachers in Serbia. *Eur. J. Pub. Health* 30:6805. doi: 10.1093/eurpub/ckaa166.1051

Tian, L., Pi, L., Huebner, E. S., and Du, M. (2016). Gratitude and adolescents' subjective well-being in school: The multiple mediating roles of basic psychological needs satisfaction at school. *Front. Psychol.* 7:1409. doi: 10.3389/fpsyg.2016.01409

Todorova, G., Bear, J. B., and Weingart, L. R. (2014). Can conflict be energizing? A study of task conflict, positive emotions, and job satisfaction. *J. Appl. Psychol.* 99, 451–467. doi: 10.1037/a0035134

Tong, E. M. W., Bishop, G. D., Enkelmann, H. C., Diong, S. M., Why, Y. P., Khader, M., et al. (2009). Emotion and appraisal profiles of the needs for competence and relatedness. *Basic Appl. Soc. Psych.* 31, 218–225. doi: 10.1080/01973530903058326

Tsui, A. S., Ashford, S. J., Clair, L. S. T., and Xin, K. R. (1995). Dealing with discrepant expectations: response strategies and managerial effectiveness. *Acad. Manag. J.* 38, 1515–1543. doi: 10.5465/256842

Unanue, W., Gómez, M. E., Cortez, D., Oyanedel, J. C., and Mendiburo-Seguel, A. (2017). Revisiting the link between job satisfaction and life satisfaction: The role of basic psychological needs. *Front. Psychol.* 8:680. doi: 10.3389/fpsyg.2017.00680

Van Den Broeck, A., Vansteenkiste, M., De Witte, H., and Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work Stress.* 22, 277–294. doi: 10.1080/02678370802393672

Vinothkumar, M., Arathi, A., Joseph, M., Nayana, P., Jishma, E. J., and Sahana, U. (2016). Coping, perceived stress, and job satisfaction among medical interns: The mediating effect of mindfulness. *Ind. Psychiatry J.* 25, 195–201. doi: 10.4103/ipj.ipj_98_14

Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N., and Schmidt, S. (2006). Measuring mindfulness-the Freiburg mindfulness inventory (FMI). *Pers. Individ. Dif.* 40, 1543–1555. doi: 10.1016/j.paid.2005.11.025

Wallace, B. A. (1999). The Buddhist tradition of Samatha: methods for refining and examining consciousness. *J. Conscious. Stud.* 6, 175–187.

Watson, D., Clark, L. A., and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *J. Pers. Soc. Psychol.* 54, 1063–1070. doi: 10.1037/0022-3514.54.6.1063

Weick, K. E., and Sutcliffe, K. M. (2006). Mindfulness and the quality of organizational attention. *Organ. Sci.* 17, 514–524. doi: 10.1287/orsc.1060.0196

Weick, K. E., Sutcliffe, K. M., and Obstfeld, D. (1999). *Organizing for High Reliability: Processes of Collective Mindfulness, Research in Organizational Behaviour*. New York: Elsevier.

Weiner, B. (2000). Intrapersonal and interpersonal theories of motivation from an attributional perspective. *Educ. Psychol. Rev.* 12, 17–30. doi: 10.1023/A:1009017532121

Weinstein, N., Brown, K. W., and Ryan, R. M. (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. *J. Res. Pers.* 43, 374–385. doi: 10.1016/j.jrp.2008.12.008

Weiss, H. M. (2002). Deconstructing job satisfaction. Separating evaluations, beliefs and affective experiences. *Hum. Resour. Manag. Rev.* 12, 173–194. doi: 10.1016/S1053-4822(02)00045-1

Weiss, H. M., and Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work; January, 1996.

Wells, M. B. (2015). Predicting preschool teacher retention and turnover in newly hired head start teachers across the first half of the school year. *Early Child Res. Q.* 30, 152–159. doi: 10.1016/j.ecresq.2014.10.003

Wichers, M., Kenis, G., Jacobs, N., Myin-Germeys, I., Schruers, K., Mengelers, R., et al. (2008). The psychology of psychiatric genetics: evidence That positive emotions in females moderate genetic sensitivity to social stress associated With the BDNF Val66Met polymorphism. *J. Abnorm. Psychol.* 117, 699–704. doi: 10.1037/a0012909

Wininger, S. R., and Birkholz, P. M. (2013). Sources of instructional feedback, job satisfaction, and basic psychological needs. *Innov. High. Educ.* 38, 159–170. doi: 10.1007/s10755-012-9229-9

Wolgast, M., Lundh, L. G., and Viborg, G. (2011). Cognitive reappraisal and acceptance: An experimental comparison of two emotion regulation strategies. *Behav. Res. Ther.* 49, 858–866. doi: 10.1016/j.brat.2011.09.011

Zeidan, F., Emerson, N. M., Farris, S. R., Ray, J. N., Jung, Y., McHaffie, J. G., et al. (2015). Mindfulness meditation-based pain relief employs different neural mechanisms than placebo and sham mindfulness meditation-induced analgesia. *J. Neurosci.* 35, 15307–15325. doi: 10.1523/JNEUROSCI.2542-15.2015

Zembylas, M., and Papanastasiou, E. (2004). Job satisfaction among school teachers in Cyprus. *J. Educ. Adm.* 42, 357–374. doi: 10.1108/09578230410534676

Ziegler, R., Schlett, C., Casel, K., and Diehl, M. (2012). The role of job satisfaction, job ambivalence, and emotions at work in predicting organizational citizenship behavior. *J. Pers. Psychol.* 11, 176–190. doi: 10.1027/1866-5888/a000071

Zinsser, K. M., Bailey, C. S., Curby, T. W., Denham, S. A., and Bassett, H. H. (2013). Exploring the predictable classroom: preschool teacher stress, emotional supportiveness, and students' social-emotional behavior in private and head start classrooms. *Dialog* 16:2

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 22 December 2021
doi: 10.3389/fpsyg.2021.796669

The Negative Effect of Job Insecurity in the Virtuous Cycle Between Trust in the Organization, Subjective Well-Being, and Task Performance in the Current Volatility, Uncertainty, Complexity, and Ambiguity Context

Živilė Stankevičiūtė[1], M. Isabel Sanchez-Hernandez[2] and Eglė Staniškienė[1]*

[1]Sustainable Management Research Group, School of Economics and Business, Kaunas University of Technology, Kaunas, Lithuania, [2]School of Economics and Business Administration, University of Extremadura, Badajoz, Spain

OPEN ACCESS

Edited by:
Włodzimierz Sroka, University of Dąbrowa Górnicza, Poland

Reviewed by:
Oscar López-de-Foronda, University of Burgos, Spain
Pedro Antonio Martín-Cervantes, University of Almeria, Spain
Regina Zsuzsánna Reicher, Óbuda University, Hungary

***Correspondence:**
Živilė Stankevičiūtė
zivile.stankeviciute@ktu.lt

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *17 October 2021*
Accepted: *29 November 2021*
Published: *22 December 2021*

Citation:
Stankevičiūtė Ž, Sanchez-Hernandez MI and Staniškienė E (2021) The Negative Effect of Job Insecurity in the Virtuous Cycle Between Trust in the Organization, Subjective Well-Being, and Task Performance in the Current Volatility, Uncertainty, Complexity, and Ambiguity Context. Front. Psychol. 12:796669. doi: 10.3389/fpsyg.2021.796669

Over the past decade, job insecurity referring to the employees' perceived threat to the continuity and stability of employment as it is currently experienced has become a hot topic. A general assumption, supported by the findings, is that job insecurity causes far-reaching negative consequences for the employee health and well-being, attitudes toward organization and the job, and behaviors at work. However, the focus on behavioral outcomes, especially on employee performance at work, is still scant. Moreover, the literature remains fragmented concerning the impact of job insecurity on employee trust in the organization and how the trust influences employee subjective well-being (SWB), which in turn affects employee performance. Consequently, the link between job insecurity and SWB needs more investigation. Trying to narrow the gap, the paper aims at revealing the linkage between job insecurity, trust in the organization, SWB, and task performance. Quantitative data were collected in Lithuania. As predicted, the results revealed that job insecurity had a negative impact on trust in the organization and employee SWB. In case of linkage between job insecurity and task performance, the hypothesis was rejected. In general, these findings affirmed that job insecurity was a hindrance stressor, which needed to be considered when managing human resources in the current volatility, uncertainty, complexity, and ambiguity context.

Keywords: job insecurity, trust in the organization, subjective well-being, employee performance, task performance, VUCA

INTRODUCTION

For a couple of centuries, work has become a subject of transformations (Sverke and Hellgren, 2002), especially recently referring to volatility, uncertainty, complexity, and ambiguity (VUCA), context (Baran and Woznyj, 2020). Rapid technological advancement coupled with the general ambition within organizations to save costs and increase effectiveness (Flecker et al., 2017; Lee

et al., 2018; Sverke et al., 2019) causes employees' feelings of insecurity about the nature and future existence of their job (Sverke and Hellgren, 2002). In contemporary organizational settings and societies, job insecurity, in terms of quantitative job insecurity (threats to the continuation or loss of the job itself), and in terms of qualitative job insecurity (threats to the continued existence of valued aspects of the job; De Witte, 2005), is considered as an important job stressor, leading to significant negative consequences for employees (Vander Elst et al., 2014a; Lee et al., 2018). While the previous studies have provided evidence of detrimental effects of job insecurity on work-related attitudes and health and well-being outcomes, and behavioral outcomes (Sverke et al., 2019), some gaps remain nonetheless.

First, assuming the existence and the relevance of the two types of job insecurity, quantitative job insecurity still receives considerable attention compared to qualitative (Vander Elst et al., 2014b). Trying to narrow the gap and treating job insecurity as a complex phenomenon, the current paper treats job insecurity as a second-order construct, which consist of both types of insecurity.

Second, referring to outcomes of job insecurity, the paper responds to the previous calls in the literature to narrow the gap and to investigate how job insecurity is related to trust in the organization (Kim, 2019), subjective well-being (SWB; Hu et al., 2021), and task performance (Sverke et al., 2019). Given that trust in the organization is at the heart of employment relations (Guest, 2004), task performance encompasses the quantity and the quality of work (Sverke et al., 2019), and the SWB reflects the person's feelings about life as measured by their own standards (Diener and Ryan, 2009), the relationship between job insecurity and the mentioned outcomes becomes highly relevant in the VUCA world (Millar et al., 2018).

Finally, empirical evidence regarding the linkage between trust in the organization and SWB (Oliveira et al., 2020) and between SWB and task performance (Peiró et al., 2019) is scant. They do not provide an explicit message about the nature of the relationship and due to this require further investigation.

Considering the gaps illustrated above, the aim of the paper is to reveal the linkage between job insecurity, trust in the organization, SWB, and task performance in the VUCA context. In doing this, the paper seeks to answer the following: (a) Will job insecurity impact trust in the organization, SWB, and task performance? (b) Will trust in the organization impact SWB and accordingly will SWB impact task performance? In order to answer these questions, this paper analyzes data of employees' perceptions from a survey carried out in Lithuania.

The current paper is supposed to make three main contributions to the existing body of knowledge. First, the paper intends to enrich the job insecurity literature by identifying how it affects employee behavior in terms of task performance, work-related attitudes in terms of trust in the organization, and well-being in terms of SWB. Second, given that the previous literature differentiates quantitative and qualitative job insecurity (De Witte, 2005), the intention is to provide the support for the idea that the job insecurity construct has two dimensions. Third, the paper deals with the virtuous cycle between trust in the organization, SWB, and task performance and captures the expected negative effect caused by job insecurity in it. As such, the complexity of relationships between job insecurity and its outcomes is revealed.

The remainder of the paper is structured as follows. The theoretical part describes four constructs, namely job insecurity, trust in an organization, SWB, and task performance. Later, the hypotheses are developed. Then, the research method applied is described. The empirical results and discussion come next. Finally, conclusions are drawn.

THEORETICAL BACKGROUND AND HYPOTHESES

Job Insecurity

As a result of the changing nature of the relationship between employee and organization (Piccoli and De Witte, 2015), job insecurity has become a "sizeable social phenomenon" (De Witte, 2005) referring to employees feeling that their jobs are at risk (Reisel, 2003; Vander Elst et al., 2014a; Probst et al., 2017, 2019). In our VUCA times, and more than never in the context of the COVID-19 pandemic, job insecurity presents a management challenge (Murugan et al., 2020).

Job insecurity has been defined in various ways in the literature. One of the earliest and most-quoted definitions was provided by Greenhalgh and Rosenblatt (1984, p. 438), claiming that job insecurity was "the perceived powerlessness to maintain desired continuity in a threatened job situation." Another commonly quoted definition was proposed by De Witte (2005, p. 1), arguing that job insecurity was "the perceived threat of job loss and the worries related to that threat." Nonetheless, the diversity in definitions—for the overview of definitions, see Shoss (2017)—allows to point out several characteristics of the construct included in all or some definitions. First, job insecurity is a subjective experience, resulting from an individual's perception and interpretation of the actual work situation implying that the same objective situation may be interpreted in various ways by different employees (De Witte et al., 2015). Thus, the following situation is possible: Some employees may feel secure about their jobs, even though they will be laid off soon afterward, whereas others may feel insecure although their job continuity is ("objectively speaking") not in danger (De Witte, 2005). Second, job insecurity is a future-focused phenomenon (Vander Elst et al., 2014a). Job insecurity reflects a forecast about a loss event, which might happen 1 day in the nearest or further future (Shoss, 2017). Thus, employees are "groping in the dark" as far as their future within the particular organization is concerned (De Witte, 2005). Third, job insecurity hints at involuntary nature (Sverke and Hellgren, 2002) as the construct reflects "discrepancy between what people wish for (certainty about the future of their current employment) and what people 'get' (the perception that the current job is threatened)" (De Witte et al., 2015, p. 110). Fourth, job insecurity implies uncertainty about the future: The employee does not know whether they will keep or lose the current job (De Witte et al., 2015). Finally, a feeling of powerlessness is also a part of numerous job insecurity definitions (De Witte, 2005).

The overview of definitions (Shoss, 2017) also allows for distinguishing different types of job insecurity, namely quantitative and qualitative. Quantitative job insecurity denotes the fear of losing the job as such (Vander Elst et al., 2014a). Employees are uncertain about whether they will be able to keep their current jobs or will become unemployed (De Witte, 2005). Thus, quantitative job insecurity implies the worries about losing one's job altogether (Hu et al., 2021). Meanwhile, qualitative job insecurity refers to employees' perceived threat to valued job features (Vander Elst et al., 2014a). Thus, employees are not so much afraid of being fired, but rather fear the impairment of valued job features, such as career possibilities, development of competencies, or salary (Hu et al., 2021).

Task Performance

Being a central construct in Industrial/Organisational Psychology, employee performance refers to "actions, behaviour and outcomes that employees engage in or bring out that are linked with and contribute to organizational goals" (Viswesvaran and Ones, 2000, p. 216). In other words, employee performance defines whether the behavior of employees matches the goals of the particular organization and whether it can achieve the desired results of that organization (Gong et al., 2019). Actually, employee performance is an umbrella term, which includes several distinct types or dimensions of performance behavior (Sverke et al., 2019). This paper limits its focus only to one dimension, namely task performance.

In Work Psychology literature, task performance is defined as the effectiveness with which job incumbents perform activities that contribute to the organization's technical core either directly by implementing a part of its technological process, or indirectly by providing it with the necessary materials or services (Borman and Motowidlo, 1993, 1997). Similarly, Van Scotter (2000, pp. 80–81) argues that employees are engaging in task performance when they "use technical skills and knowledge to produce goods or services through the organization's core technical processes, or when they accomplish specialized tasks that support these core functions." In general terms, task performance refers to the execution of the tasks assigned to the employee (Darvishmotevali and Ali, 2020) through a job description or communicated in other ways (Sverke et al., 2019). Accordingly, task performance requires more cognitive ability and is primarily facilitated through task knowledge, task skill, and task habits (Conway, 1999). In order to be proficient at task performance and to meet the expectations the organization (Darvishmotevali and Ali, 2020), employees need both, the ability to do the job and prior experience (Pradhan and Jena, 2017).

Subjective Well-Being

Well-being, understood as the essential qualities of a good society and the good life, has been a subject of consideration at least since the times of Aristotle (Diener and Suh, 1997). Despite alternative viewpoints in determining the quality of life, two conceptual approaches to well-being research now prevail in the field (Western and Tomaszewski, 2016), namely the objective and the subjective approaches. As the objective well-being is based on observable factors such as richness, tangible goods, or health (D'Acci, 2011), the SWB refers to people's own evaluations of their lives (Western and Tomaszewski, 2016) and is psychologically experienced (D'Acci, 2011). The current paper limits its focus only to SWB.

According to Diener et al. (2002, p. 63), SWB is defined as "a person's cognitive and affective evaluations of his or her life." Proctor (2014, p. 6437) claims that SWB "is the personal perception and experience of positive and negative emotional responses and global and (domain) specific cognitive evaluations of satisfaction with life." Actually, SWB is a more scientific-sounding term for what people usually mean by happiness (Diener et al., 2002; Seligman and Csikszentmihalyi, 2014). SWB is a self-reported measure of well-being and addresses the person's feelings about life in the context of their own standards (Diener and Suh, 1997; Diener and Ryan, 2009). Accordingly, the evaluations can be either formulated in terms of cognitive reflections or in terms of affect (Diener and Suh, 1997). The cognitive aspect of SWB refers to what people think about their life satisfaction in general (life as a whole) and also in a certain area of life, such as work or relationships. Meanwhile, the affective aspect of SWB implies the individual's feeling, emotion, and mood. The affect can be positive when things seem to be going well or negative when people experience a decline in the course of things (Diener et al., 2017). Positive affect encompasses both momentary emotions (for instance, enjoyment), and more chronic long-term moods (for instance contentment). In the case of negative affect, the situation is similar, with negative affect including anger, sadness, worry, or stress as momentary emotions, and longer-lasting moods such as depression that might occur over time (Diener et al., 2017).

Trust in the Organization

Following the notion that trust is a key "aspect of relationships" (Gullett et al., 2009), trust is usually defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" (Rousseau et al., 1998, p. 395). To elaborate this idea, there are two conditions that must exist for trust to arise, namely risk and interdependence. Risk is the perceived probability of loss, as interpreted by the trusting party, while interdependence implies that one party's interests cannot be fulfilled without reliance on the other party (Rousseau et al., 1998).

Within an organizational setting, trust can be manifested in reference to individuals (for example, trust in one's supervisor or colleague), specific groups (for example, trust in top-level managers or team), or the organization as a whole (Schoorman et al., 2007). The current paper considers employees' trust in the employing organization as a whole (Verburg et al., 2018; Guzzo et al., 2021). Accordingly, trust in an organization refers to the individual's expectation that some organized system will act with predictability and goodwill (Maguire and Phillips, 2008).

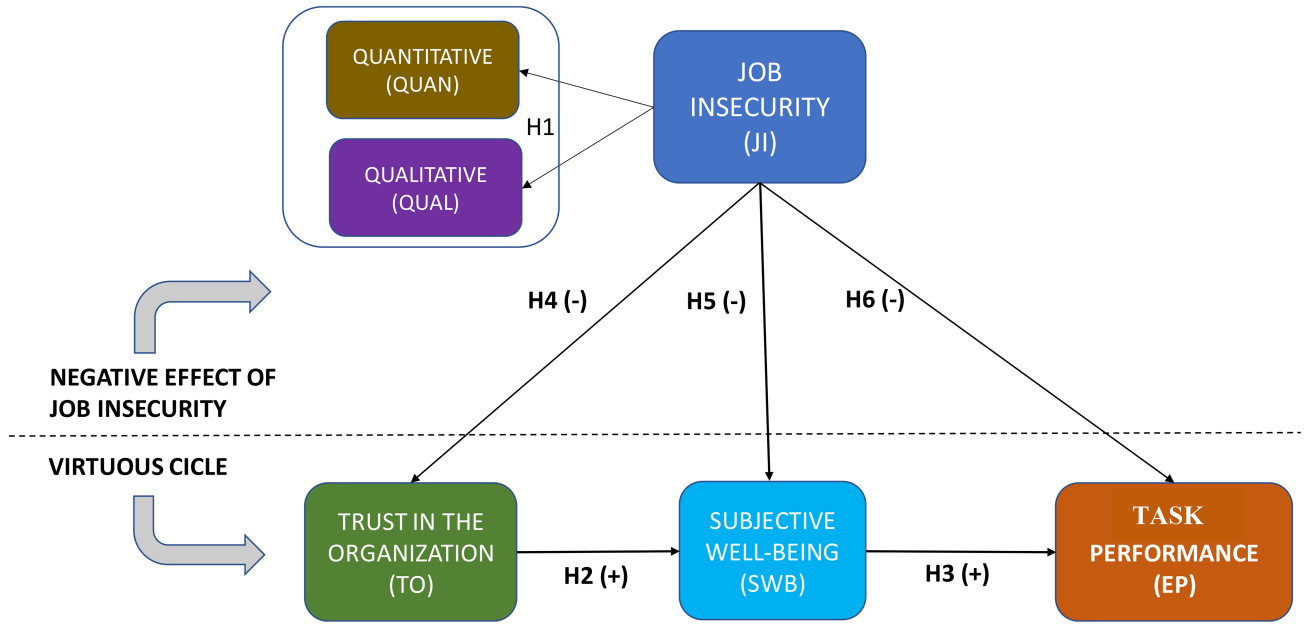

FIGURE 1 | The theoretical model.

Hypotheses Development

The main theoretical model shown in **Figure 1** represents, on the one hand, a virtuous cycle between trust in the organization, SWB, and employee performance. On the other hand, the model captures the expected negative effect caused by job insecurity (considering the quantitative and the qualitative dimensions) in this virtuous cycle. Below the hypothesis is grounded.

Quantitative and Qualitative Job Insecurity (H1)

The current research follows the view of Shoss (2017, p. 1914), treating job insecurity as "a perceived threat to the continuity and stability of employment as it is currently experienced" while capturing both quantitative and qualitative types of job insecurity. Consequently, the first hypothesis is posited.

> *H1*: Job insecurity has two dimensions, one quantitative and other qualitative.

Linkage Between Trust in an Organization and Subjective Well-Being (H2)

Trust in the organization implies a healthy employee–employer relationship (Guest, 2004; Richter and Näswall, 2019). When trusting an organization, employees have the confidence that employer will not exploit the employees' vulnerabilities (Holland et al., 2017). With respect to this, it could be predicted that trust in an organization serves as an antecedent of SWB, referring to people's cognitive and affective evaluations of their lives. Such prediction is supported by several previous empirical studies. For instance, Oliveira et al. (2020) found that trust in an organization positively correlated with SWB. Based on the above, the current paper hypothesizes the following.

> *H2*: Trust in organizations is direct and positively related to SWB

Linkage Between SWB and Task Performance (H3)

According to the "happy worker–productive worker" thesis, happy employees perform better than less happy ones (Cropanzano and Wright, 2001). In this sense, the paper argues that employees with high levels of SWB will exhibit higher levels of task performance. Such proposition is supported by some previous empirical findings. For instance, Peiró et al. (2019) found that employees with high levels of happiness were more productive than those with a low level of happiness. Fogaça and Junior (2016) indicated that well-being at work, including positive effect, and job satisfaction were positively associated with individual job performance. The study of Zelenski et al. (2008) provided significant support for the "happy worker-productive worker" thesis demonstrating that happy people achieved a higher level of productivity at both the state and trait levels of analysis. More recently, Lee et al. (2021) revealed that SWB was positively and significantly related to job performance.

Moreover, when exploring the link between SWB and task performance, it is worthwhile to address two notions. As stated by Zelenski et al. (2008, p. 523), "across the various tasks typically required of employees, happiness will, on balance,

likely benefit overall productivity." Additionally, Lee et al. (2021, p. 4) argue that "the positive psychology of SWB gives employees a sense of security, makes them settle down in the job" and accordingly improves task performance.

Consequently, based on theoretical reasoning and prevailing findings from previous studies, the current paper hypothesizes the following:

H3: SWB is directly and positively related to task performance

Linkage Between Job Insecurity and Trust in an Organization (H4)

Drawing upon the previous literature, it seems that psychological contract theory (Rousseau, 1995) is one of the main theoretical approaches used to explain the relationship between job insecurity and trust in an organization (Richter and Näswall, 2019). Psychological contract refers to the set of explicitly or implicitly given promises including duties and entitlements between the employer and employee, as perceived by the employee (Conway and Briner, 2005). In most countries, including Lithuania, psychological contract is likely to include job security (De Cuyper and De Witte, 2007). In this sense, employees expect that when their endeavors benefit the organization, the organization will in turn reciprocate by offering them rewards in terms of job security (Piccoli and De Witte, 2015). Meanwhile, employees may perceive job insecurity as a breach of the psychological contract (Schreurs et al., 2012). In turn, the breach results in an impairment of the employee–employer relationship, which can manifest as a loss of trust in the organization (Conway et al., 2011).

Supporting this reasoning, various studies found that insecure employees no longer believed that the employer would deliver on its implied obligations and trusted their organizations less (Richter and Näswall, 2019). For instance, the meta-analysis of Cheng and Chan (2008) revealed the negative effect of job insecurity on trust. More recently, Kim (2019) provided findings that job insecurity lowered organizational trust.

Based on the theoretical arguments and research findings presented, the current paper hypothesizes the following.

H4: Job insecurity is directly and negatively related to trust in organizations

Linkage Between Job Insecurity and SWB (H5)

The current paper employs the conservation of resources (COR) theory (Hobfoll, 1989) to address the relationship between job insecurity and SWB. According to the COR theory, resources are defined as "those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies" (Hobfoll, 1989, p. 516). Following this theoretical view, employees strive to retain, gain, and protect their resources (Hu et al., 2021). Meanwhile, job insecurity implies the possibility of losing resources, for instance, lower career possibilities in case of qualitative job insecurity or loss of work position in case of quantitative job insecurity. As such, employees who feel insecure about their jobs will experience lower levels of SWB, because they are faced with the possible loss of important employment-related resources (Hu et al., 2021).

Turning to empirical findings, previous studies have shown that job insecurity correlates with a lower score on various indicators of job-related well-being (Vander Elst et al., 2012; Darvishmotevali and Ali, 2020). More precisely, Stiglbauer and Batinic (2015) pointed out the detrimental effects of job insecurity for an employee's SWB as job insecurity was associated with lower happiness and higher depression. More recently, similar results were found by Hu et al. (2021), while addressing only qualitative job insecurity, SWB was negatively affected by qualitative job insecurity.

Building upon the theoretical arguments and research results presented, the current paper hypothesizes as follows.

H5: Job insecurity is directly and negatively related to SWB

Linkage Between Job Insecurity and Task Performance (H6)

As task performance is a key area for managers, gaining a complex understanding of the nature of the relationship between job insecurity and task performance may have far reaching practical implications for organizational sustainability (Piccoli et al., 2021). However, the previous research has demonstrated conflicting findings on the link between the two constructs (Shin et al., 2019; Sverke et al., 2019) as the majority of studies have found job insecurity to be negatively related to general and task performance (Schreurs et al., 2012; Vander Elst et al., 2014a; Roll et al., 2015); this notwithstanding, there are some studies that have found non-significant (Selenko et al., 2017) or even positive associations (Probst et al., 2007). These mixed findings call for the further investigation while referring to the psychological mechanisms, which serve for explaining why job insecurity may lead to particular consequences. In doing this, the current paper relies on the stress theory, more precisely on the hindrance dimension of two-dimensional stressor model (Piccoli et al., 2021). Unquestionably, in contemporary working life, job insecurity is considered as an important stressor (Vander Elst et al., 2014a). Following the mentioned model, any stressor reflects two basic dimensions, hindrance ("bad" stress) and challenge ("good stress"; Lepine et al., 2005). Despite this, the latest empirical studies (for instance, Piccoli et al., 2021) found support only for the negative job insecurity impact on performance. These findings strengthen the proposition of this paper that job insecurity undermines task performance acting as a hindrance stressor. As stated

by Cavanaugh et al. (1998, p. 8), hindrance stressor refers "to work related demands or circumstances that tend to constrain or interfere with an individual's work achievement, and that do not tend to be associated with potential gains for the individual." In other words, job insecurity causes strain reactions (Lepine et al., 2005; Piccoli et al., 2021) and one way to emotionally cope with such a stressor is to behaviorally withdraw from the situation (Staufenbiel and König, 2010). Reduced task performance serves as a perfect example of such behavioral withdrawal (Staufenbiel and König, 2010).

Thus, based on theoretical reasoning and prevailing findings from primary studies and meta-analyses, the current paper hypothesizes the following:

H6: Job insecurity is directly and negatively related to task performance.

METHODOLOGY

Method

Partial least squares (PLS), a technique of structural equation modeling (SEM), can provide much value for causal inquiry in the Organisational Psychology field (Ringle et al., 2020). Following the procedure of Hair et al. (2019), this paper will report the results of an empirical study using PLS-SEM to validate a reflective structural model derived from the theoretical model previously developed here.

The PLS-SEM method will enable to estimate the model, with many constructs, indicators, and structural paths, without imposing the distributional normality on the data. In addition, PLS-SEM is considered a causal-predictive method (Sarstedt et al., 2017) that is very suitable for our purposes.

Sample and Data Collection

Given the objective of the research, data were collected by using a convenience sampling type from employees in Lithuania. Convenience sampling is a type of non-probability sampling where members of the target population that meet certain practical criteria, such as availability at a given time, easy accessibility, geographical proximity, or the willingness to participate are included for the purpose of the study (Etikan et al., 2016).

For the survey, the online questionnaire was created. The questionnaire was distributed *via* LinkedIn, Facebook, Twitter, and Instagram. Due to the way of questionnaire dissemination, it is impossible to estimate the number of persons the questionnaire was sent to and the response rate. While distributing the questionnaire, the information about the purpose of the survey and a link to a survey were enclosed. Data collection took place during the COVID-19 lockdown period, in April and May 2020 (approx. 1 month). Such length of the period for data selection was chosen due to several reasons. First, as the study has been developed in a context characterized by VUCA, the period of approximately 1 month seems adequate as in VUCA context, and changes are continuous. Second, during the mentioned period, rules regarding lockdown have not been modified. Third, as usually 80% of responses are collected within 7 days (SurveyMonkey INC.),[1] there was no advantage in keeping the survey open for a longer period. At the end of the research, 211 questionnaires were collected. The profile of respondents is presented in **Table 1**. Turning to demographical characteristics of the respondents, 163 of them were women (77.3%). Only 55 respondents (26.1%) held a managerial position. One hundred and six respondents were born in 1981–2001, and 88 respondents were born in 1965–1980.

TABLE 1 | The respondents' profile.

Characteristics	Frequency (*n*)	Percentage (%)
Gender		
Female	163	77.3
Male	46	21.8
Other	2	0.9
Year of birth		
Born in 2002 and later	4	1.9
Born in 1981–2001	106	50.2
Born in 1965–1980	88	41.7
Born in 1946–1964	13	6.2
Work experience within the current organization		
Up to 1 year	32	15.2
From 1 to 3 years	59	28.0
From 3 to 5 years	28	13.3
From 5 to 10 years	25	11.8
From 10 to 20 years	45	21.3
More than 20 years	22	10.4
Position within the current organization		
Managerial	55	26.1
Non-managerial	156	73.9

Instrument

A self-reported questionnaire with questions to be answered on a five-point Likert scale was used in the study where 1 indicated "strongly disagree," and 5 indicated "strongly agree." All items were translated into Lithuanian language using a back translation procedure (Brislin, 1970), ensuring translation accuracy.

Measures

Job insecurity was measured as a higher-order construct, which consists of two dimensions. First, quantitative job insecurity was measured using a four-item scale developed by De Witte (2000). Sample items are: "I feel insecure about the future of my job" and "I am sure I can keep my job" (reverse-coded). Second, qualitative job insecurity was measured using a four-item scale developed by Hellgren et al. (1999). Sample item is: "My pay development in this organisation is promising" (reverse-coded).

[1]www.surveymonkey.com

Trust in the organization was measured using seven items provided by Robinson (1996). Sample items are: "In general, I believe my employer's motives and intentions are good" and "My employer is open and up-front with me." The model also examined the SWB by using a five-item scale of Diener et al. (1985). A sample item is: "In most ways my life is close to my ideal." Finally, task performance was measured using a four-item scale developed by Verburg et al. (2018). Sample item is "I fulfill the responsibilities specified in job description."

RESULTS

The first step to assess the measurement model consists of examining the indicator loadings for verifying item reliability. Loadings above 0.7 are recommended, as they indicate that the construct explains more than 50 per cent of the indicator's variance. Only two rounds were necessary to depurate indicators, one from trust in the organization and other from SWB.

The second step deals with assessing internal consistency reliability. In the model, composite reliability values are between 0.70 and 0.90, indicating from satisfactory to good, and any value is higher than 0.95, indicating that any indicator is redundant (Diamantopoulos and Winklhofer, 2001). Cronbach's alpha, that is the classical measure of internal consistency reliability, and the alternative rho_A (Dijkstra and Henseler, 2015), that assumes similar thresholds, have also been calculated.

The third step consists of calculating the convergent validity of each construct measure. The metric used is the average variance extracted (AVE) that has to be 0.50 or higher. That occurs in our model, indicating that the constructs explain more than 50 per cent of the variance of its respective indicators.

Table 2 shows the results from the measurement model commented above in detail.

The fourth step is to assess the extent to which the constructs in the model are empirically distinct one from other, i.e., to check the discriminant validity of each construct. For that purpose, we have calculated both, the classical Fornell–Larcker measure and the HTMT, the newest ratio developed by Henseler et al. (2015), that must be above 0.90 (**Table 3**).

Once the measurement model has been assessed, the fifth step is to assess the structural model. Before, we have verified that the model has no collinearity problems by checking the VIF value (Hair et al., 2019). All VIF values were close to 3 and above, ranging from the lower 1.44 from the indicator EP4, to the highest 2,940 from the indicator TO1.

For the purpose of assessing the structural model, we have first calculated the coefficient of determination (R^2). Second, we have calculated the blindfolding-based cross-validated redundancy measure Q^2. The R^2 for the three endogenous constructs is acceptable indicating good model's explanatory power. In the same way, the Q^2 value. As a rule of thumb, Q^2 values are higher than 0, showing the predictive relevance of the model. These results are shown in **Table 4**.

Third, and finally, we have calculated the statistical significance and relevance of the path coefficients through the bootstrapping procedure, with 5,000 resamples (**Table 5**).

DISCUSSION

The paper was intended to examine the relationship between job insecurity, trust in the organization, SWB, and task performance. More specifically, treating job insecurity as a hindrance stressor, the paper claims for a negative association between job insecurity and the mentioned outcomes. In doing this, the paper echoes the call in the previous literature to focus on employee well-being, attitudinal outcomes, and performance as the three major outcomes of job insecurity

TABLE 2 | Convergent validity and internal consistency reliability.

Construct	Item	Convergent validity		Internal consistency reliability		
		Loadings >0.70	AVE >0.50	Composite reliability >0.70	Reliability (rho_A) >0.70	Cronbach's Alfa 0.65–0.95
JI	QUAN	0.902	0.786	0.880	0.738	0.729
	QUAL	0.871				
TO	TO1	0.870				
	TO2	0.836	0.662	0.921	0.905	0.897
	TO4	0.847				
	TO5	0.714				
	TO6	0.826				
	TO7	0.781				
SWB	SWB1	0.764	0.656	0.884	0.835	0.824
	SWB2	0.870				
	SWB3	0.855				
	SWB4	0.744				
EP	EP1	0.739	0.600	0.857	0.781	0.777
	EP2	0.813				
	EP3	0.811				
	EP4	0.733				

TABLE 3 | Discriminant validity.

Constructs	Fornell–Larcker criterion				Heterotrait–Monotrait ratio			
	JI	TO	SWB	EP	JI	TO	SWB	OT
JI	0.88							
TO	–0.60	0.81			0.74			
SWB	–0.46	0.49	0.81		0.58	0.56		
EP	–0.30	0.37	0.43	0.77	0.40	0.43	0.53	

TABLE 4 | Assessment criteria R^2 and Q^2 for the structural model.

Constructs	R^2	Q^2
TO	0.363	0.235
SWB	0.291	0.185
EP	0.201	0.112

(Lee et al., 2018; Shin et al., 2019) acknowledging the VUCA environment. Further, the paper addresses the relationship between constructs in the virtuous cycle. More specifically, the paper analyzes how trust in the organization, SWB, and task performance are related. Turning to the methodological part, the reflective measurement model tested has provided acceptable item reliability that has been verified in all constructs, including job insecurity, confirming its dimensions. Consequently, H1 has been verified. The convergent and the discriminant validity of all constructs in the model have also been verified. Turning to the structural model, the statistical significance and relevance of the path coefficients have been verified for H2, H3, H4, and H5, with H6 as the only rejected hypothesis. Further, the theoretical and practical implications of the findings are discussed.

Theoretical Implications

First, the previous literature distinguishes between considered quantitative and qualitative job insecurity (Lee et al., 2018). However, the paper provides support that job insecurity is multidimensional construct, confirming its two dimensions.

Second, as job insecurity is a subjective experience (Vander Elst et al., 2014a), employees may experience varying degrees of uncertainty, even if they are objectively under the same working conditions (Lepine et al., 2005). As such, job insecurity may trigger contradicting reactions. This notwithstanding, the growing body of the literature considers job insecurity as a relevant job stressor, which has a detrimental effect on employees (Lee et al., 2018).

As it was predicted, the findings revealed that job insecurity served as a determinant of lower trust in the organization. These findings are in line with some previous studies (Kim, 2019) supporting the idea that breach of the psychological contract harms the employer–employee relationships (Maguire, 2003; Rao, 2021). As trust creates a collaborative environment by giving employee a feeling of security (Dirks and Ferrin, 2001; Ertürk and Vurgun, 2015), it is particularly important in times of crisis and uncertainty (Gustafsson et al., 2021), like in the VUCA world. Hence, the current paper contributes by elaborating on the relationship between trust in the organization and overall employee concern about the continued existence of their job in the future and its valued features (De Witte, 2005).

Third, as predicted, the findings revealed that job insecurity led to lower SWB. According to the COR theory, when employees perceive a resource loss or anticipate the possibility of resource loss (perception of job insecurity), they will invest their remaining resources in proactive defense against such resource loss (Hobfoll, 1989). As such, the defense against the potential loss of job (quantitative job insecurity) or valued job features (qualitative job insecurity) might result in lower SWB. Although some previous studies have confirmed the hypothesized negative effect of job insecurity on SWB, mostly they considered quantitative job insecurity or qualitative job insecurity (Hu et al., 2021). Hence, the current paper broadens the literature treating job insecurity as a second-order construct and providing an answer to the empirical question regarding the potential negative impact of job insecurity on SWB.

Fourth, contrary to the expectations, the hypothesis regarding the negative effect of job insecurity on task performance was rejected. Previous findings were contradicted. Some studies have shown that job insecurity decreased task performance of employees (Cheng and Chan, 2008; Schreurs et al., 2012). However, other studies have shown that job insecurity was not related to performance or even have suggested that job insecurity could motivate employees to perform better in order to secure their jobs (Shin et al., 2019; Sverke et al., 2019). Accordingly, the current finding calls for further investigation and stimulates further discussion through the understanding of the relationship between job insecurity and task performance as job insecurity might serve in this relationship as a hindrance stressor or challenge stressor (Piccoli et al., 2021).

Fifth, while exploring the virtuous cycle between trust in the organization, SWB, and task performance, the findings demonstrated that trust in the organization increased SWB, whereas SWB increased task performance. Hence, the current paper broadens the literature by exploring the virtual cycle between constructs, which are important outcomes of job insecurity.

Practical Implications

In addition to the theoretical implications, the research has some managerial implications for practitioners. Following the notion that job insecurity is one of the most important stressors in work life (Vander Elst et al., 2014a) and based on the

TABLE 5 | Hypotheses testing.

Hypothesis	Path coefficient (original)	Path coefficient (sample)	St. Error	Confidence interval [2.5/97.5]%	t-statistics	Significant ($p < 0.05$; accepted or rejected)
H2: TO SWB	0.340	0.345	0.088	0.151/0.500	3.863	0.000 (accepted)
H3: SWB EP	0.369	0.375	0.074	0.214/0.502	4.974	0.000 (accepted)
H4: JI TO	−0.602	−0.606	0.045	−0.681/−0.502	13.348	0.000 (accepted)
H5: JI SWB	−0.262	−0.260	0.097	−0.447/−0.063	2.696	0.007 (accepted)
H6: JI EP	−0.136	−0.137	0.075	−0.275/0.016	1.821	0.069 (rejected)

finding that job insecurity impairs trust in the organization and task performance, organizational leaders are invited to design some strategies and take some initiatives, which are concerned with eliminating or reducing job insecurity as such. The current literature supports the initial view of De Witte (2005) that job insecurity could be eliminated or mitigated by communication (Jiang and Probst, 2014), participation in decision making (Gallie et al., 2017), and enhancement of organizational justice (Greenberg, 1990). More recently, Shin and Hur (2019) highlighted the importance of employee training aimed at increasing their confidence. Although job insecurity is inevitable in the VUCA world, several aspects that might be taken into consideration by practitioners are provided below.

First, valuable and relevant communication might serve as an energy resource (Jiang and Probst, 2014). Accordingly, open, early, and honest information increases the predictability of future work existence and its valued features (De Witte, 2005). Moreover, communication tends to show that one is respected as an employee (De Witte, 2005). Respect captures the state of being seen and valued by recognizing another person, listening, understanding, and appreciating people, attending to needs, emphasizing another's good qualities (Carmeli et al., 2015). Thus, leaders are strongly encouraged to implement a sustainable communication process where frequency, channels, structure, and content of the messages are highly important.

Second, by participating, employees have influence over decision making (Vander Elst et al., 2010) and control over situation (De Witte, 2005); therefore, job insecurity is reduced. Consulting with employees on work-related issues spreads the message among employees that their needs are important for the organization and taken into consideration (Gallie et al., 2017). Clear strategy addressing employee participation in decision making and implementation of explicit actions lead to higher situation predictability and control, which in turn mitigate job insecurity.

Third, the organizations should rethink organizational justice, which deals with the understanding of the complexity of fair treatment in a work setting (Graso et al., 2020). In fact, employees who perceive greater organizational justice will have a stronger sense of being valued by the organizations (Cropanzano et al., 2001). The sense of value tends to increase the predictability and controllability of work situations experienced by employees and accordingly lowers their job insecurity.

Fourth, the role of employee development, especially in a VUCA world (Dachner et al., 2021), is highly underestimated in the literature. The employee development referring to "the expansion of an individual's capacity to function effectively in his or her present or future job and work organization" (McCauley and Hezlett, 2001, p. 314) is supposed not only to enhance the employee competences, but also reduce job insecurity, as employee will be more confident about successful managing of changes in case of job or its valued attribute loss.

Summing up, the complex of actions with respect to open communication, employee development, involving employees in decision making, and increasing the feeling of organizational justice of the organizational actions might create a synergic effect and reduce job insecurity as such.

Limitations

This research has some shortcomings that might be addressed in future research.

The first concern is related to self-reported nature of the data regarding task performance. This may have increased the risk of common method variance (Podsakoff et al., 2003, 2012) and other response biases such as social desirability. Attempts were made to decrease the social desirability on measurements of task performance by guaranteeing the anonymity of results and emphasizing that there would be no right or wrong answers (Piccoli et al., 2021). Nonetheless, in order to avoid overrated results, other rated measures of task performance are recommended (Peiró et al., 2019).

The second concern deals with the fact that objective predictors of job insecurity were neglected in the current research. In the course of the survey, the data on organizations' industry or size, or employee income level, educational level or living place (rural or urban area) were not collected. Assuming that objective predictors matter (Keim et al., 2014), further research should consider previously mentioned relevant data.

The third concern is related to the sample size. The sample size limits the opportunity to draw generalized conclusions. The paper calls for the future studies addressing the sample which would allow for providing robust generalized conclusions.

The fourth concern refers to the sample. As a sample from one country is considered to be an appropriate practice (Shin and Hur, 2019), it would nonetheless be interesting to examine whether the job insecurity, trust in the organization, SWB, and task performance relationship in a virtuous cycle vary across countries and whether this variation depends on specific country-level characteristics.

Finally, seeing that the previous studies showed inconsistent results regarding the existing gender differences when predicting the perceived job insecurity based on objective individual and organizational variables (Menéndez-Espina et al., 2020), further studies might address the gender aspect while revealing the linkage between job insecurity, trust in the organization, SWB, and task performance in the VUCA context.

CONCLUSION

The aim of the paper was to explore the linkage between job insecurity, trust in the organization, SWB, and task performance in the VUCA context while addressing the virtuous cycle. The findings confirmed that job insecurity could be treated as a bidimensional construct capturing both qualitative and quantitative dimensions. Further, the results revealed that job insecurity reduced employee trust in the organization and their SWB, while the hypothesis regarding the detrimental impact of job insecurity on task performance was rejected. Moreover, findings in the virtuous cycle allowed for concluding that employees who trusted their organizations more felt happier and accordingly happier employees performed better while dealing with job responsibilities included in the job description. Treating job insecurity as a stressor and seeing that job insecurity is inevitable in the contemporary VUCA world, organizations are encouraged to deal with unpredictability and uncontrollability of work situations experienced by employees and thus reduce job insecurity.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

AUTHOR CONTRIBUTIONS

ŽS, M-SH, and ES conceived and designed the work, and drafted the article. ŽS and ES collected the data. M-SH analyzed and interpreted the data. ŽS critically revised the article and approved the published version. All authors contributed to the article and approved the submitted version.

ACKNOWLEDGMENTS

The authors would like to extend their sincere thanks to the participants in this study and express their appreciation to Sustainable Management Research Group of Kaunas University of Technology School of Economics and Business for their support. The authors are also grateful to the Regional Government (Junta de Extremadura) for supporting the research groups under the SEJ021 code at the University of Extremadura through the European Funds (FSE and FEDER). Last but not least, sincere thanks go to the reviewers who contributed their valuable time and effort to improve the paper's quality with much appreciated suggestions and comments.

REFERENCES

Baran, B. E., and Woznyj, H. M. (2020). Managing VUCA: the human dynamics of agility. *Organ. Dyn.* doi: 10.1016/j.orgdyn.2020.100787 [Epub ahead of print].

Borman, W. C., and Motowidlo, S. M. (1993). "Expanding the criterion domain to include elements of contextual performance," in *Personnel Selection in Organizations*. eds. N. Schmitt and W. C. Borman (San Francisco, Jossey-Bass: Psychology Faculty Publications), 71–98.

Borman, W. C., and Motowidlo, S. J. (1997). Task performance and contextual performance: the meaning for personnel selection research. *Hum. Perform.* 10, 99–109. doi: 10.1207/s15327043hup1002_3

Brislin, R. W. (1970). Back-translation for cross-cultural research. *J. Cross-Cult. Psychol.* 1, 185–216. doi: 10.1177/135910457000100301

Carmeli, A., Dutton, J. E., and Hardin, A. E. (2015). Respect as an engine for new ideas: linking respectful engagement, relational information processing and creativity among employees and teams. *Hum. Relat.* 68, 1021–1047. doi: 10.1177/0018726714550256

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., and Boudreau, J. W. (1998). "Challenge" and "hindrance" related stress among US managers. *J. Appl. Psychol.* 85, 65–74. doi: 10.1037/0021-9010.85.1.65

Cheng, G. H.-L., and Chan, D. K.-S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Appl. Psychol.* 57, 272–303. doi: 10.1111/j.1464-0597.2007.00312.x

Conway, J. M. (1999). Distinguishing contextual performance from task performance for managerial jobs. *J. Appl. Psychol.* 84:3. doi: 10.1037/0021-9010.84.1.3

Conway, N., and Briner, R. B. (2005). *Understanding Psychological Contracts at Work: A Critical Evaluation of Theory and Research*. Oxford: Oxford University Press.

Conway, N., Guest, D., and Trenberth, L. (2011). Testing the differential effects of changes in psychological contract breach and fulfillment. *J. Vocat. Behav.* 79, 267–276. doi: 10.1016/j.jvb.2011.01.003

Cropanzano, R., Rupp, D. E., Mohler, C. J., and Schminke, M. (2001). *Three Roads to Organizational Justice* Elsevier Science/JAI Press, 1–113.

Cropanzano, R., and Wright, T. A. (2001). When a "happy" worker is really a "productive" worker: a review and further refinement of the happy-productive worker thesis. *Consult. Psychol. J. Pract. Res.* 53, 182–199. doi: 10.1037/1061-4087.53.3.182

D'Acci, L. (2011). Measuring well-being and progress. *Soc. Indic. Res.* 104, 47–65. doi: 10.1007/s11205-010-9717-1

Dachner, A. M., Ellingson, J. E., Noe, R. A., and Saxton, B. M. (2021). The future of employee development. *Hum. Resour. Manag. Rev.* 31:100732. doi: 10.1016/j.hrmr.2019.100732

Darvishmotevali, M., and Ali, F. (2020). Job insecurity, subjective well-being and job performance: the moderating role of psychological capital. *Int. J. Hosp. Manag.* 87:102462. doi: 10.1016/j.ijhm.2020.102462

De Cuyper, N., and De Witte, H. (2007). Job insecurity in temporary versus permanent workers: associations with attitudes, well-being, and behaviour. *Work Stress.* 21, 65–84. doi: 10.1080/02678370701229050

De Witte, H. (2000). "Arbeidsethos en jobonzekerheid: meting en gevolgen voor welzijn, tevredenheid en inzet op het werk (Work ethic and job insecurity: assessment and consequences for well-being, satisfaction and performance at work)" in *Van groep naar gemeenschap (From Group to Community)*. eds. R. Bouwen, K. Witte, H. Witte and T. Taillieu (Leuven: Garant), 325–350.

De Witte, H. (2005). Job insecurity: review of the international literature on definitions, prevalence, antecedents and consequences. *SA J. Ind. Psychol.* 31, 1–6. doi: 10.4102/sajip.v31i4.200

De Witte, H., Vander Elst, T., and De Cuyper, N. (2015). "Job insecurity, health and well-being," in *Sustainable Working Lives*. eds. J. Vuori et al. (Dordrecht: Springer), 109–128.

Diamantopoulos, A., and Winklhofer, H. M. (2001). Index construction with formative indicators: an alternative to scale development. *J. Mark. Res.* 38, 269–277. doi: 10.1509/jmkr.38.2.269.18845

Diener, E. D., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The satisfaction with life scale. *J. Pers. Assess.* 49, 71–75. doi: 10.1207/s15327752jpa4901_13

Diener, E., Lucas, R. E., and Oishi, S. (2002). "Subjective well-being: the science of happiness and life satisfaction," in *Handbook of Positive Psychology*. eds. S. J. Lopez and C. R. Snyder (Oxford: Oxford University Press), 63–73.

Diener, E., Pressman, S. D., Hunter, J., and Delgadillo-Chase, D. (2017). If, why, and when subjective well-being influences health, and future needed research. *Appl. Psychol. Health Well Being* 9, 133–167. doi: 10.1111/aphw.12090

Diener, E., and Ryan, K. (2009). Subjective well-being: a general overview. *S. Afr. J. Psychol.* 39, 391–406. doi: 10.1177/008124630903900402

Diener, E., and Suh, E. (1997). Measuring quality of life: economic, social, and subjective indicators. *Soc. Indic. Res.* 40, 189–216. doi: 10.1023/A:1006859511756

Dijkstra, T. K., and Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Q.* 39, 297–316. doi: 10.25300/MISQ/2015/39.2.02

Dirks, K. T., and Ferrin, D. L. (2001). The role of trust in organizational settings. *Organ. Sci.* 12, 450–467. doi: 10.1287/orsc.12.4.450.10640

Ertürk, A., and Vurgun, L. (2015). Retention of IT professionals: examining the influence of empowerment, social exchange, and trust. *J. Bus. Res.* 68, 34–46. doi: 10.1016/j.jbusres.2014.05.010

Etikan, I., Musa, S. A., and Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *Am. J. Theor. Appl. Stat.* 5, 1–4. doi: 10.11648/j.ajtas.20160501.11

Flecker, J., Fibich, T., and Kraemer, K. (2017). "Socio-economic changes and the reorganization of work," in *Job Demands in a Changing World of Work*. eds. C. Korunka and K. Kubicek (Berlin/Heidelberg, Germany: Springer), 7–24.

Fogaça, N., and Junior, F. A. C. (2016). Is "happy worker" more productive. *Manage. Stud.* 4, 149–160.

Gallie, D., Felstead, A., Green, F., and Inanc, H. (2017). The hidden face of job insecurity. *Work Employ. Soc.* 31, 36–53. doi: 10.1177/0950017015624399

Gong, Z., Chen, Y., and Wang, Y. (2019). The influence of emotional intelligence on job burnout and job performance: mediating effect of psychological capital. *Front. Psychol.* 10:2707. doi: 10.3389/fpsyg.2019.02707

Graso, M., Camps, J., Strah, N., and Brebels, L. (2020). Organizational justice enactment: an agent-focused review and path forward. *J. Vocat. Behav.* 116:103296. doi: 10.1016/j.jvb.2019.03.007

Greenberg, J. (1990). Organizational justice: yesterday, today, and tomorrow. *J. Manag.* 16, 399–432. doi: 10.1177/014920639001600208

Greenhalgh, L., and Rosenblatt, Z. (1984). Job insecurity: toward conceptual clarity. *Acad. Manag. Rev.* 9, 438–448. doi: 10.5465/amr.1984.4279673

Guest, D. E. (2004). The psychology of the employment relationship: an analysis based on the psychological contract. *Appl. Psychol.* 53, 541–555. doi: 10.1111/j.1464-0597.2004.00187.x

Gullett, J., Do, L., Canuto-Carranco, M., Brister, M., Turner, S., and Caldwell, C. (2009). The buyer–supplier relationship: an integrative model of ethics and trust. *J. Bus. Ethics* 90, 329–341. doi: 10.1007/s10551-010-0430-4

Gustafsson, S., Gillespie, N., Searle, R., Hope Hailey, V., and Dietz, G. (2021). Preserving organizational trust during disruption. *Organ. Stud.* 42, 1409–1433. doi: 10.1177/0170840620912705

Guzzo, R. F., Wang, X., Madera, J. M., and Abbott, J. (2021). Organizational trust in times of COVID-19: hospitality employees' affective responses to managers' communication. *Int. J. Hosp. Manag.* 93:102778. doi: 10.1016/j.ijhm.2020.102778

Hair, J. F., Risher, J. J., Sarstedt, M., and Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* 31, 2–24. doi: 10.1108/EBR-11-2018-0203

Hellgren, J., Sverke, M., and Isaksson, K. (1999). A two-dimensional approach to job insecurity: consequences for employee attitudes and well-being. *Eur. J. Work Organ. Psy.* 8, 179–195. doi: 10.1080/135943299398311

Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* 43, 115–135. doi: 10.1007/s11747-014-0403-8

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *Am. Psychol.* 44, 513–524. doi: 10.1037/0003-066X.44.3.513

Holland, P., Cooper, B., and Sheehan, C. (2017). Employee voice, supervisor support, and engagement: the mediating role of trust. *Hum. Resour. Manag.* 56, 915–929. doi: 10.1002/hrm.21809

Hu, S., Jiang, L., Probst, T. M., and Liu, M. (2021). The relationship between qualitative job insecurity and subjective well-being in Chinese employees: the role of work–family conflict and work centrality. *Econ. Ind. Democr.* 42, 203–225. doi: 10.1177/0143831X18759793

Jiang, L., and Probst, T. M. (2014). Organizational communication: a buffer in times of job insecurity? *Econ. Ind. Democr.* 35, 557–579. doi: 10.1177/0143831X13489356

Keim, A. C., Landis, R. S., Pierce, C. A., and Earnest, D. R. (2014). Why do employees worry about their jobs? A meta-analytic review of predictors of job insecurity. *J. Occup. Health Psychol.* 19, 269–290. doi: 10.1037/a0036743

Kim, B. J. (2019). Unstable jobs cannot cultivate good organizational citizens: the sequential mediating role of organizational trust and identification. *Int. J. Environ. Res. Public Health* 16:1102. doi: 10.3390/ijerph16071102

Lee, C., Huang, G. H., and Ashford, S. J. (2018). "Job insecurity and the changing workplace: recent developments and the future trends in job insecurity research," in *Annual Review of Organizational Psychology and Organizational Behavior. Vol. 5*. F. Morgeson (Ed.) (CA, USA: Palo Alto), 335–359.

Lee, T. C., Yao-Ping Peng, M., Wang, L., Hung, H. K., and Jong, D. (2021). Factors influencing employees' subjective wellbeing and job performance during the COVID-19 global pandemic: the perspective of social cognitive career theory. *Front. Psychol.* 12:577028. doi: 10.3389/fpsyg.2021.577028

Lepine, J. A., Podsakoff, N. P., and Lepine, M. A. (2005). A meta-analytic test of the challenge stressor–hindrance stressor framework: an explanation for inconsistent relationships among stressors and performance. *Acad. Manag. J.* 48, 764–775. doi: 10.5465/amj.2005.18803921

Maguire, H. (2003). The changing psychological contract: challenges and implications for HRM, organisations and employees. thesis. University of Southern Queensland.

Maguire, S., and Phillips, N. (2008). 'Citibankers' at Citigroup: a study of the loss of institutional trust after a merger. *J. Manag. Stud.* 45, 372–401. doi: 10.1111/j.1467-6486.2007.00760.x

McCauley, C. D., and Hezlett, S. A. (2001). "Individual development in the workplace," in *Handbook of Industrial, Work & Organizational Psychology*. eds. N. Anderson, D. S. Ones, H. K. Sinangil and C. Viswesvaran (London: Sage Publications), 313–335.

Menéndez-Espina, S., Llosa, J. A., Agulló-Tomás, E., Rodríguez-Suárez, J., Sáiz-Villar, R., Lasheras-Díez, H. F., et al. (2020). The influence of gender inequality in the development of job insecurity: differences between women and men. *Front. Public Health* 8:526162. doi: 10.3389/fpubh.2020.526162

Millar, C. C., Groth, O., and Mahon, J. F. (2018). Management innovation in a VUCA world: challenges and recommendations. *Calif. Manag. Rev.* 61, 5–14. doi: 10.1177/0008125618805111

Murugan, S., Rajavel, S., Aggarwal, A. K., and Singh, A. (2020). Volatility, uncertainty, complexity and ambiguity (VUCA) in context of the COVID-19 pandemic: challenges and way forward. *Int. J. Health Syst. Implement. Res.* 4, 10–16.

Oliveira, A. F., Gomide, S., and Poli, B. V. (2020). Antecedents of well-being at work: trust and people management policies. *RAM Rev. Adm. Mackenzie* 21, 1–26. doi: 10.1590/1678-6971/eramd200105

Peiró, J. M., Kozusznik, M. W., Rodríguez-Molina, I., and Tordera, N. (2019). The happy-productive worker model and beyond: patterns of wellbeing and performance at work. *Int. J. Environ. Res. Public Health* 16:479. doi: 10.3390/ijerph16030479

Piccoli, B., and De Witte, H. (2015). Job insecurity and emotional exhaustion: testing psychological contract breach versus distributive injustice as indicators of lack of reciprocity. *Work Stress* 29, 246–263. doi: 10.1080/02678373.2015.1075624

Piccoli, B., Reisel, W. D., and De Witte, H. (2021). Understanding the relationship between job insecurity and performance: hindrance or challenge effect? *J. Career Dev.* 48, 150–165. doi: 10.1177/0894845319833189

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., and Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88, 879–903. doi: 10.1037/0021-9010.88.5.879

Podsakoff, P. M., MacKenzie, S. B., and Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annu. Rev. Psychol.* 63, 539–569. doi: 10.1146/annurev-psych-120710-100452

Pradhan, R. K., and Jena, L. K. (2017). Employee performance at workplace: conceptual model and empirical validation. *Bus. Perspect. Res.* 5, 69–85. doi: 10.1177/2278533716671630

Probst, T. M., Gailey, N. J., Jiang, L., and Bohle, S. L. (2017). Psychological capital: buffering the longitudinal curvilinear effects of job insecurity on performance. *Saf. Sci.* 100, 74–82. doi: 10.1016/j.ssci.2017.02.002

Probst, T. M., Jiang, L., and Bohle, S. A. L. (2019). Job insecurity and impression management: which is the horse and which is the cart when it comes to job performance? *Career Dev. Int.* 25, 306–324. doi: 10.1108/CDI-04-2018-0119

Probst, T. M., Stewart, S. M., Gruys, M. L., and Tierney, B. W. (2007). Productivity, counterproductive and creativity: the ups and downs of job insecurity. *J. Occup. Organ. Psychol.* 80, 479–497. doi: 10.1348/096317906X159103

Proctor, C. (2014). "Subjective well-being," in *Encyclopedia of Quality of Life and Well-Being Research*. ed. A. Michalos (Amsterdam: Springer), 6437–6441.

Rao, I. (2021). Psychological contract for human development and organizational sustainability. *Bus. Perspect. Res.* 9, 415–426. doi: 10.1177/2278533721989832

Reisel, W. D. (2003). Validation and measurement of perceived environmental threat as an antecedent to job insecurity. *Psychol. Rep.* 93, 359–364. doi: 10.2466/pr0.2003.93.2.359

Richter, A., and Näswall, K. (2019). Job insecurity and trust: uncovering a mechanism linking job insecurity to well-being. *Work Stress* 33, 22–40. doi: 10.1080/02678373.2018.1461709

Ringle, C. M., Sarstedt, M., Mitchell, R., and Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *Int. J. Hum. Resour. Manag.* 31, 1617–1643. doi: 10.1080/09585192.2017.1416655

Robinson, S. L. (1996). Trust and breach of the psychological contract. *Adm. Sci. Q.* 41, 574–599. doi: 10.2307/2393868

Roll, L. C., Siu, O., and Li, S. Y. W. (2015). The job insecurity-performance relationship in Germany and China: the buffering effect of uncertainty avoidance. *Psihol. Resur. Um.* 13, 165–178.

Rousseau, D. M. (1995). *Psychological Contract: Understanding of Written and Unwritten Agreements*. Thousand Oaks: Sage.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., and Camerer, C. (1998). Not so different after all: a cross-discipline view of trust. *Acad. Manag. Rev.* 23, 393–404. doi: 10.5465/amr.1998.926617

Sarstedt, M., Ringle, C. M., and Hair, J. F. (2017). "Partial least squares structural equation modeling," in *Handbook of Market Research*. eds. C. Homburg, M. Klarmann and A. Vomberg (Heidelberg: Springer).

Schoorman, F. D., Mayer, R. C., and Davis, J. H. (2007). An integrative model of organizational trust: past, present, and future. *Acad. Manag. Rev.* 32, 344–354. doi: 10.5465/amr.2007.24348410

Schreurs, B. H. J., Hetty van Emmerik, I., Günter, H., and Germeys, F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance. *Hum. Resour. Manag.* 51, 259–279. doi: 10.1002/hrm.21465

Selenko, E., Mäkikangas, A., and Stride, C. B. (2017). Does job insecurity threaten who you are? Introducing a social identity perspective to explain well-being and performance consequences of job insecurity. *J. Organ. Behav.* 38, 856–875. doi: 10.1002/job.2172

Seligman, M. E., and Csikszentmihalyi, M. (2014). "Positive psychology: an introduction," in *Flow and the Foundations of Positive Psychology* (Dordrecht: Springer), 279–298.

Shin, Y., and Hur, W.-M. (2019). When do service employees suffer more from job insecurity? The moderating role of coworker and customer incivility. *Int. J. Environ. Res. Public Health* 16:1298. doi: 10.3390/ijerph16071298

Shin, Y., Hur, W. M., Moon, T. W., and Lee, S. (2019). A motivational perspective on job insecurity: relationships between job insecurity, intrinsic motivation, and performance and behavioral outcomes. *Int. J. Environ. Res. Public Health* 16:1812. doi: 10.3390/ijerph16101812

Shoss, M. K. (2017). Job insecurity: an integrative review and agenda for future research. *J. Manag.* 43, 1911–1939. doi: 10.1177/0149206317691574

Staufenbiel, T., and König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *J. Occup. Organ. Psychol.* 83, 101–117. doi: 10.1348/096317908X401912

Stiglbauer, B., and Batinic, B. (2015). Proactive coping with job insecurity: is it always beneficial to well-being? *Work Stress* 29, 264–285. doi: 10.1080/02678373.2015.1074956

Sverke, M., and Hellgren, J. (2002). The nature of job insecurity: understanding employment uncertainty on the brink of a new millennium. *Appl. Psychol.* 51, 23–42. doi: 10.1111/1464-0597.0077z

Sverke, M., Låstad, L., Hellgren, J., Richter, A., and Näswall, K. (2019). A meta-analysis of job insecurity and employee performance: testing temporal aspects, rating source, welfare regime, and union density as moderators. *Int. J. Environ. Res. Public Health* 16:2536. doi: 10.3390/ijerph16142536

Van Scotter, J. R. (2000). Relationships of task performance and contextual performance with turnover, job satisfaction, and affective commitment. *Hum. Resour. Manag. Rev.* 10, 79–95. doi: 10.1016/S1053-4822(99)00040-6

Vander Elst, T., Baillien, E., De Cuyper, N., and De Witte, H. (2010). The role of organizational communication and participation in reducing job insecurity and its negative association with work-related well-being. *Econ. Ind. Democr.* 31, 249–264. doi: 10.1177/0143831X09358372

Vander Elst, T., De Witte, H., and De Cuyper, N. (2014a). The job insecurity scale: a psychometric evaluation across five European countries. *Eur. J. Work Organ. Psy.* 23, 364–380. doi: 10.1080/1359432X.2012.745989

Vander Elst, T., Richter, A., Sverke, M., Näswall, K., De Cuyper, N., and De Witte, H. (2014b). Threat of losing valued job features: the role of perceived control in mediating the effect of qualitative job insecurity on job strain and psychological withdrawal. *Work Stress* 28, 143–164. doi: 10.1080/02678373.2014.899651

Vander Elst, T., Van den Broeck, A., De Witte, H., and De Cuyper, N. (2012). The mediating role of frustration of psychological needs in the relationship between job insecurity and work-related well-being. *Work Stress* 26, 252–271. doi: 10.1080/02678373.2012.703900

Verburg, R. M., Nienaber, A. M., Searle, R. H., Weibel, A., Den Hartog, D. N., and Rupp, D. E. (2018). The role of organizational control systems in employees' organizational trust and performance outcomes. *Group Org. Manag.* 43, 179–206. doi: 10.1177/1059601117725191

Viswesvaran, C., and Ones, D. S. (2000). Perspectives on models of job performance. *Int. J. Sel. Assess.* 8, 216–226. doi: 10.1111/1468-2389.00151

Western, M., and Tomaszewski, W. (2016). Subjective wellbeing, objective wellbeing and inequality in Australia. *PLoS One* 11:e0163345. doi: 10.1371/journal.pone.0163345

Zelenski, J. M., Murphy, S. A., and Jenkins, D. A. (2008). The happy-productive worker thesis revisited. *J. Happiness Stud.* 9, 521–537. doi: 10.1007/s10902-008-9087-4

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 30 December 2021
doi: 10.3389/fpsyg.2021.803481

Linking Corporate Social Responsibility to Workplace Deviant Behaviors: Mediating Role of Job Satisfaction

Khalid Rasheed Memon[1], Muhammad Zada[2], Bilqees Ghani[3], Rezwan Ullah[4], Mohammad Tahlil Azim[5], Muhammad Shujaat Mubarik[3], Alejandro Vega-Muñoz[6]*† and Dante Castillo[7]†*

[1] Graduate School of Business, Universiti Sains Malaysia, Penang, Malaysia, [2] Business School, Henan University, Kaifeng, China, [3] College of Business Management, Institute of Business Management, Karachi, Pakistan, [4] School of Management and Economics, Beijing Institute of Technology, Beijing, China, [5] Department of Business Administration, Faculty of Economics & Administration, King Abdulaziz University, Jeddah, Saudi Arabia, [6] Public Policy Observatory, Universidad Autónoma de Chile, Santiago, Chile, [7] Centro de Estudios e Investigación Enzo Faletto, Universidad de Santiago de Chile, Santiago, Chile

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
MeiPeng Low, Tunku Abdul Rahman University College, Malaysia
Ascensión Barroso Martínez, University of Extremadura, Spain

***Correspondence:**
Muhammad Zada
mzada@henu.edu.cn
Alejandro Vega-Muñoz
alejandro.vega@uautonoma.cl

†ORCID:
Alejandro Vega-Muñoz
orcid.org/0000-0002-9427-2044
Dante Castillo
orcid.org/0000-0002-5648-0627

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *28 October 2021*
Accepted: *10 December 2021*
Published: *30 December 2021*

Citation:
Memon KR, Zada M, Ghani B, Ullah R, Azim MT, Mubarik MS, Vega-Muñoz A and Castillo D (2021) Linking Corporate Social Responsibility to Workplace Deviant Behaviors: Mediating Role of Job Satisfaction. Front. Psychol. 12:803481. doi: 10.3389/fpsyg.2021.803481

The purpose of this article is to present a mechanism through which the deviant work behaviors of employees can be dealt-with positively through corporate good deeds in the form of fulfilling social responsibilities. Based on the spirit of social identity theory and social exchange theory, the study explores the relationships of various deviant behaviors with corporate social responsibility (CSR) through the mediation mechanism of job satisfaction. Data were collected from 385 employees of 40 large manufacturing organizations involved in CSR activities operating in Pakistan. A self-report survey was conducted using a close-ended questionnaire. Data analysis was performed using SEM through Mplus 7. The results reveal that both internal and external CSR contribute to the reduced level of turnover intention, counterproductive work behaviors, and prohibitive voice behaviors. Job satisfaction fully mediates the relationship for internal CSR while partially mediates for external CSR. The study encourages the practitioners to avail approaches that convey the feelings of care, concern, and safety, representing internal CSR practices through diverse HR interventions, organizational support, and justice. They should also keep up the socially responsible behaviors aiming toward the larger community.

Keywords: corporate social responsibility, job satisfaction, turnover intentions, prohibitive voice behavior, counterproductive work behaviors, organizational identification, social exchange theory, social identity theory

INTRODUCTION

Employee perceptions of their working environment have a significant impact on their conduct. Negative impressions relate to deviant actions such as counter-productive work behavior, prohibitive voice behavior (PVB), or turnover intention (Colbert et al., 2004). These aberrant behaviors can have significant negative impact on companies. For example, excessive turnover leads not just to direct financial expenditures but also to decreased productivity, low morale,

and service interruptions, all of which result in consumer dissatisfaction (Lu et al., 2016). Additionally, PVB includes disparaging the company, criticizing work regulations and processes, all of which erode the organization's culture and reputation (Maynes and Podsakoff, 2014; Memon and Ghani, 2020). Similarly, counterproductive work behaviors (CWB) revolve upon violating organizational norms and regulations, such as organizational fraud, production deviance, and sabotage (Griep et al., 2020).

Corporate social responsibility (CSR) is a broad notion that encompasses both the organization's internal and external stakeholders. It is a voluntary effort on the part of the organization to benefit its stakeholders. According to research, socially responsible firms are more likely to be viewed as distinct, valuable, desired, and a source of pride for employees (Farooq et al., 2017). The social identity theory (Tajfel and Turner, 1979), with its overarching process of self-enhancement, provides a robust paradigm for analyzing the influence of CSR on employee perceptions (Turker, 2009). When workers realize how their company contributes to society's well-being, they develop a sense of success and a desire to engage with the organization. This relationship tends to boost their self-esteem and sense of pride (Hogg and Terry, 2000; Rupp and Mallory, 2015; Farooq et al., 2017). Thus, the social identity theory provides a rational explanation for the association between perceived CSR and employees' positive mindsets, which results in increased job satisfaction (Azim et al., 2014; Farooq et al., 2014).

Moreover, the firm's CSR activities lead toward flourishing social exchanges, connecting a firm and its employees. CSR literature considers CSR to be an alternative to perceived organizational support, as it encompasses all types of social exchanges, i.e., generalized, and restricted exchange (Farooq et al., 2013; Memon et al., 2020). Additionally, a well-developed CSR may be considered as a type of organizational justice in and of itself, since it promotes equitable treatment of internal and external stakeholders (Mallory and Rupp, 2016). As a result, CSR activities are linked to the cognitive, emotional, and behavioral responses of stakeholders, most notably workers (Hansen et al., 2011). CSR efforts are expected to reduce workers' turnover intentions (Chaudhary, 2017; Farooq et al., 2019), CWBs (Mashi, 2018; Agrawal and Gautam, 2020; Hamid, 2020), and PVB (Liu et al., 2010; Ng and Feldman, 2011; Memon and Ghani, 2020). However, based on the spirit of social exchange theory, we argue that this would be an indirect impact through the mediation of job satisfaction (Blau, 1964). Thus, the current study will examine the association between firm's CSR activities and employees' turnover intention, CWB, and PVB, through the mediating effect of job satisfaction.

Though recently some researches have been conducted to measure the effect of CSR on employee attitudes and behaviors like employee knowledge sharing behavior (Farooq et al., 2014), affective organizational commitment (Farooq et al., 2013), OCB (Shiun and Ho, 2012; Wenbin et al., 2012; Azim et al., 2014; Memon and Ghani, 2020) employee motivation (Skudiene and Auruskeviciene, 2012), employee work engagement (Rupp et al., 2013; Zulfiqar et al., 2019; Memon et al., 2020), job performance and quality of work-life (Kim et al., 2017), employees' promotive voice behavior (Memon et al., 2021). Almost all of these are positive work behaviors where very few of the studies have been conducted for measuring CSR's impact on negative work behaviors whereby the findings of these research leave considerable uncertainty. Specifically, we don't know how CSR deters the negative behaviors of employees rather leads employees to behave positively toward their organizations (Zhao et al., 2019). Further, very limited studies paid attention in considering job satisfaction as dependent or mediating variable (Azim et al., 2014; Memon and Ghani, 2020) whereas more research is required to be aware of what organizational and individual variables figure out the job satisfaction and dissatisfaction of employees (Viseu et al., 2020).

This study uses three dependent variables as employees' deviant behaviors. These are PVB, counter-productive work behavior and turnover intentions of employees. As per our knowledge, none of the previous research have been conducted, empirically measuring the relationship between CSR and PVB, based on social exchange and identification theories; rather PVB has been studied with different constructs. Even till yet, very little research has been done on PVB as a construct itself (Maynes and Podsakoff, 2014; Memon and Ghani, 2020) whereby previously PVB doesn't contain negative connotation in its definition and was defined differently as compared to the current study (see Liang et al., 2012; Zhang et al., 2014). Please refer section "Corporate Social Responsibility, Job Satisfaction and Prohibitive Voice Behavior (A Social Exchange Perspective)" for the exact concept of PVB as per the current study. Further, very few studies are available on counter-productive work behavior whereby these are studied through social identity theory (see Shin et al., 2017; Mahmood et al., 2020). These studies do not specifically measure internal and external CSR's impact rather measure "perceived CSR" as a whole. Such limited studies may not present the certain findings regarding the said relationships.

Only one of these variables, i.e., employee turnover intention has been studied with CSR; however either these studies are based on social identity theory (Kim et al., 2016; Wang et al., 2017; Ng et al., 2019) or social exchange theory having different variables like organizational commitment (Farooq et al., 2019) whereas the current study would propose some new relationships based on social exchange theory as well as social identity theory with different mediating variable of job satisfaction. Further, the direct effect of CSR and employee turnover intentions (Aguinis and Glavas, 2012; Gharleghi et al., 2018) have been measured by most of the previous studies; whereas some studies have found no influence of CSR on turnover intention (de Gilder et al., 2005; Jones, 2010) due to direct effect. Therefore, there is much uncertainty among the results of these studies which invokes the need to study this relationship further.

Accordingly, the present research contributes in multiple ways. Firstly, it explores the effect of firms' CSR activities directly and indirectly (through mediation) on least explored employee behaviors i.e., PVB, and counter-productive work behavior (Farooq et al., 2013, 2014; Maynes and Podsakoff, 2014; Memon and Ghani, 2020) and turnover intentions. Secondly, it presents job satisfaction as a mediator between CSR and employee deviant behavior which is a relatively less practiced research framework

for negative work behaviors (Azim et al., 2014; Memon and Ghani, 2020). Thirdly, the study incorporates the theoretical basis of both social identity and social exchange theories together in explaining the interrelationships among the stated variables (Farooq et al., 2019; Zulfiqar et al., 2019).

Finally, the current study is prominent for research in an Asian nation such as Pakistan, as earlier researches on work behavior has primarily been undertaken in the United States, the United Kingdom, or other developed countries (Antonaki and Trivellas, 2014; Maynes and Podsakoff, 2014; Kim et al., 2017). Due to the fact that emerging nations have distinct cultural, economic, and social situations, this study will undoubtedly provide something unique to the body of knowledge. For example, in most Pakistan's work settings, the prevalence of jobs has been stated as low. Pakistani workers are notorious for being careless with their organizations and self-interested. Additionally, they are interested in some duties that are performed exclusively for them, such as internal CSR initiatives (Farooq et al., 2013, 2014; Memon et al., 2020). Indeed, recent events in the country, such as trade and market pressures resulting from global economic meltdowns, privatization of public companies, bureaucratic dishonesty and corruption, and heightened government legislation, as well as restructuring of financial sectors, have all served as a catalyst for employee withdrawal and disengagement (Shah et al., 2010; Memon and Ghani, 2020). Furthermore, this condition is developing the outlook for doubt and anxiety among workers due to an increase in the occurrence of pay deductions and increased unemployment (Memon, 2014b; Zulfiqar et al., 2019). Despite this difficult context, examining the elements that contribute to deviant work behaviors, such as PVB, is critical and valuable to the body of knowledge.

LITERATURE REVIEW

Corporate Social Responsibility-Definitions and Dimensions

The conceptualizations of the term CSR are broader and dynamic due to its implications at the micro (individual), meso (organizational), macro (country), and supra (transnational) levels (Aguilera et al., 2007; Hansen et al., 2011; Graafland and Schouten, 2012; Marquis and Qian, 2014). CSR may be defined as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (McWilliams and Siegel, 2001). It corresponds to a form of corporate behavioral outlook toward stakeholders (i.e., external, and internal), such as consumers, employees, and the public (Farooq et al., 2013, 2014). Much research had been done during the last quarter-century on CSR and its impact on stakeholders' relations, firm performance, external environment, corporate citizenship (Matten and Moon, 2008; Graafland and Schouten, 2012; Ooi et al., 2020).

CSR programs may include volunteer activities or policies within the firm such as incorporating greater environmental and safety standards, employee human treatment, efforts to improve employee diversity, as well as activities outside the firm such as cause-related marketing activities, community outreach programs, generous and philanthropic contributions to local communities (Hansen et al., 2011; Zheng et al., 2014). In any case, CSR efforts are usually projected to represent an illustration of a corporation as quick to respond to the requirements of the society (Ellen et al., 2006). CSR builds up the significance of an organization's implicit claims with its stakeholders. For instance, while an employee's wage can be predetermined in his contract, it is difficult to specify working conditions. An organization with a good reputation of care and consideration for its employees will be able to implicitly assure superior working conditions, aiding in better recruitment (Edmans, 2012).

This study would focus on the micro level i.e., internal stakeholders (individual employees) and CSR (internal and external) activities. Internal CSR merely means internal code of conduct, health and safety programs and policies, working time and environmental policies, fair pay and benefits, redundancy, and unfair dismissals (Campbell, 2007; Basil and Erlandson, 2008; Matten and Moon, 2008; Manika et al., 2017), procedural justice and high-performance work systems (HPWS) through HR (Azim et al., 2014; Farooq et al., 2019). External CSR involves organization's behavior toward external operations i.e., customers, local communities and business partners and environmental issues (Skudiene and Auruskeviciene, 2012).

Job Satisfaction

Job satisfaction is one of the most discussed and key constructs in organizational behavior literature since firms accomplish their desired goals and objectives through satisfied workers. It can be defined as "the reaction of people who enjoy their work and do it well, revealing characteristics of fulfillment and pride based on a range of elements" (Moro et al., 2020). Satisfied workers are strengths to their companies, portraying amplified physical and psychological health. Dissatisfied workers have inferior quality of employment and physical and psychological well-being that can adversely manipulate corporate efficiency (e.g., decrease in consumer numbers and unfavorable word of mouth or PVB) (Viseu et al., 2020).

Firms want their employees to be satisfied and perform well by mentally and emotionally committed to their careers. On the other end, employers must treat employees' social requirements with respect by meeting their social expectations. Accordingly, Moro et al. (2020) conducted research on U.S information technology professionals, 13 percent of them were found to be dissatisfied with their jobs in 2016 and the causes were largely unfulfilled aspirations. The literature further indicates that breakage of these expectations and job dissatisfaction results in a wide variety of unconstructive consequences, including decreased organizational trust, work frustration, increased organizational cynicism, existence in general, and enhanced intention to quit (Turnley et al., 2003; Mount et al., 2006; Antonaki and Trivellas, 2014; Memon and Ghani, 2020). Contrary to this, job satisfaction results in increased productivity as well as boosting-up of inherent humanitarian value (Oshagbemi, 2013). Further, job satisfaction decreases

absenteeism (Hardy et al., 2003; Adekanmbi and Ukpere, 2020), reduces counter-productive work behaviors (Meier and Spector, 2013), enhances life satisfaction (Judge et al., 2000; Viseu et al., 2020), and OCB (Organ and Ryan, 1995; Djaelani et al., 2021), leading toward higher firm performance.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Social identity (Tajfel and Turner, 1986) and social exchange (Blau, 1964) theories are two profound theoretical frameworks that underpin the relationship between organizational activities including CSR and attitudinal and behavioral reactions of employees (Cropanzano and Mitchell, 2005; Azim, 2016). In the following sections, the article discusses in detail the mechanisms portraying the relationships between CSR and employee work behaviors using both the theories while hypothesizing and building our study model.

Corporate Social Responsibility and Job Satisfaction (An Organizational Identification Mechanism)

Organizational identification refers to an organization's workers' sense of belonging (Mael and Ashforth, 1992, p. 104). According to the social identity theory's premise, employees prefer to identify with their social background (i.e., their organizational affiliation) and to classify themselves and others into various social groups by comparing their organization's characteristics, beliefs, and behaviors to those of other organizations (Farooq et al., 2017; Ko et al., 2018). Employees evaluate their self-esteem in terms of their organization's social position. As a result, people are more inclined to affiliate with an organization whose capabilities, ideals, and activities are desired and distinguishing in comparison to those of other organizations (Azim et al., 2014). CSR is believed to be a key determinant of workers' perceptions of their organization's dominance and distinctiveness (Azim, 2016). Given that CSR is a voluntary effort by the business to guarantee the well-being of diverse stakeholders, it is anticipated that these activities would be highly valued by stakeholders, particularly workers. As a result, socially responsible businesses are more likely to be perceived as unique, prestigious, attractive, and a source of pride for their personnel (Ashforth and Mael, 1989). Thus, the social identity theory provides a reasonable explanation for the link between perceived CSR and workers' favorable attitudes toward greater levels of job satisfaction, which correlates to an individual's total affective reaction to a range of work-related factors (Cranny et al., 1992; Azim et al., 2014).

Besides, the internal component of CSR applies more directly to employee behavior (Zulfiqar et al., 2019). Cropanzano and Rupp (2003) compared CSR directed toward employees with HPWS and claimed that there was significant overlap between Human Resources Management (HRM) and the internal component of CSR. HR practices, such as pay for performance, training, and development, and empowerment have historically been closely related to corporate identification resulting in job satisfaction. These activities have certain parallels to CSR behavior aimed directly at employees. Further, previous studies demonstrate that employees may feel obliged to exhibit positive attitudes and behaviors for the organizations having good internal practices. For instance, a well thought out and sensible performance appraisal system may amplify the discernment of procedural and interactive justice among employees, resulting in heightened emotional attachment with the organization (Cropanzano and Rupp, 2003; Pham, 2020). Valentine and Fleischman (2008) found that perceived CSR has a positive implication with employee job satisfaction. Similar results are also observed by Tziner et al. (2011), Azim et al. (2014), De Roeck et al. (2014), Dhanesh (2014), and Zheng et al. (2014). Skudiene and Auruskeviciene (2012) found that internal and external CSR activities positively correlate with internal employee motivation. They observed that internal CSR was a stronger predictor of internal employee motivation than all the external CSR dimensions. Hence, we present (see **Figure 1**):

> **Hypothesis 1a:** Employees' perceptions of the firm's internal CSR has direct and positive relationship with job satisfaction.
> **Hypothesis 1b:** Employees' perceptions of the firm's external CSR has direct and positive relationship with job satisfaction.

Corporate Social Responsibility, Job Satisfaction and Employee Turnover Intention (A Social Exchange Perspective)

The term "turnover intention" relates to an individual's behavioral attitude toward leaving a company, whereas "actual turnover" refers to the physical process of leaving an organization (Aydogdu and Asikgil, 2011). Increased turnover not only results in financial loss, but also in decreased production, low morale, and service interruptions, creating a pool of disgruntled consumers (Lu et al., 2016). Numerous research indicates the link between turnover intention and actual departure behavior (Joo and Park, 2010). One of the most effective strategies for reducing actual turnover is to identify the elements that are likely to diminish employees' intentions to quit the job. Employees may see organizational support, care, and concern as positive signals, preventing them from leaving the business (Srivastava and Agrawal, 2020). Internal CSR is considered an alternative to perceived organizational support in the CSR literature since it encompasses all types of social exchanges, i.e., generalized, and restricted exchanges (Farooq et al., 2013; Memon et al., 2020). Thus, it is predicted that a business's internal CSR efforts will help reduce employee turnover intentions by linking the firm and its workers through thriving social interactions (Chaudhary, 2017; Farooq et al., 2019).

External CSR is directed at the broader community. However, it also has an influence on the feelings and emotions of employees. An organization that contributes to society's well-being through CSR (external) generates a favorable image in the community. As a result, and consistent with the social identity approach,

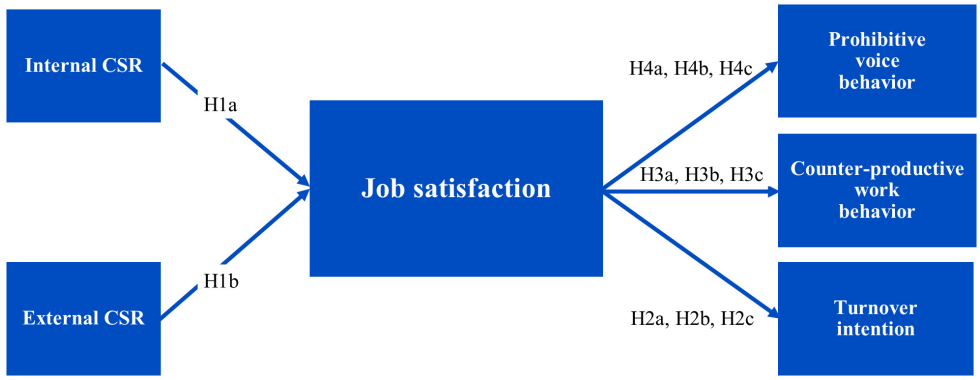

FIGURE 1 | Conceptual model of the relationship between perceived CSR and employee work behaviors through mediation mechanism.

workers experience increased self-esteem and pride, which results in increased commitment to the business and decreased desire to leave (Hogg and Terry, 2000; Azim, 2016). De Roeck and Delobbe (2012) discovered a favorable correlation between perceived CSR (environmental CSR) and employees' Organizational Identity.

Further, the relationship between CSR and turnover intention and other job-related attitudes and behaviors is likely to be mediated by the employees' job satisfaction. Perceived care by the organization and enhanced self-esteem due to internal and external CSR are expected to increase the satisfaction of the employees. And the satisfied employees reciprocate through their commitment to the organization which reduces their turnover intention (Chaudhary, 2017; Mashi, 2018; Farooq et al., 2019). Previous studies support the view that there is a negative correlation between job satisfaction and employee turnover intention (Randhawa, 2007; Bright, 2008; McNall et al., 2009; Alarcon and Edwards, 2011; Aydogdu and Asikgil, 2011; Lu and Gursoy, 2013; Lu et al., 2016; Li et al., 2019). Riordan et al. (1997) found that corporate image as a proxy of social performance perceived by employees positively influences job satisfaction and negatively affects the employee turnover intention. Accordingly, we have considered the following Hypotheses.

Hypothesis 2a: Job satisfaction is negatively associated with employees' turnover intention.

Hypothesis 2b: Internal CSR has negative relationship with employees' turnover intention through the mediation of job satisfaction.

Hypothesis 2c: External CSR has negative relationship with employees' turnover intention through the mediation of job satisfaction.

Corporate Social Responsibility, Employees' Job Satisfaction and Counterproductive Work Behavior (A Social Exchange Perspective)

Counterproductive work behaviors (CWB) are undesirable behaviors within the workplace. Sackett (2002) defined it as "any intentional behavior on the part of an organization member viewed by the organization as contrary to its legitimate interests." CWB is usually described in terms of three main characteristics: (a) CWB is volitional and inspired, and thus not accidental. (b) Actions are deviant because they contradict the rules of the organization, and (c) actions are aimed at and detrimental to the organization (Griep et al., 2020). CWB can be of two types viz., (a) CWB – Organizational, which is directed to the organization, e.g., organizational fraud, public criticism of the organization, production deviance, sabotage, withdrawal, and (b) CWB–Individual which is directed at co-workers, e.g., omission, bullying, threats.

Counterproductive work behaviors is related to the emotional state of the employees. The events that promote negative emotions (sense of deprivation) are likely to increase the CWB while the events leading to positive feelings (sense of achievement) reduce such behavior. Breach of psychological contract (Griep et al., 2020), unfair treatment (Folger and Cropanzano, 2001), hostility (Judge et al., 2006), organizational injustice (Ambrose et al., 2002) are found to contribute to counterproductive behavior. In fact, such factors generate a sense of dissatisfaction among the employees, and they retaliate with CWB (Czarnota-Bojarska, 2015). Thus, job satisfaction (or dissatisfaction) is an observed proximal antecedent of CWB (Judge et al., 2006).

Corporate social responsibility activities have an effect on the attitudes and actions of both internal and external stakeholders. Numerous researches have established a link between CSR and cognitive, emotional, and behavioral responses (Cramer, 2005; Hansen et al., 2011). Internal CSR-driven organizations care about their employees' well-being, and as a result, their employees feel cared for and safe. As a result, reciprocity develops, and workers retaliate by working diligently rather than withholding their efforts or causing harm to their business (Cropanzano and Mitchell, 2005; Mount et al., 2006). Similarly, businesses that engage in external CSR on a voluntary basis and contribute to a social cause can establish themselves as respected corporate entities. Due to their altruistic commitment to society, such firms are seen as trustworthy and helpful by existing and potential workers (Barton and Barton, 2011; Chaudhary, 2017). These attitudes and expectations establish reciprocal duties between employee and employer (Rousseau, 1989) and deter workers from

engaging in negative or counter-productive work practices and behaviors (Memon et al., 2020). Given the proximity of work satisfaction to CWB, it is possible to envision that job satisfaction mediates the link between CSR and CWB (Judge et al., 2006). As a result, we examine the following possibilities.

Hypothesis 3a: Job satisfaction has negative relationship with employees' counterproductive work behavior.
Hypothesis 3b: Internal CSR has negative relationship with employees' counterproductive work behaviors through the mediation of job satisfaction.
Hypothesis 3c: External CSR has negative relationship with employees' counterproductive work behaviors through the mediation of job satisfaction.

Corporate Social Responsibility, Job Satisfaction and Prohibitive Voice Behavior (A Social Exchange Perspective)

Prohibitive voice behavior (PVB) generally means being vocal against organizational decisions and practices. It may take place in two forms: (a) defensive voice and (b) destructive voice (Maynes and Podsakoff, 2014). Defensive voice behavior is defined as "the voluntary expression of opposition to changing an organization's policies, procedures, programs, and practices, even when the proposed changes have merit or making changes is necessary." It includes, deliberately opposing the changes in working methods or SOPs (standard operating procedures) or arguing stubbornly against any proposed changes. This dimension of PVB is similar to resistance to change. However, it is active in nature. Destructive voice behavior is defined as "the voluntary expression of hurtful, critical, or debasing opinions regarding work policies, practices, procedures." For example, harsh criticism of organizational policies, or work methods, bad-mouthing, making sarcastic comments about the organization (Maynes and Podsakoff, 2014). PVBs are likely to hurt the organizational image and damage interpersonal relationships at work (LePine and Van Dyne, 1998).

Prior studies explored the determinants of employee voice behavior in terms of individual characteristics (e.g., Crant et al., 2011), contextual factors (e.g., Stamper and Van Dyne, 2001), social exchange (e.g., Rees et al., 2013), psychological factors (e.g., Walumbwa and Schaubroeck, 2009). Several studies (Janssen et al., 1998; Fuller et al., 2007; Nikolaou et al., 2008; Landau, 2009; Crant et al., 2011; Grant, 2013; Qin et al., 2014; Wu et al., 2015) have identified personality, impression management tendencies, emotional intelligence, and cognitive style preferences, as the likely antecedents of voice behavior. Similarly, contextual factors, such as tenure (Avery et al., 2011), employee past performance (Fuller et al., 2007), leadership (Walumbwa and Schaubroeck, 2009; Hsiung, 2012), human resource management practices (Davis-Blake et al., 2003; Si and Li, 2012), voice climate (Morrison, 2011; Engemann and Scott, 2020), ethical and organizational culture (e.g., Berry, 2004; Ruiz-Palomino and Martínez-Cañas, 2014), national culture (e.g., Farh et al., 2004), and labor union (e.g., Deery et al., 2014) were found to be predictive of employee voice behavior. Some studies (e.g., Stamper and Van Dyne, 2001; Gong et al., 2010; Farndale et al., 2011; Rees et al., 2013) emphasize the social exchange relationship within the workplace as the potential cause of the voice behavior. Due to profound social exchange relationships, the employees feel more valued, recognized, and involved that consequently motivated them to engage in voice behavior. Employee voice behavior is also observed to be affected by psychological factors such as perceived risk of voicing, trust in leadership, job satisfaction, organizational identification (e.g., Janssen et al., 1998; Detert and Burris, 2007; Tangirala and Ramanujam, 2008; Walumbwa and Schaubroeck, 2009; Gao et al., 2011).

As discussed, the organizations that practice internal CSR are required to act encouragingly, demonstrating care and concern, openness and trustworthiness, involvement in goal setting, and communicate the vision with their employees through HPWS so that employees are satisfied with their jobs (Memon et al., 2018, 2021). Similarly, due to external CSR, an organization earns a reputation, and the employees consider working in those particular organizations as pride and prestige for themselves. This sense of job satisfaction, in line with the norm of reciprocity, would enable them to raise positive voice (Arnold et al., 2000; Liu et al., 2010; Ng and Feldman, 2011) while refraining them from PVB s that may damage the organization (Memon and Ghani, 2020).Therefore we present our hypothesis as:

Hypothesis 4a: Job satisfaction has negative relationship with employees' prohibitive voice behavior.
Hypothesis 4b: Internal CSR has negative relationship with employees' prohibitive voice behavior through the mediation of job satisfaction.
Hypothesis 4c: External CSR has negative relationship with employees' prohibitive voice behavior through the mediation of job satisfaction.

METHODOLOGY

Sample and Procedure

The study is based on a survey managed through a self-reported questionnaire. However, the time lag technique has been used to avoid common method bias, and accordingly, temporal, and psychological separations of our variables are used (Farooq et al., 2017) our focus is on the employees of different manufacturing units in Pakistan. Their products consisted of food items, paper manufacturing, auto parts manufacturing, and cement manufacturing. These companies have larger sales volumes since Pakistan is having a population of approximately 220 million inhabitants.

The study used convenience sampling technique for collecting the data. In total 75 companies were selected based on their CSR information available through secondary data sources, especially websites implying that they are involved in CSR activities and their employees are well aware of the related concepts and activities (Farooq et al., 2013, 2014). Forty out of 75 firms agreed to participate in our research study (Food,

paper, automotive parts, and cement manufacturing companies). Further, data from the non-management staff was collected who are not directly involved in CSR policy making and implementing but are the direct observer and affected by CSR activities (Rupp et al., 2006). We divided our variables into two sections and created two distinct sheets. At time 1, the first booklet assessed CSR and job satisfaction elements in addition to demographic data, whereas the second booklet assessed PVB, counter-productive work behavior, and employee turnover intentions. This data collecting procedure necessitated the division of periods ranging from 15 to 20 days. However, it stays cross-sectional because no change is anticipated over this time period (Farooq et al., 2017). Questionnaires were sent to workers of the selected businesses with the assistance of our field survey assistants. The questionnaire was delivered with a cover letter explaining the purpose of the study and obtaining approval from the employee to participate in the research. Through this procedure, we collected the data from 385 employees (Mid-level and supervisory level managers and the operative employees) completed in every aspect after period 2 whereas there were 430 employees who filled the questionnaire at period 1. So, the drop out of 45 employees occurred. The sample size N is calculated by the priori power analysis (Cohen, 1988) based on the suitable degree of power (1-β), the pre-specified degree of significance, and the magnitude of the population effect that may be seen with probability (1-β). Before a thorough study is done, *a priori* analysis can regulate the prediction potential effectively (Hager, 2006; Faul et al., 2007). There is a minimum sample size of 107, and actual power of 85 percent when using the program G*Power 3 with input parameters: medium effect, probability of Type I error $\alpha = 0.05$, probability of Type II error $\beta = 0.05$ which means $(1-\beta) = 0.95$ and number of predictors = 2. Thus, the sample size of 385 is enough to justify our results. The demographic characteristics of the sampled employees are given in **Table 1**. It shows that the sample comprised of 280 males and 105 female respondents. Around 70% (276) of the respondents have a bachelor's degree and above. It means most of the respondents were academically qualified enough. Among the respondents, 243 employees had less than 5 years of service with the organizations while 142 had more than 5 years. As regards, their position in the hierarchy, 181 respondents belonged to mid-level and supervisory level management and the rest were operative employees (see **Table 1**).

TABLE 1 | Demographics of the respondents.

Demographics		Frequency
Age	18–28	180
	29–40	160
	41–55	45
Gender	Male	280
	Female	105
Service tenure (years)	1	46
	2	39
	3	68
	4	90
	5	66
	6 and more	76
Qualification	Below bachelors	118
	Bachelors	182
	Masters	65
	MS/Mphil	20
Management Level	Middle management	95
	Supervisor	86
	Non-managerial staff	204

Tools and Measurements

Several tools, whose validity and reliability have already been established, were adapted, to test the model. For instance, perceived CSR was measured through the instrument, originally developed by Turker (2009). However, the same was amended by adding one additional item from Maignan and Ferrell (2000) related to charities and donations to fulfill the contextual requirements of Pakistan. A similar scale was also adopted by Farooq et al. (2013, 2014) in their studies in Pakistan. This tool includes 16 items in total having 10 items for External CSR (community, environment, and consumers). For example, "Our organization implements special social programs to minimize its negative impact on the natural environment." Six items were used to measure Internal CSR (Employees). For example, "Our organization policies encourage the employees to develop their skills and careers."

Job Satisfaction

We used a five-item perception questionnaire, developed by Hackman and Oldham (1975) and adopted from Zhang et al. (2014), to measure job satisfaction. A sample item includes: "Overall, I am very satisfied with this job." The questionnaire has a Cronbach alpha of 0.851 "as adopted from Zhang et al. (2014)."

Prohibitive Voice Behavior

Prohibitive voice behavior was measured through a 10-item instrument developed by Maynes and Podsakoff (2014) as it measures the voice behavior of employees as per our operational definition i.e., voice behavior in a defensive and destructive sense. Cronbach alpha for the defensive voice was 0.92 while it was 0.93 for destructive voice.

Counterproductive Work Behavior

It was measured through a two-dimensional workplace deviance scale developed by Bennett and Robinson (2000). It consisted of 12 items for measuring organizational deviant behaviors that are harmful for the organization and 7 items for individual/interpersonal deviant behavior that are harmful to an individual within the organization. For instance, "Come in late to work without permission"; "Publicly embarrassed someone at work." Their reliability scores were 0.81 and 0.78 respectively.

Turnover Intentions

The three-item turnover intention scale was adopted from Khatri et al. (2001) since it was developed for the Asian context. Sample item includes, "I will probably look for a new job in the next year." Its Cronbach alpha was 0.87.

Demographic and Control Variables

Research imply that age, gender, service tenure, type of employment could potentially manipulate employees' voice behavior and work behaviors (Liang et al., 2012; Zhang et al., 2014) turnover intentions (Huang and Cheng, 2012; Farooq et al., 2019) and job satisfaction (Singhapakdi et al., 2014), therefore we controlled these demographic variables in data analysis.

We adapted the instrument and translated it into Urdu (the national language of Pakistan). The translated questionnaire was then examined by 2 management research experts. We also pre-tested the instrument through 20 Executive MBA students to identify any potential problems associated with adaptation and translation. We found some minor problems regarding translation which were corrected at once. However, no such problem was found with its structure and flow. Thus, both the experts' reviews and pre-test revealed that the questionnaire is readable and comprehensive as well as fit for our contextual requirements. (Items available at **Supplementary Appendix 1**).

TABLE 2 | Model fit statistic.

Modelfit indices	X^2	DF	X^2/DF	CFI	NFI	TLI	RMSEA
	546.82	366	1.50	0.97	0.944	0.96	0.04

DF, Degrees of Freedom; X^2/DF, minimum discrepancy; CFI, Confirmatory Fit Index; NFI, Normed Fit Index; TLI, Tucker–Lewis Index; RMSEA, Root Mean Square Error of Approximation.

TABLE 3 | Reliability and convergent validity.

Latent variables	# of items	Convergent validity	Cronbach's alpha	Joreskög's Rhô.
External CSR	6	0.65	0.79	0.78
Internal CSR	5	0.80	0.90	0.90
Job satisfaction	4	0.72	0.86	0.86
CPWB	12	0.69	0.90	0.91
TOI	3	0.82	0.85	0.85
PVB	9	0.76	0.82	0.82

CPWB, counterproductive work behavior; TOI, turn over intentions; PVB, prohibitive voice behavior.

FINDINGS AND RESULTS

Assessing the Tools and Measurement (Confirmatory Factor Analysis)

Since most of the measurement tools were adopted from Western research, it was important to test their validity in the context of a developing country (Zulfiqar et al., 2019). Confirmatory Factor Analysis (CFA) was conducted to assess the convergent and discriminatory validity of all study instruments.

We established a calculation structure for all variables and covariate them in a single model. This helped us to determine the cross-loadings if any and allowed us to quantify the discriminant validity of the tools. We used Mplus 7 to test both the measurement model and the hypothesized model. The 6-factor model provided a good fit for the results (X^2 = 546.82; Df = 366; X^2/Df = 1.50; CFI = 0.97; TLI = 0.96; RMSEA = 0.04; SRMR = 0.03). Contrary to this, while all factors were loaded to one factor through a single factor model, it provided a poor fit with results. In a six-factor model, the typical loading factor was greater than 0.50. Those items having lesser values were deleted (Kline, 2011; see items loadings at **Supplementary Appendix 1** and **Table 2**).

We have also evaluated the convergent and discriminant validity of all six latent variables using the average extracted variance (AVE) approach suggested by Fornell and Larcker (1981). The AVE values that were higher than the suggested value of 0.50 are shown in **Table 3**. Thus, all the constructs have high convergent validity. In addition to the adequacy and validity of the measurement tool, we have assessed the internal reliability and consistency of our measurements. The values of Cronbach Alpha (Cronbach, 1951) and Joreskog Rho were both adequately higher than the recommended value of 0.7 (Nunnally, 1978; see **Table 3**).

For the determination of discriminant validity, we used a factor-based procedure (Fornell and Larcker, 1981). This is the most meticulous and powerful approach to solve the problems of the difference in the chi-square method (Fornell and Larcker, 1981). By using this method, we concluded that these constructs were dissimilar from each other since the square root of the average variance derived from each construct was greater than the following correlations (see **Table 4**). **Table 4** also presents the mean, standard deviation, and correlation of all variables studied.

Testing of Model

Hypotheses were evaluated using Mplus version 7 for structural equation modeling. The hypothesized study model provided a rather good fit with the results (X^2 = 546.82; Df = 366; X^2/Df = 1.50; CFI = 0.97; TLI = 0.96; RMSEA = 0.04; SRMR = 0.03). The direct results of this model are displayed in **Table 5**. The significance level is given in brackets whereas the values outside the brackets are standardized regression weights. Job satisfaction, CPWB, TOI, and PVB are dependent variables. According to given table the CSR has direct relationship with job satisfaction whereas the job satisfaction has direct relationship with CPWB, TOI, and PVB. The CSR (as a whole) tended to be a good predictor of job satisfaction. The internal CSR had the highest effect of 0.40 at a degree of significance of 0.001.

TABLE 4 | Descriptive statistics correlation matrix and test of discriminant validity.

Latent variables	Mean	*SD*	1	2	3	4	5	6
External CSR	3.71	0.68	0.75					
Internal CSR	4.19	0.67	0.37**	0.89				
Job satisfaction	3.82	0.58	0.29**	0.39**	0.84			
CPWB	4.07	0.64	0.23**	0.36**	0.38**	0.83		
Turnover	3.60	0.54	0.20*	0.28*	0.38**	0.18	0.89	
PVB	4.10	0.68	0.22*	0.26**	0.32**	0.16	0.18	0.88

CPWB, counterproductive work behavior; PVB, prohibitive voice behavior. Values on the diagonal represent the square root of convergent validity. Values in the columns are the correlations between two constructs. Values denoted with (*) are significant at 0.05 and with (**) are significant at 0.01.

TABLE 5 | Testing of model.

	Job satisfaction	CPWB	TOI	PVB	Hypothesis supported
External CSR	0.36 (0.000)	–	–		1b
Internal CSR	0.40 (0.000)	–	–		1a
Job satisfaction	–	–0.34 (0.001)	–0.20 (0.001)	–0.38 (0.001)	2a, 3a, 4a

CPWB, counterproductive work behavior; TOI, turnover intention; PVB, prohibitive voice behavior.

External CSR had an effect of 0.36 at a significance level of 0.001. As a result, our hypothesis-1a and 1b were completely supported by the evidence. Further, the results revealed the negative impact of job satisfaction on employees' CWB, PVB, and turnover intentions as shown in **Table 5** that support our Hypotheses 2a, 3a, and 4a (see **Table 5**).

Mediation of Job Satisfaction Between Corporate Social Responsibility Dimensions and Employee Work Behaviors

We analyzed the mediation of job satisfaction between CSR dimensions and Employee work behaviors in MPlus employing a structural equation modeling technique (Lacobucci et al., 2007). MPlus has an edge greater than the other statistical tools since it presents direct and indirect effects at the same time. We also considered the direct effects of independent variables on the dependent variable job satisfaction after partialing out the effect of the mediator (C-prim Path). The studies indicate that the mediation occurs when both the independent to mediator and mediator to dependent path coefficients are significant (Lacobucci et al., 2007). [1]AB Path represents the indirect relation of CSR dimensions on employee behaviors through the mediation of job satisfaction; Values outside brackets are a standardized indirect relation obtained from the hypothesized model; these paths represent single mediation. [2]CB' path represents the direct relations of CSR dimensions after partialing out the impact of the job satisfaction (mediator); here also the values outside brackets are standardized regression weights obtained from the hypothesized model. The values inside the brackets of both paths are significance levels (see **Table 6**).

The results shown in **Table 6** indicate that our Hypotheses 2b, 3b, and 4b were fully accepted while 2c, 3c, and 4c were partially accepted since one path of these hypotheses is not significant. Indirect effects of the two dimensions of CSR were significant which shows that these two dimensions of CSR negatively affect CWB, turnover intentions, and PVB through job satisfaction. The external CSR had a direct negative effect (after partialing out the effect of mediator) on CWB, turnover intentions, and PVB which demonstrate the partial mediation in case of external CSR and full mediation in the case of internal CSR. These results portray that the indirect effect of internal CSR on employee behaviors via job satisfaction was significant at the 0.05 level whereas the indirect effect of external CSR was significant at the 0.01 level (see **Figure 2**).

DISCUSSION

This study explores the impact of CSR on deviant workplace behaviors through the mediation of job satisfaction. Specifically, it studies the impact of both internal and external CSR on turnover intention, CWB, and PVB as mediated by job satisfaction. The theoretical foundation of the study is grounded on the social identity theory and social exchange theory. Contrary to previous studies, which have focused on usual constructs for measuring the effect of CSR on, for instance, affective organizational commitment (Farooq et al., 2013; Shin et al., 2017), organizational identification and knowledge sharing behavior (Farooq et al., 2014; Wang et al., 2017; Mahmood et al., 2020), and organizational trust as mediators (Farooq et al., 2019), the current study has focused on the least focused construct of job satisfaction as mediator leading toward negative work behaviors.

The result of the study indicates that internal CSR has been the best indicator of job satisfaction leading toward a shield against employees undesirable work behaviors. The findings are consistent with the HPWS literature that stressed the use of human capital management strategies to motivate workers to be a source of competitive advantage (Farooq et al., 2019; Chen et al., 2021). Thus, the result further consolidates the existing literature, showing a positive partnership between job satisfaction and internal CSR to create a pool of motivated employees.

Our findings of, for example, Hypothesis 1 and Hypothesis 2 are compatible with other research on CSR conducted in the

TABLE 6 | Mediation of Job satisfaction between CSR Dimensions and Employee work behaviors.

Independent variables	Indirect relations [1] AB path	Direct relation [2] CB' path	Proportion of mediation AB/AB + CB'	Remarks	Hypothesis supported
External CSR → TOI	–0.06 (0.01)	–0.05 (0.15)	0.06 (6%)	Partial mediation	2c
Internal CSR → TOI	–0.057 (0.02)	0.74 (0.02)	–	Full Mediation	2b
External CSR → CPWB	–0.08 (0.01)	–0.05 (0.12)	0.08 (8%)	Partial mediation	3c
Internal CSR → CPWB	–0.048 (0.02)	0.72 (0.02)	–	Full mediation	3b
External CSR → JS	–0.09 (0.01)	–0.05 (0.14)	0.09 (9%)	Partial mediation	4c
Internal CSR → JS	–0.056 (0.02)	0.78 (0.02)	–	Full mediation	4b

Dependent variables: CPWB, counterproductive work behavior; TOI, turnover intentions; PVB, prohibitive voice behavior.

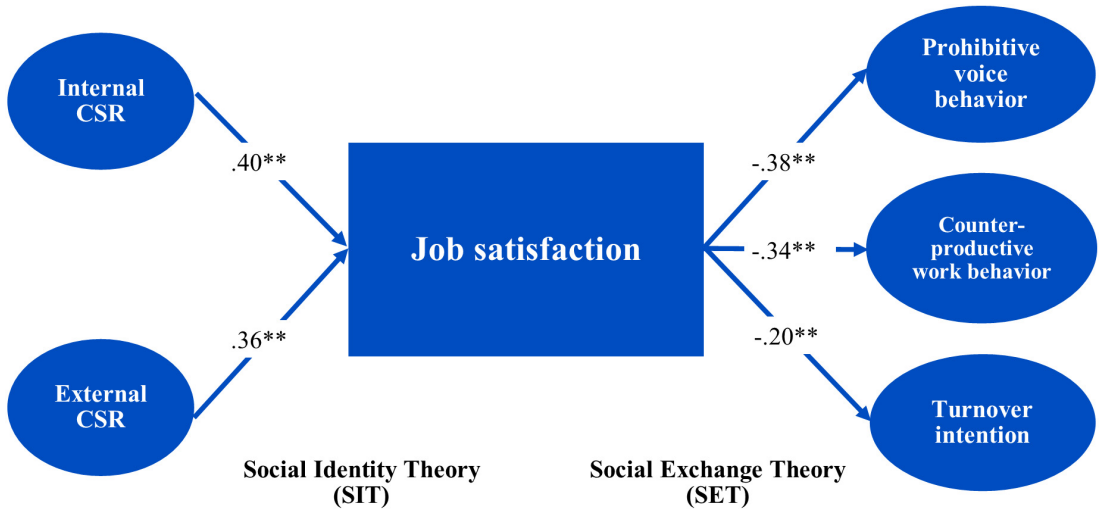

FIGURE 2 | The estimated model of the relationship between perceived CSR and employee work behaviors through mediation mechanism. Values given on the paths are standardized regression coefficients. Values denoted with (**) are significant at 0.01.

context of Pakistan (Farooq et al., 2013, 2014, 2019; Zulfiqar et al., 2019; Memon et al., 2020, 2021) presenting that CSR programs, contribute to the growth of trust and faith and develops the feelings of job satisfaction (Azim et al., 2014). It is found that, due to overt support for workers by presumed organizational justice (hypothesis 3 and hypothesis 4), through internal CSR and the generalized feelings of justice developed through external CSR (Farooq et al., 2017), employees in-turn, reciprocate by exhibiting their attachments to the organization in the form of a reduced level of turnover intention, PVB and CWB (Seibert et al., 2011; Singh and Singh, 2019; Memon and Ghani, 2020).

The study's findings also indicate a clear positive impact of CSR's external dimension on job satisfaction. This shows that CSR activities related to economic growth, grants, charities, and the commitment to social problems are also not unrelated to the employees' feelings and emotions. This indicates that organizations' CSR behavior is significant and vital to understanding how workers react to these organizational actions. Philanthropic contributions of the organizations add to the meaningfulness of the job and the employees feel proud of their organizations. They also view their organization as caring and responsible which eventually instigates a higher sense of emotional bondage with their organizations. Consequently, they review their relationships with the organization in a positive way.

According to the findings, compared to the external CSR, the employees are found more inclined toward internal CSR activities. This indicates that workers in Pakistan are more concerned with activities that are precisely related to them than those to others (external stakeholders). This is possibly due to the relatively poor economic status of the country. In the absence of social benefits accorded by the government, people in Pakistan largely depend on their personal income for meeting up their necessities of life. For this, job security is a prime concern for them. When the employees find that the organization is caring and concerned about them, they feel secured and become loyal to their organizations and sincere in their actions, in reciprocation. This is reflected in the result as it shows full mediation with internal CSR and partial mediation with external CSR.

THEORETICAL IMPLICATIONS

This study proposes a model based on the huge construct of employees' job satisfaction, developed as a result of CSR activities (external and internal) conveying the feeling of care and concern for employees, trust, and organizational justice. This empirically tested model within the context of Pakistan provides important implications for researchers.

Firstly, most of the recent studies have been done in developed countries, while our research focuses on developing country, since the data has been gathered from employees of 20 manufacturing units of Pakistan. This part of the world is predominantly a part of the developing world in terms of the global, economic, and cultural environment (Khatri et al., 2001; Memon et al., 2021). This extends the boundary conditions of the earlier studies.

Secondly, the domino effect of our research advances the underlying theories on the relationship of CSR, job satisfaction, and employees' work behaviors in organizations. Our study finds support in the existing literature for perceived fairness at the place of work felt through firms' CSR activities especially internal CSR, influences employees' sense of trust and job satisfaction (e.g., Valentine and Fleischman, 2008; Seibert et al., 2011; Ugwu et al., 2014; Singh and Singh, 2019; Memon and Ghani, 2020) leading toward positive voice behavior (Liu et al., 2010; Morrison, 2011; Seibert et al., 2011; Antonaki and Trivellas, 2014; Memon et al., 2021) deterring from counter-productive work behavior (Shin et al., 2017; Mahmood et al., 2020). Similarly, we found support for CSR activities leading toward positive work behaviors deterring the negative behaviors (Farooq et al., 2013, 2014;

Yu and Choi, 2014; Mallory and Rupp, 2016; Zulfiqar et al., 2019; Memon et al., 2021).

Thirdly, our study provides an interdisciplinary paradigm when it extends social psychological theories to the interpretation of an organizational phenomenon. We combine a macro-level CSR definition with micro-level employee-related variables. Rupp et al. (2006) indicate that the CSR literature lacks a comprehensive micro-level review due to over-emphasis on macro-level studies. This research thus opened a new avenue in CSR research by highlighting the role of CSR in employee attitudes and behavior (Aguinis and Glavas, 2012).

Fourthly, in comparison, the latest literature has mainly looked at the direct effect of CSR on employee attitudes. The method by which employee behavior is developed from CSR also needs to be explained. The results of the current study indicate that the CSR practices of firms become the source of employees' job satisfaction, which in turn affects their intentions and behaviors. Explaining the sustaining mechanism, the overall implication of the study is significantly enhanced. Accordingly, we broaden and enhance recent research that discuss the influence of firms' involvement in CSR practices on employee attitudes and behavior in the workplace.

Fifthly, previous studies on job satisfaction-CWBs (i.e., JS-CWB relationship) have fragmented results. Some of these are inclined toward negative relationships (see, for instance, Crede et al., 2007; Guo, 2012; Zhang and Deng, 2016; Malhotra and Kathuria, 2017) whereas there are instances where the said relationship i.e., JS-CWB has been reported positive or have a partial effect in decreasing CWB (see Dalal, 2005; Mount et al., 2006; Illies et al., 2009; Greenidge et al., 2014; Czarnota-Bojarska, 2015). Therefore, the said research contributes to the body of knowledge with regards to the relationship between JS-CWB and their variety of relationships whether partial or full (He et al., 2021). Moreover, the exploratory study measuring the impact of CSR activities on job satisfaction leading toward CWB is new to the body of knowledge. This would open a new horizon for researchers to study and understand the way in which CSR affects CWB through job satisfaction since previously diminutive research are available on the subject matter.

CONCLUSION AND MANAGERIAL IMPLICATIONS

Based on a developing country's context, this paper demonstrates that both internal, as well as external CSR, have a bearing on the attitudes and behaviors of employees. It reveals that both the forms of CSR act as the distal antecedents of deviant workplace behaviors including turnover intention, counterproductive behavior, and PVB through the process of social identity and exchange relationships mediated by job satisfaction. This study further demonstrates that the internal CSR activities targeted to the employees themselves have a greater impact on employee attitudes and behaviors than those of the external CSR aimed at the society at large. These findings on the differential effects of CSR activities have multiple implications for managers and researchers.

The greater influence of internal CSR implies that Management should be concerned about responsible human resource management within the workplace (Zhuang et al., 2021). Memon et al. (2020) stress the notion that the employees are very adaptive. They analyze and perceive signals in the workplace and establish attitudes. This means that as soon as employees realize that the organization has an environment of concern and commitment to them, the employees reciprocate the caring behavior and are inclined to carry out their duties for the benefit and progress of their organization. It urges professionals and managers to convey their concern, care, and protection through several human resource interventions, organizational support through leader's mentoring behaviors, and the communication system; since these are the most influential factors of employee motivation and instrumental in resisting employee deviant behaviors (Bedarkar and Pandita, 2014; Babalola et al., 2020; Sherf et al., 2020).

Moreover, provided that the moral development of managers is known to have an impact on CSR activities (Valentine and Fleischman, 2008), organizations should consider a wide spectrum of leadership issues in the promotion of employees (Memon, 2014a). In particular, organizations should not only focus on increasing the efficiency of workers but should also consider the degree to which managers can effectively respond to diverse work-based ethical circumstances. Companies should also develop training sessions that center on managerial ethical thought and use situation-centric vignettes and role-playing (Valentine and Fleischman, 2008).

Reciprocal relationships between external CSR and employee deviant behaviors imply that spending money for the social cause by the organizations has its spillover effects. Therefore, the managers should not consider CSR as a one-way approach of giving, it also reverts back in the form of corporate image, a satisfied pool of employees, and better organizational functioning. It is not only the demand of the larger community to perform philanthropic CSR, but also the latent expectations of the employees.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study has several shortcomings. First, since it deals with the phenomenological issue of employee feelings and emotions, data collection through a close-ended questionnaire may not reveal the true picture. Hence, in-depth interviews, focus group discussion, observation, and other qualitative approaches may be applied for better comprehension of the issue. Second, the reaction to the internal and external CSR activities of an organization by the employees is expected to be affected by demographic (age, gender, education), psychological (Personality, values) and contextual (Culture, organizational size, organizational type) factors. However, the current study does not explore the moderating effect of such variables. Therefore, future studies may pay attention to this aspect. Third, this particular study is conducted in the context of a single country (a developing country) with a relatively small number of

respondents, it is, therefore, not possible to generalize the result for the developing countries, even though it offers a general understanding of the phenomenon in the context of the other Asian countries, particularly emerging South Asian countries with similar infrastructure and economic conditions. A multi-country study of a similar issue warrants better generalization. Fourthly, the study used single source data, although the common method biasness was catered through the use of time lag technique as well as marker variables and thus no such problem was found, yet future research may use multiple source data, i.e., peers/co-workers, managers may be asked to report employee deviant behaviors. Finally, one major limitation of the study is its sampling procedure. It applies convenient sampling that seriously limits the representativeness of the sample. Data collection through random sampling will overcome the weakness. However, the study satisfies all the statistical requirements for a correct interpretation of the analyzed data set.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

KM, BG, and RU contributed to conception and design of the study. MA organized the database. MM performed the statistical analysis. KM, BG, RU, MA, and MM wrote the first draft of the manuscript. MZ, AV-M, and DC wrote sections of the manuscript. All the authors contributed to manuscript revision, read, and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.803481/full#supplementary-material

REFERENCES

Adekanmbi, F. P., and Ukpere, W. I. (2020). Individual substance abuse, perceived workplace fairness and organisational factors as predictors of absenteeism among civil servants in Oyo State. *Psychol. Educ.* 57, 309–323.

Agrawal, P., and Gautam, O. (2020). "The effects of leaders' behavior on job satisfaction, organizational citizenship behavior, deviant behavior, and job performance of employees," in *Analyzing Workplace Deviance in Modern Organizations*, ed N. Sharma (Pennsylvania: IGI Global), 100–113. doi: 10.4018/978-1-5225-9996-8.ch006

Aguilera, R. V., Rupp, D. E., Williams, C. A., and Ganapathi, J. (2007). Putting the S back in corporate social responsibility: a multilevel theory of social change in organizations. *Acad. Manage. Rev.* 32, 836–863. doi: 10.5465/amr.2007.25275678

Aguinis, H., and Glavas, A. (2012). What we know and don't know about corporate social responsibility: a review and research agenda. *J. Manag.* 38, 932–968. doi: 10.1177/0149206311436079

Alarcon, G. M., and Edwards, J. M. (2011). The relationship of engagement, job satisfaction and turnover intentions. *Stress Health* 27, e294–e298. doi: 10.1002/smi.1365

Ambrose, M. L., Seabright, M. A., and Schminke, M. (2002). Sabotage in the workplace: the role of organizational justice. *Organ. Behav. Hum. Decis. Process.* 89, 947–965. doi: 10.1016/S0749-5978(02)00037-7

Antonaki, X.-E., and Trivellas, P. (2014). Psychological contract breach and organizational commitment in the Greek banking sector: the mediation effect of Job satisfaction. *Proc. Soc. Behav. Sci.* 148, 354–361. doi: 10.1016/j.sbspro.2014.07.053

Arnold, J. A., Arad, S., Rhoades, J. A., and Drasgow, F. (2000). The empowering leadership questionnaire: the construction and validation of a new scale for measuring leader behaviors. *J. Organ. Behav.* 21, 249–269. doi: 10.1002/(SICI)1099-1379(200005)21:3<249::AID-JOB10>3.0.CO;2-#

Ashforth, B. E., and Mael, F. (1989). Social identity theory and the organization. *Acad. Manage. Rev.* 14, 20–39. doi: 10.5465/amr.1989.4278999

Avery, D. R., McKay, P. F., Wilson, D. C., Volpone, S. D., and Killham, E. A. (2011). Does voice go flat? how tenure diminishes the impact of voice. *Hum. Resour. Manag.* 50, 147–158. doi: 10.1002/hrm.20403

Aydogdu, S., and Asikgil, B. (2011). An empirical study of the relationship among job satisfaction, organizational commitment and turnover intention. *Int. Rev. Manage. Market.* 1, 43–53.

Azim, M. (2016). Corporate Social Responsibility and employee behavior: mediating role of organizational commitment. *Rev. Bus. Manag.* 18, 207–225. doi: 10.7819/rbgn.v18i60.2319

Azim, M. T., Diyab, A. A., and Al-Sabaan, S. A. (2014). CSR, employee job attitude and behavior: Saudi bank experience. *Transylvanian Rev. Adm. Sci.* 43, 25–47.

Babalola, M. T., Ren, S., Ogbonnaya, C., Riisla, K., Soetan, G. T., and Gok, K. (2020). Thriving at work but insomniac at home: understanding the relationship between supervisor bottom-line mentality and employee functioning. *Hum. Relat.* 75, 33–57. doi: 10.1177/0018726720978687

Barton, H., and Barton, L. C. (2011). Trust and psychological empowerment in the Russian work context. *Hum. Resour. Manag. Rev.* 21, 201–208. doi: 10.1016/j.hrmr.2011.02.001

Basil, D. Z., and Erlandson, J. (2008). Corporate Social Responsibility website representations: a longitudinal study of internal and external self-presentations. *J. Mark. Commun.* 14, 125–137. doi: 10.1080/13527260701858497

Bedarkar, M., and Pandita, D. (2014). A study on the drivers of employee engagement impacting employee performance. *Proc. Soc. Behav. Sci.* 133, 106–115. doi: 10.1016/j.sbspro.2014.04.174

Bennett, R. J., and Robinson, S. L. (2000). Development of a measure of workplace deviance. *J. Appl. Psychol.* 85, 349–60. doi: 10.1037/0021-9010.85.3.349

Berry, B. (2004). Organizational culture: a framework and strategies for facilitating employee whistleblowing. *Employee Responsib. Rights J.* 16, 1–11. doi: 10.1023/B:ERRJ.0000017516.40437.b1

Blau, P. M. (1964). *Exchange And Power In Social Life*. New York: John Wiley & Sons.

Bright, L. (2008). Does public service motivation really make a difference on the job satisfaction and turnover intentions of public employees? *Am. Rev. Public Adm.* 38, 149–166. doi: 10.1177/0275074008317248

Campbell, J. L. (2007). Why would Corporations behave in socially responsible ways? An Institutional Theory of Corporate Social Responsibility. *Acad. Manag. Rev.* 32, 946–967. doi: 10.5465/amr.2007.25275684

Chaudhary, R. (2017). CSR and turnover intentions: examining the underlying psychological mechanisms. *Soc. Responsib. J.* 13, 643–660. doi: 10.1108/SRJ-10-2016-0184

Chen, D., Gao, H., and Ma, Y. (2021). Human capital-driven acquisition: evidence from the inevitable disclosure doctrine. *Manag. Sci.* 67, 4643–4664. doi: 10.1287/mnsc.2020.3707

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Mahwah: Lawrence Erlbaum.

Colbert, A. E., Mount, M. K., Harter, J. K., Witt, L. A., and Barrick, M. R. (2004). Interactive effects of personality and perceptions of the work situation on workplace deviance. *J. Appl. Psychol.* 89, 599–609. doi: 10.1037/0021-9010.89.4.599

Cramer, J. (2005). Company Learning about Corporate Social Responsibility. *Bus. Strat. Environ.* 14, 255–266. doi: 10.1002/bse.432

Cranny, C. J., Smith, P. C., and Stone, E. (1992). *Job Satisfaction: How People Feel About Their Jobs And How It Affects Their Performance*. Minneapolis: Lexington Books.

Crant, J., Kim, T., and Wang, J. (2011). Dispositional antecedents of demonstration and usefulness of voice behavior. *J. Bus. Psychol.* 26, 285–297. doi: 10.1007/s10869-010-9197-y

Crede, M., Chernyshenko, O. S., Stark, S., Dalal, R. S., and Bashshur, M. (2007). Job satisfaction as mediator: an assessment of job satisfaction's position within the nomological network. *J. Occup. Organ. Psychol.* 80, 515–538. doi: 10.1348/096317906X136180

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika* 16, 297–334. doi: 10.1007/BF02310555

Cropanzano, R., and Mitchell, M. S. (2005). Social exchange theory: an interdisciplinary review. *J. Manag.* 31, 874–900. doi: 10.1177/0149206305279602

Cropanzano, R., and Rupp, D. E. (2003). An overview of organizational justice: implications for work motivation. *Motiv. Work Behav.* 7, 82–95.

Czarnota-Bojarska, J. (2015). Counterproductive work behavior and job satisfaction: a surprisingly rocky relationship. *J. Manag. Organ.* 21, 460–470. doi: 10.1017/jmo.2015.15

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *J. Appl. Psychol.* 90, 1241–55. doi: 10.1037/0021-9010.90.6.1241

Davis-Blake, A., Broschak, J. P., and George, E. (2003). Happy together? how using nonstandard workers affects exit, voice, and loyalty among standard employees. *Acad. Manag. J.* 46, 475–485. doi: 10.5465/30040639

de Gilder, D., Schuyt, T. N. M., and Breedijk, M. (2005). Effects of an employee volunteering program on the work force: the ABN-AMRO Case. *J. Bus. Ethics* 61, 143–152. doi: 10.1007/s10551-005-7101-x

De Roeck, K., and Delobbe, N. (2012). Do environmental CSR initiatives serve organizations' legitimacy in the oil industry? Exploring employees' reactions through organizational identification theory. *J. Bus. Ethics* 110, 397–412. doi: 10.1007/s10551-012-1489-x

De Roeck, K., Marique, G., Stinglhamber, F., and Swaen, V. (2014). Understanding employees' responses to corporate social responsibility: mediating roles of overall justice and organisational identification. *Int. J. Hum. Resour. Manag.* 25, 91–112. doi: 10.1080/09585192.2013.781528

Deery, S. J., Iverson, R. D., Buttigieg, D. M., and Zatzick, C. D. (2014). Can union voice make a difference? the effect of union citizenship behavior on employee absence. *Hum. Resour. Manag.* 53, 211–228. doi: 10.1002/hrm.21549

Detert, J. R., and Burris, E. R. (2007). Leadership behavior and employee voice: is the door really open? *Acad. Manag. J.* 50, 869–884. doi: 10.5465/amj.2007.26279183

Dhanesh, G. S. (2014). CSR as organization–employee relationship management strategy: a case study of socially responsible information technology companies in India. *Manag. Commun. Q.* 28, 130–149. doi: 10.1177/0893318913517238

Djaelani, A. K., Sanusi, A., and Triatmanto, B. (2021). Spiritual leadership, job Satisfaction, and its effect on organizational commitment and organizational citizenship behavior. *Manag. Sci. Lett.* 11, 3907–3914. doi: 10.5267/j.msl.2020.7.020

Edmans, A. (2012). The Link Between Job Satisfaction and Firm Value, With Implications for Corporate Social Responsibility. *Acad. Manag. Persp.* 26, 1–19. doi: 10.5465/amp.2012.0046

Ellen, P. S., Webb, D. J., and Mohr, L. A. (2006). Building corporate associations: consumer attributions for corporate socially responsible programs. *J. Acad. Mark. Sci.* 34, 147–157. doi: 10.1177/0092070305284976

Engemann, K. N., and Scott, C. W. (2020). Voice in safety-oriented organizations: examining the intersection of hierarchical and mindful social contexts. *Hum. Resour. Manag. Rev.* 30:100650. doi: 10.1016/j.hrmr.2018.05.002

Farh, J., Zhong, C., and Organ, D. W. (2004). Organizational citizenship behavior in the People's republic of China. *Organ. Sci.* 15, 241–253. doi: 10.1287/orsc.1030.0051

Farndale, E., Van Ruiten, J., Kelliher, C., and Hope-Hailey, V. (2011). The influence of perceived employee voice on organizational commitment: an exchange perspective. *Hum. Resour. Manag.* 50, 113–129. doi: 10.1002/hrm.20404

Farooq, M., Farooq, O., and Cheffi, W. (2019). How do employees respond to the CSR initiatives of their organizations: empirical evidence from developing countries. *Sustainability* 11:2646. doi: 10.3390/su11092646

Farooq, M., Farooq, O., and Jasimuddin, S. M. (2014). Employees response to corporate social responsibility: exploring the role of employees' collectivist orientation. *Eur. Manag. J.* 32, 916–927. doi: 10.1016/j.emj.2014.03.002

Farooq, O., Payaud, M., Merunka, D., and Valette-Florence, P. (2013). The impact of corporate social responsibility on organizational commitment: exploring multiple mediation mechanisms. *J. Bus. Ethics* 125, 563–580. doi: 10.1007/s10551-013-1928-3

Farooq, O., Rupp, D. E., and Farooq, M. (2017). The multiple pathways through which internal and external corporate social responsibility influence organizational identification and multifoci outcomes: the moderating role of cultural and social orientations. *Acad. Manag. J.* 60, 954–985. doi: 10.5465/amj.2014.0849

Faul, F., Erdfelder, E., Lang, A. G., and Buchner, A. (2007). G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav. Res. Methods* 39, 175–191. doi: 10.3758/BF03193146

Folger, R., and Cropanzano, R. (2001). "Fairness theory: justice as accountability," in *Advances in Organizational Justice*, eds J. Greenberg and R. Cropanzano (Stanford: Stanford University Press), 1–55.

Fornell, C., and Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: algebra and statistics. *J. Mark. Res.* 18, 382–388. doi: 10.1177/002224378101800313

Fuller, J. B., Barnett, T., Hester, K., Relyea, C., and Frey, L. (2007). An exploratory examination of voice behavior from an impression management perspective. *J. Manag. Issues* 19, 134–151.

Gao, L., Janssen, O., and Shi, K. (2011). Leader trust and employee voice: the moderating role of empowering leader behaviors. *Leadersh. Q.* 22, 787–798. doi: 10.1016/j.leaqua.2011.05.015

Gharleghi, B., Afshar Jahanshahi, A., and Nawaser, K. (2018). The outcomes of corporate social responsibility to employees: empirical evidence from a developing country. *Sustainability* 10:698. doi: 10.3390/su10030698

Gong, Y., Chang, S., and Cheung, S. (2010). High-performance work system and collective OCB: a collective social exchange. *Hum. Resour. Manag. J.* 20, 119–137. doi: 10.1111/j.1748-8583.2010.00123.x

Graafland, J., and Schouten, C. M. D. (2012). Motives for corporate social responsibility. *Economist* 160, 377–396. doi: 10.1007/s10645-012-9198-5

Grant, A. M. (2013). Rocking the boat but keeping it steady: the role of emotional regulation in employee voice. *Acad. Manag. J.* 56, 1703–1723. doi: 10.5465/amj.2011.0035

Greenidge, D., Devonish, D., and Alleyne, P. (2014). The relationship between ability-based emotional intelligence and contextual performance and counterproductive work behaviors: a test of the mediating effects of job satisfaction. *Hum. Perform.* 27, 225–242. doi: 10.1080/08959285.2014.913591

Griep, Y., Vantilborgh, T., and Jones, S. K. (2020). The relationship between psychological contract breach and counterproductive work behavior in social enterprises: do paid employees and volunteers differ? *Econ. Industr. Democr.* 41, 727–745. doi: 10.1177/0143831X17744029

Guo, X. W. (2012). Counterproductive work behaviors, Confucian values, and production deviance: the mediating effect of job satisfaction. *Soc. Behav. Pers. Int. J.* 40, 1045–1056. doi: 10.2224/sbp.2012.40.6.1045

Hackman, J. R., and Oldham, G. R. (1975). Development of the job diagnostic survey. *J. Appl. Psychol.* 60, 159–170. doi: 10.1037/h0076546

Hager, W. (2006). Die Fallibilität empirischer Daten und die Notwendigkeit der Kontrolle von falschen Entscheidungen [The fallibility of empirical data and the need for controlling for false decisions]. *Z. Psychol.* 214, 10–23. doi: 10.1026/0044-3409.214.1.10

Hamid, N. (2020). The application of spiritual leadership affects job satisfaction and deviant behavior in the workplace. *Hum. Syst. Manag.* 39, 1–11. doi: 10.3233/HSM-190639

Hansen, S. D., Dunford, B. B., Boss, A. D., Boss, R. W., and Angermeier, I. (2011). Corporate social responsibility and the benefits of employee trust: a cross-disciplinary perspective. *J. Bus. Ethics* 102, 29–45. doi: 10.1007/s10551-011-0903-0

Hardy, G. E., Woods, D., and Wall, T. D. (2003). The impact of psychological distress on absence from work. *J. Appl. Psychol.* 88, 306–314. doi: 10.1037/0021-9010.88.2.306

He, P., Jiang, C., Xu, Z., and Shen, C. (2021). Knowledge hiding: current research status and future research directions. *Front. Psychol.* 12:748237. doi: 10.3389/fpsyg.2021.748237

Hogg, M. A., and Terry, D. I. (2000). Social identity and self-categorization processes in organizational contexts. *Acad. Manag. Rev.* 25, 121–140. doi: 10.5465/amr.2000.2791606

Hsiung, H. (2012). Authentic leadership and employee voice behavior: a multi-level psychological process. *J. Bus. Ethics* 107, 349–361. doi: 10.1007/s10551-011-1043-2

Huang, M. H., and Cheng, Z. H. (2012). The effects of inter-role conflicts on turnover intentions among frontline service providers: does gender matter? *Serv. Industr. J.* 32, 367–381. doi: 10.1080/02642069.2010.545391

Illies, R., Wilson, K. S., and Wagner, D. T. (2009). The spillover of daily job satisfaction onto employees' family lives: the facilitating role of work-family integration. *Acad. Manag. J.* 52, 87–102. doi: 10.5465/amj.2009.36461938

Janssen, O., de Vries, T., and Cozijnsen, A. J. (1998). Voicing by adaptive and innovating employees: an empirical study on how personality and environment interact to affect voice behavior. *Hum. Relat.* 51, 945–967. doi: 10.1177/001872679805100705

Jones, D. A. (2010). Does serving the community also serve the company? Using organizational identification and social exchange theories to understand employee responses to a volunteerism programme. *J. Occup. Organ. Psychol.* 83, 857–878. doi: 10.1348/096317909X477495

Joo, B., and Park, S. (2010). Career satisfaction, organizational commitment, and turnover intention: the effects of goal orientation, organizational learning culture and developmental feedback. *Leadersh. Organ. Dev. J.* 31, 482–500. doi: 10.1108/01437731011069999

Judge, T. A., Bono, J. E., and Locke, E. A. (2000). Personality and job satisfaction: the mediating role of job characteristics. *J. Appl. Psychol.* 85, 237–249. doi: 10.1037/0021-9010.85.2.237

Judge, T. A., Scott, B. A., and Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: test of a multilevel model. *J. Appl. Psychol.* 91, 126–38. doi: 10.1037/0021-9010.91.1.126

Khatri, N., Fern, C. T., and Budhwar, P. (2001). Explaining employee turnover in an Asian context. *Hum. Resour. Manag. J.* 11, 54–74. doi: 10.1111/j.1748-8583.2001.tb00032.x

Kim, H. L., Rhou, Y., Uysal, M., and Kwon, N. (2017). An examination of the links between corporate social responsibility (CSR) and its internal consequences. *Int. J. Hosp. Manag.* 61, 26–34. doi: 10.1016/j.ijhm.2016.10.011

Kim, J. S., Song, H. J., and Lee, C. K. (2016). Effects of corporate social responsibility and internal marketing on organizational commitment and turnover intentions. *Int. J. Hosp. Manag.* 55, 25–32. doi: 10.1016/j.ijhm.2016.02.007

Kline, R. (2011). *Principles and Practice of Structural Equation Modeling*. New York: Guilford Press.

Ko, S. H., Moon, T. W., and Hur, W. M. (2018). Bridging service employees' perceptions of CSR and organizational citizenship behavior: the moderated mediation effects of personal traits. *Curr. Psychol.* 37, 816–831. doi: 10.1007/s12144-017-9565-0

Lacobucci, D., Saldanha, N., and Deng, X. (2007). A meditation on mediation: evidence that structural equations models perform better than regressions. *J. Consum. Psychol.* 17, 139–153. doi: 10.1016/S1057-7408(07)70020-7

Landau, J. (2009). To speak or not to speak: predictors of voice propensity. *J. Organ. Cult. Commun. Confl.* 13, 35–54.

LePine, J. A., and Van Dyne, L. (1998). Predicting voice behavior in work groups. *J. Appl. Psychol.* 83, 853–868. doi: 10.1037/0021-9010.83.6.853

Li, N., Zhang, L., Xiao, G., Chen, J., and Lu, Q. (2019). The relationship between workplace violence, job satisfaction, and turnover intention in emergency nurses. *Int. Emerg. Nurs.* 45, 50–55. doi: 10.1016/j.ienj.2019.02.001

Liang, J., Farh, C. I., and Farh, J.-L. (2012). Psychological antecedents of promotive and prohibitive voice: a two-wave examination. *Acad. Manag. J.* 55, 71–92. doi: 10.5465/amj.2010.0176

Liu, W., Zhu, R., and Yang, Y. (2010). I warn you because I like you: voice behavior, employee identifications, and transformational leadership. *Leadersh. Q.* 21, 189–202. doi: 10.1016/j.leaqua.2009.10.014

Lu, A. C. C., and Gursoy, D. (2013). Impact of job burnout on satisfaction and turnover intention: do generational differences matter? *J. Hosp. Tour. Res.* 40, 210–235. doi: 10.1177/1096348013495696

Lu, L., Lu, A. C. C., Gursoy, D., and Neale, N. R. (2016). Work engagement, job satisfaction, and turnover intentions: a comparison between supervisors and line-level employees. *Int. J. Contemp. Hosp. Manag.* 28, 737–761. doi: 10.1108/IJCHM-07-2014-0360

Mael, F., and Ashforth, B. E. (1992). Alumni and their alma mater: a partial test of the reformulated model of organizational identification. *J. Organ. Behav.* 13, 103–123. doi: 10.1002/job.4030130202

Mahmood, F., Qadeer, F., Abbas, Z., Hussain, I., Saleem, M., Hussain, A., et al. (2020). Corporate social responsibility and employees' negative behaviors under abusive supervision: a multilevel insight. *Sustainability* 12:2647. doi: 10.3390/su12072647

Maignan, I., and Ferrell, O. C. (2000). Measuring corporate citizenship in two countries: the case of the United States and France. *J. Bus. Ethics* 23, 283–297. doi: 10.1023/A:1006262325211

Malhotra, M., and Kathuria, K. (2017). Relationship between spiritual intelligence, job satisfaction and counterproductive work behaviour among employees of multinational companies in India. *J. Psychosoc. Res.* 12, 315–323.

Mallory, D. B., and Rupp, D. E. (2016). ""Good" leadership: using corporate social responsibility to enhance leader-member exchange," in *The Oxford Handbook Of Leader-Member Exchange*, eds T. N. Bauer and B. Erdogan (Oxford: Oxford University Press), 335–350.

Manika, D., Gregory-Smith, D., Wells, V. K., Comerford, L., and Aldrich-Smith, L. (2017). Linking environmental sustainability and healthcare: the effects of an energy-saving intervention in two hospitals. *Int. J. Bus. Sci. Appl. Manag.* 11, 32–55.

Marquis, C., and Qian, C. (2014). Corporate social responsibility reporting in China: symbol or substance? *Organ. Sci.* 25, 127–148. doi: 10.1287/orsc.2013.0837

Mashi, M. S. (2018). The mediating role of job satisfaction in the relationship between organizational justice and employee outcomes. *Int. J. Public Adm.* 41, 1351–1360. doi: 10.1080/01900692.2017.1388819

Matten, D., and Moon, J. (2008). Implicit" and "Explicit" CSR: a conceptual framework for a comparative understanding of Corporate Social Responsibility. *Acad. Manag. Rev.* 33, 404–424. doi: 10.5465/amr.2008.31193458

Maynes, T. D., and Podsakoff, P. M. (2014). Speaking more broadly: an examination of the nature, antecedents, and consequences of an expanded set of employee voice behaviors. *J. Appl. Psychol.* 99, 87–112. doi: 10.1037/a0034284

McNall, L. A., Masuda, A. D., and Nicklin, J. M. (2009). Flexible work arrangements, job satisfaction, and turnover intentions: the mediating role of work-to-family enrichment. *J. Psychol.* 144, 61–81. doi: 10.1080/00223980903356073

McWilliams, A., and Siegel, D. (2001). Corporate social responsibility: a theory of the firm perspective. *Acad. Manag. Rev.* 26, 117–127. doi: 10.5465/amr.2001.4011987

Meier, L. L., and Spector, P. E. (2013). Reciprocal effects of work stressors and counterproductive work behavior: a five-wave longitudinal study. *J. Appl. Psychol.* 98, 529–539. doi: 10.1037/a0031732

Memon, K. R. (2014b). Strategic role of HRD in employee skill development: an employer perspective. *J. Hum. Resour. Manag.* 2, 27–32. doi: 10.11648/j.jhrm.20140201.15

Memon, K. R. (2014a). Effects of leadership styles on employee performance: integrating the mediating role of culture, gender and moderating role of communication. *Int. J. Manag. Sci. Bus. Res.* 3, 63–80.

Memon, K. R., and Ghani, B. (2020). The relationship between psychological contract and voice behavior—a social exchange perspective. *Asian J. Bus. Ethics* 9, 257–274. doi: 10.1007/s13520-020-00109-4

Memon, K. R., Ghani, B., and Kazi, A. A. (2018). Restructuring the relationship between performance management and employee engagement. *Pakistan Bus. Rev.* 20, 99–109.

Memon, K. R., Ghani, B., and Khalid, S. (2020). The relationship between corporate social responsibility and employee engagement - A social exchange perspective. *Int. J. Bus. Sci. Appl. Manag.* 15, 1–16.

Memon, K. R., Say, K. O., Khalid, S., and Ghani, B. (2021). Mediation - Moderation mechanism between the relationship of corporate social responsibility and employees' promotive voice behavior. *Int. J. Bus. Sci. Appl. Manag.* 16, 50–68.

Moro, S., Ramos, R. F., and Rita, P. (2020). What drives job satisfaction in IT companies? *Int. J. Product. Perform. Manag.* 70, 391–407. doi: 10.1108/IJPPM-03-2019-0124

Morrison, E. W. (2011). Employee voice behavior: integration and directions for future research. *Acad. Manag. Ann.* 5, 373–412. doi: 10.5465/19416520.2011.574506

Mount, M., Ilies, R., and Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: the mediating effects of job satisfaction. *Pers. Psychol.* 59, 599–622. doi: 10.1111/j.1744-6570.2006.00048.x

Ng, T. W., Yam, K. C., and Aguinis, H. (2019). Employee perceptions of corporate social responsibility: effects on pride, embeddedness, and turnover. *Pers. Psychol.* 72, 107–137. doi: 10.1111/peps.12294

Ng, T. W. H., and Feldman, D. C. (2011). Employee voice behavior: a meta-analytic test of the conservation of resources framework. *J. Organ. Behav.* 33, 216–234. doi: 10.1002/job.754

Nikolaou, I., Vakola, M., and Bourantas, D. (2008). Who speaks up at work? Dispositional influences on employees' voice behavior. *Pers. Rev.* 37, 666–679. doi: 10.1108/00483480810906892

Nunnally, J. C. (1978). *Psychometric Theory*, 2nd Edn. New York: McGraw-Hill.

Ooi, S. K., Ooi, C. A., and Memon, K. R. (2020). The role of CSR oriented organisational culture in eco-innovation practices. *World Rev. Entrepreneursh. Manag. Sustain. Dev.* 16, 538–556. doi: 10.1504/WREMSD.2020.110451

Organ, D. W., and Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Pers. Psychol.* 48, 775–802. doi: 10.1111/j.1744-6570.1995.tb01781.x

Oshagbemi, T. (2013). *Job Satisfaction In Higher Education*. Bloomington: Trafford Publishing.

Pham, H. (2020). Impact of human resource management practices on enterprises' competitive advantages and business performance: evidence from telecommunication industry. *Manag. Sci. Lett.* 10, 721–732. doi: 10.5267/j.msl.2019.10.025

Qin, X., Direnzo, M. S., Xu, M., and Duan, Y. (2014). When do emotionally exhausted employees speak up? exploring the potential curvilinear relationship between emotional exhaustion and voice. *J. Organ. Behav.* 35, 1018–1041. doi: 10.1002/job.1948

Randhawa, G. (2007). Relationship between job satisfaction and turnover intentions: an empirical analysis. *Indian Manag. Stud. J.* 11, 149–159.

Rees, C., Alfes, K., and Gatenby, M. (2013). Employee voice and engagement: connections and consequences. *Int. J. Hum. Resour. Manag.* 24, 2780–2798. doi: 10.1080/09585192.2013.763843

Riordan, C. M., Gatewood, R. D., and Bill, J. B. (1997). Corporate image: employee reactions and implications for managing corporate social performance. *J. Bus. Ethics* 16, 401–412. doi: 10.1023/A:1017989205184

Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsib. Rights J.* 2, 121–139. doi: 10.1007/BF01384942

Ruiz-Palomino, P., and Martínez-Cañas, R. (2014). Ethical culture, ethical intent, and organizational citizenship behavior: the moderating and mediating role of person-organization fit. *J. Bus. Ethics* 120, 95–108. doi: 10.1007/s10551-013-1650-1

Rupp, D. E., Ganapathi, J., Aguilera, R. V., and Williams, C. A. (2006). Employee reactions to corporate social responsibility: an organizational justice framework. *J. Organ. Behav.* 27, 537–543. doi: 10.1002/job.380

Rupp, D. E., and Mallory, D. B. (2015). Corporate social responsibility: psychological, person-centric, and progressing. *Annu. Rev. Organ. Psychol. Organ. Behav.* 2, 211–236. doi: 10.1146/annurev-orgpsych-032414-111505

Rupp, D. E., Skarlicki, D., and Shao, R. (2013). The psychology of corporate social responsibility and humanitarian work: a person-centric perspective. *Industr. Organ. Psychol.* 6, 361–368. doi: 10.1111/iops.12068

Sackett, P. R. (2002). The structure of counterproductive work behaviors: dimensionality and relationships with facets of job performance. *Int. J. Select. Assess.* 10, 5–11. doi: 10.1111/1468-2389.00189

Seibert, S. E., Wang, G., and Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: a meta-analytic review. *J. Appl. Psychol.* 96, 981–1003. doi: 10.1037/a0022676

Shah, I. H., Ajmal, M., and Rahman, F. (2010). Structure of technical education and vocational training in Pakistan. *J. Tech. Educ. Train.* 2, 63–76.

Sherf, E. N., Parke, M. R., and Isaakyan, S. (2020). Distinguishing voice and silence at work: unique relationships with perceived impact, psychological safety, and burnout. *Acad. Manag. J.* 64, 114–148. doi: 10.5465/amj.2018.1428

Shin, I., Hur, W. M., Kim, M., and Kang, S. (2017). Hidden roles of CSR: perceived corporate social responsibility as a preventive against counterproductive work behaviors. *Sustainability* 9:955. doi: 10.3390/su9060955

Shiun, T., and Ho, A. (2012). *The Impact of Perceived CSR on Employee Performance and Turnover Intention: An Examination of the Mediating Effect of Organizational Justice and Organization-Based Self esteem*. Ph.D. thesis. Singapore: Singapore Management University.

Si, S., and Li, Y. (2012). Human resource management practices on exit, voice, loyalty, and neglect: organizational commitment as a mediator. *Int. J. Hum. Resour. Manag.* 23, 1705–1716. doi: 10.1080/09585192.2011.580099

Singh, S. K., and Singh, A. P. (2019). Interplay of organizational justice, psychological empowerment, organizational citizenship behavior, and job satisfaction in the context of circular economy. *Manag. Decis.* 57, 937–952. doi: 10.1108/MD-09-2018-0966

Singhapakdi, A., Sirgy, M. J., Lee, D. J., Senasu, K., Yu, G. B., and Nisius, A. M. (2014). Gender disparity in job satisfaction of Western versus Asian managers. *J. Bus. Res.* 67, 1257–1266. doi: 10.1016/j.jbusres.2013.04.004

Skudiene, V., and Auruskeviciene, V. (2012). The contribution of corporate social responsibility to internal employee motivation. *Baltic J. Manag.* 7, 49–67. doi: 10.1108/17465261211197421

Srivastava, S., and Agrawal, S. (2020). Resistance to change and turnover intention: a moderated mediation model of burnout and perceived organizational support. *J. Organ. Change Manag.* 33, 1431–1447. doi: 10.1108/JOCM-02-2020-0063

Stamper, C. L., and Van Dyne, L. (2001). Work status and organizational citizenship behavior: a field study of restaurant employees. *J. Organ. Behav.* 22, 517–536. doi: 10.1002/job.100

Tajfel, H., and Turner, J. C. (1979). "An Integrative Theory of Intergroup Conflict," in *The Social Psychology of Intergroup Relations*, eds W. G. Austin and S. Worchel (Monterey: Brooks/Cole Publishing Co), 33–47.

Tajfel, H., and Turner, J. C. (1986). "The social identity theory of intergroup behavior," in *Psychology Of Intergroup Relations*, eds S. Worchel and W. Austin (Chicago: Nelson Hall), 7–24.

Tangirala, S., and Ramanujam, R. (2008). Exploring nonlinearity in employee voice: the effects of personal control and organizational identification. *Acad. Manag. J.* 51, 1189–1203. doi: 10.5465/amj.2008.35732719

Turker, D. (2009). How corporate social responsibility influences organizational commitment. *J. Bus. Ethics* 89, 189–204. doi: 10.1007/s10551-008-9993-8

Turnley, W. H., Bolino, M. C., Lester, S. W., and Bloodgood, J. M. (2003). The Impact of psychological contract fulfillment on the performance of in-role and organizational citizenship behaviors. *J. Manag.* 29, 187–206. doi: 10.1177/014920630302900204

Tziner, A., Oren, L., Bar, Y., and Kadosh, G. (2011). Corporate social responsibility, organizational justice and job satisfaction: how do they interrelate, if at all? *J. Work Organ. Psychol.* 27, 67–72. doi: 10.5093/tr2011v27n1a7

Ugwu, F. O., Onyishi, I. E., and Rodríguez-Sánchez, A. M. (2014). Linking organizational trust with employee engagement: the role of psychological empowerment. *Pers. Rev.* 43, 377–400. doi: 10.1108/PR-11-2012-0198

Valentine, S., and Fleischman, G. (2008). Ethics programs, perceived corporate social responsibility and job satisfaction. *J. Bus. Ethics* 77, 159–172. doi: 10.1007/s10551-006-9306-z

Viseu, J., Pinto, P., Borralha, S., and de Jesus, S. N. (2020). Role of individual and organizational variables as predictors of job satisfaction among hotel employees. *Tour. Hosp. Res.* 20:146735842092406. doi: 10.1177/1467358420924065

Walumbwa, F. O., and Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: mediating roles of ethical leadership andwork group psychological safety. *J. Appl. Psychol.* 94, 1275–1286. doi: 10.1037/a0015848

Wang, W., Fu, Y., Qiu, H., Moore, J. H., and Wang, Z. (2017). Corporate social responsibility and employee outcomes: a moderated mediation model of organizational identification and moral identity. *Front. Psychol.* 8:1906. doi: 10.3389/fpsyg.2017.01906

Wenbin, W., Fengjun, L., and Hui, L. (2012). Effect of corporate social responsibility on organizational citizenship behavior from the perspective of the reciprocity theory. *Contemp. Econ. Manag.* 11:006.

Wu, W., Tang, F., Dong, X., and Liu, C. (2015). Different identifications cause different types of voice: a role identity approach to the relations between organizational socialization and voice. *Asia Pacif. J. Manag.* 32, 251–287. doi: 10.1007/s10490-014-9384-x

Yu, Y., and Choi, Y. (2014). Corporate social responsibility and firm performance through the mediating effect of organizational trust in Chinese firms. *Chin. Manag. Stud.* 8, 577–592. doi: 10.1108/CMS-10-2013-0196

Zhang, L., and Deng, Y. (2016). Guanxi with supervisor and counterproductive work behavior: the mediating role of job satisfaction. *J. Bus. Ethics* 134, 413–427. doi: 10.1007/s10551-014-2438-7

Zhang, X., Hu, B., and Qiu, M. (2014). Job satisfaction as a mediator in the relationship between performance appraisal and voice behavior. *Soc. Behav. Pers.* 42, 1315–1324. doi: 10.2224/sbp.2014.42.8.1315

Zhao, H., Zhou, Q., He, P., and Jiang, C. (2019). How and when does socially responsible HRM affect employees' organizational citizenship behaviors toward the environment? *J. Bus. Ethics* 169, 371–385. doi: 10.1007/s10551-019-04285-7

Zheng, Q., Luo, Y., and Maksimov, V. (2014). Achieving legitimacy through corporate social responsibility: the case of emerging economy firms. *J. World Bus.* 50, 389–403. doi: 10.1016/j.jwb.2014.05.001

Zhuang, M., Zhu, W., Huang, L., and Pan, W.-T. (2021). Research of influence mechanism of corporate social responsibility for smart cities on consumers' purchasing intention. *Library Hi Tech* [Epub Online ahead of Print]. doi: 10.1108/LHT-11-2020-0290

Zulfiqar, S., Sadaf, R., Popp, J., Vveinhardt, J., and Máté, D. (2019). An examination of corporate social responsibility and employee behavior: the case of Pakistan. *Sustainability* 11:3515. doi: 10.3390/su11133515

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

frontiers in Psychology

ORIGINAL RESEARCH
published: 30 December 2021
doi: 10.3389/fpsyg.2021.800778

Abusive Supervision and Its Impact on Knowledge Hiding Behavior Among Sales Force

Rana Faizan Gul[1], Liu Dunnan[1,2], Khalid Jamil[1], Fazal Hussain Awan[1], Basharat Ali[3], Ayaz Qaiser[4] and Qi Aobin[1]*

[1] School of Economics and Management, North China Electric Power University, Beijing, China, [2] Beijing Key Laboratory of New Energy and Low-Carbon Development, North China Electric Power University, Beijing, China, [3] Department of Sociology, Government College University Faisalabad, Faisalabad, Pakistan, [4] Department of Business Administration, University of Sialkot, Sialkot, Pakistan

The purpose of this study is to test the relationship between abusive supervision and employee's knowledge hiding behavior (evasive hiding, playing dumb, rationalized hiding) among sales force of insurance companies in Pakistan. The paper also strives to theoretically discuss and then seek empirical evidence to the mediational paths of psychological contract breach that explain the focal relationship between abusive supervision and knowledge hiding. To test the proposed hypotheses, the study draws cross-sectional data from sales force of insurance companies working in Pakistan. Data were collected through structured questionnaire and using convenient sampling technique. The final sample of 340 valid and complete responses analyzed using structured equation modeling (partial least square) approach. Results showed that abusive supervision is positively related to employee's knowledge hiding behaviors. Also, mediating variable psychological contract breach partially mediates the abusive supervision-knowledge hiding behavior linkage. Current study has tested the positive relationship between abusive supervision and knowledge hiding behaviors unlike most of the previous investigations that have focused on knowledge sharing behavior. The study also empirically investigated the mediational route of psychological contract breach, that explains the blame attributed by the beleaguered employee that led to covert retaliatory behavior, such as knowledge hiding. This paper contributes to knowledge hiding literature which is an important part of knowledge management from the perspective of abusive supervision based on both reactance theory and SET theory.

Keywords: abusive supervision, knowledge hiding, psychological contract breach, evasive hiding, playing dumb, rationalized hiding

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Rafael Robina-Ramírez, University of Extremadura, Spain
Stefania Fantinelli, University of Studies G. d'Annunzio Chieti and Pescara, Italy

****Correspondence:***
Basharat Ali
basharataligcuf@yahoo.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *24 October 2021*
Accepted: *02 December 2021*
Published: *30 December 2021*

Citation:
Gul RF, Dunnan L, Jamil K, Awan FH, Ali B, Qaiser A and Aobin Q (2021) Abusive Supervision and Its Impact on Knowledge Hiding Behavior Among Sales Force. Front. Psychol. 12:800778. doi: 10.3389/fpsyg.2021.800778

INTRODUCTION

Every organization needs knowledge since it provides sustainable competitiveness in the current complex, ambiguous, uncertain, and volatile world. Employees ought to acquire and share knowledge amongst themselves (Han et al., 2021). A diverse and organization with a greater capacity emphasis on the adoption of the various strategic mix, such as the knowledge management (KM). KM helps companies respond to transitions and boost activities' viability and competitive

advantage. In designing and implementing innovative services and goods, KMP has been viewed as a critical component to handle the business method in the modern business environment. This is why companies continue to implement new and successful knowledge management methods to achieve sustainability goals (Kumar Jha and Varkkey, 2018). Therefore, organizations are expected to invest in creating a comprehensive knowledge management system besides ensuring there is a conducive environment that promotes goodwill and trust to have seamless sharing of knowledge. According to several studies, transferring knowledge from one employee to another enhances organizational performance and effectiveness (Singh, 2019).

Despite efforts made by organizations to ensure there is the proper transfer of knowledge among employees, there is still some reluctance among employees to share knowledge (Singh, 2019). Most organizations have gone the extra mile to put strategies that will ensure a smooth transfer of knowledge amongst employees. The measures include introducing systems that reward employees, strengthening and enhancing interpersonal relationships around the workplace, and creating a culture that enhances sharing of knowledge (Xiao and Cooke, 2019). Nevertheless, some employees have chosen not to share some of their critical knowledge with others. Despite the numerous studies conducted to demystify the importance of knowledge sharing, many employees are still rigid and fond of hoarding knowledge (Di Vaio et al., 2021).

Knowledge hiding is influenced by organizational factors, knowledge content, and individual factors. Based on personal factors, the contributors of knowledge hiding include perceived knowledge value, psychological possession of knowledge, and commitment to knowledge commitment (Nguyen et al., 2022). According to Connelly et al. (2012) factors such as corporate rules, reward systems and leadership may have an impact on how information is hidden. Sharing information at work is influenced by interpersonal relationships and the way one is treated by their supervisors. The present research is mostly quiet on how dysfunctional leadership influences an employee's choice to withhold information from others. On factors related to the knowledge, you find knowledge complexity and task relatedness. Other organizational factors that lead to knowledge hiding include politics, goal orientation, policies, knowledge management systems, culture, and leadership styles (Miminoshvili and Černe, 2021). As a result, you will find individuals who do not want to share knowledge avoiding activities that involve sharing of knowledge. Also, according to Khoreva and Wechtler (2020), abusive behaviors displayed by supervisors facilitate the habit of hiding knowledge. Although, such a topic is still lacking in terms of research since not many people have investigated how abusive behaviors by supervisors lead to knowledge hoarding (Anser et al., 2021).

Supervisors' abusive behaviors include intimidating, ridiculing, criticizing, and undermining employees' perceptions regarding the psychological contract (Khalid et al., 2018). The abusive behavior is always evident through hostile verbal and non-verbal behaviors but without physical contact. Once the psychological contract of employees has been breached, they opt to withhold knowledge (Jahanzeb et al., 2019). However, studies on the connection between knowledge hoarding and abusive supervision are still limited. But the consequences of abusive supervision can be dealt with through individual characteristics (Ghani et al., 2020).

Most of the studies have focused on the association between knowledge sharing behaviors and supervisor abuse that is different from knowledge hoarding behavior regarding the employee's motivation and intention (Feng and Wang, 2019). Our study is focused on both knowledge management and abusive supervision. The research aims to unravel the relationship between knowledge hiding behaviors and abusive supervision. In this research, hoarding of knowledge is regarded as covert retaliation used by the employee in the event of abusive supervision. According to Agarwal et al. (2021a,b)), when an aggravated person has less positional power than the supervisor or organization, where supervisory abuse is coming from, the individual will tend to use subtle retaliatory and overt strategies instead of direct retaliation overt. The study goes to the extent of investigating the knowledge hiding behaviors among employees, which often go undetected. However, they have adverse effects on the proper functioning and performance of a firm such as innovativeness, sustainability, profitability, and productivity (Xiao and Cooke, 2019).

The study also seeks to investigate to whom the blame goes in the light of abusive supervision that causes knowledge hiding behavior. According to Khoreva and Wechtler (2020), the employee subjected to abusive supervision will either resolve to blame the supervisor who dispensed the abuse or the organization for failing to lay down measures that protect the interests of employees. To demystify the indirect impact of knowledge hoarding behavior and abusive supervision, this research considers literature that clarifies if the employee will blame the organization in the instance of supervisory abuse.

There is a relevant literature review in the subsequent paragraphs, followed by a hypothesis of the relationships between the focal constructs. After which comes the research methodology, then analyses, and then discussion of results. The last section involves the implications, limitations, and future research recommendations for management.

HYPOTHESES AND DEVELOPMENT AND LITERATURE REVIEW

Components of Knowledge Hiding

Connelly et al. (2012) expressed that the knowledge hiding is, "intentionally attempting to hide or conceal task information, ideas, or know-how that has been sought by another person." When employees believe their immediate supervisor or managers are authentic and transformational, they are more willing to share critical resources with other members of the organization, whereas when they believe their immediate supervisor or managers are toxic and destructive, they are more reluctant to share their knowledge and demonstrate knowledge hiding behaviors. The three forms of knowledge hiding include evasive hiding that entails misleading pledge to offer a full answer in the future or offering wrong information; rationalized hiding

that entails blaming others or justifying your failure to provide the needed knowledge; and playing dumbs whereby the person hiding knowledge ignores the request to share knowledge (Weng et al., 2020). In knowledge hiding, unlike other negative knowledge behaviors, there is always a clear intent for an individual to decline sharing the requested information (Butt and Ahmad, 2021). On the other side, knowledge withholding entails an individual providing less information than the one required. Thus, it can be done intentionally since the person might not be sure that they are withholding important knowledge (Gul et al., 2021; Moh'd et al., 2021). For knowledge hoarding, the knowledge gathered might not have been requested. So, this study focuses on demystifying Intra organizational hiding of knowledge with great emphasis on the individual hiding of knowledge requested to supplement the knowledge associated with the study (Zhang and Min, 2021).

Social Exchange Theory

We find theoretical support for our argument in SET (Blau, 1968), which predicts knowledge concealing in the presence of abusive supervision. Individual activities motivated by a desired outcome are referred to be SET. For instance, an employee who goes above and beyond the call of duty expects the business to recognize and reward him or her appropriately (Gouldner, 1960). The social trade is governed by the reciprocity standard, which establishes the acceptable behavior of the participating parties. Positive and negative reciprocity norms are possible. Positive reciprocity entails a favorable reaction to favorable treatment, while negative reciprocity entails a tendency to react adversely to adverse treatment (Cropanzano and Mitchell, 2005). Thus, when an individual employee believes that he or she is being treated unfavorably, the individual will act unfavorably in return as a kind of reciprocity.

Social exchange theory also suggests that supervisory abuse leads to knowledge hiding. Usually, an individual's actions will be determined by a particular return being sought. According to Cook et al. (2013), an employee who goes the extra mile expects reward or recognition from the organization. So, it is evident that social exchange depends on a reciprocity norm which reveals the proper way of behaving (Mohsin et al., 2021; Sukumaran and Lanke, 2021). This norm can be not only positive but also negative (Bogilović et al., 2017). Positive reciprocity entails a positive response in the event of positive treatment, while on the other side negative reciprocity involves a negative response when there is negative treatment (Lanke, 2018). As a result, when an employee undergoes unfavorable treatment, he or she might respond negatively, which can be in the form of hiding knowledge (Cropanzano et al., 2002).

Abusive Supervision and Knowledge Hiding

According to past studies, supervisory abuse emanates from employees' undesirable behavioral and attitudinal outcomes like increased deviant workplace behavior, emotional exhaustion, job burnout, reduction in the organization's citizenship behavior, and low job performance (Arain et al., 2020). The abusive behaviors displayed by supervisors include hostile behaviors, belittlement, public ridicule, rudeness, and mocking. Besides, other studies also tested various individual (psychological entitlement and professional commitment) and organizational factors (leadership styles, policies, and organizational cultures) to be antecedents with knowledge hiding (Abdillah et al., 2020).

Thornton et al. (2009) revealed that knowledge hiding is the deliberate effort by one person to hide information demanded by another individual. Knowledge hiding behaviors were classified into three categories: rationalized hiding, playing dumb, and evasive hiding. In rationalized hiding, a person attempts to justify himself or herself to the information seeker or to blame a third party for failing to provide the desired knowledge. Similarly, when a person plays dumb, he or she portrays ignorance of the information sought by the knowledge seeker. Evasive hiding is described as the concealer supplying false facts or promising to disclose information in the future in order to deceive the knowledge seeker with no such genuine motives.

One of the undesirable behavioral outcomes happens to be knowledge hiding, which tends to be ignored in most literature about abusive supervision. Employee knowledge hiding behavior is one of the many outcomes of supervisory abuse. Many studies about abusive supervision regard it as a cause of various negative workplace results (Lin et al., 2020; Awan et al., 2021). However, several practitioners and scholars assume that knowledge sharing, and knowledge hiding are opposite outcomes from a similar continuum. But according to Rezwan and Takahashi (2021), these two are different constructs with different underlying mechanisms, antecedents, and motivations. The literature on the way and reasons as to why employees hide knowledge is lacking, unlike in studies demystifying the reasons why and how people share knowledge (Oubrich et al., 2021; Sarfraz et al., 2021).

Due to stronger decisional power and high power in organizations, employee engagement, and important duties in achieving organizational goals, leaders tend to display supervisory abuse such as attributing undesirable results, taking credit on behalf of employees, intimidating, ridiculing, and yelling at employees (Zhao and Jiang, 2021). As a result, supervisory abuse causes destructive leadership, whereby the leader displays both verbal and non-verbal hostile behaviors but without physical contact.

According to Lanke (2018), there are ways through which the negative outcomes of supervisory abuse can be established, especially through establishing the relationship between knowledge-associated behaviors and abusive supervision. Some ways include having a supportive organization that prevents the negative effects of supervisory abuse that affects knowledge sharing (Butt, 2020; Jamil et al., 2021). Islamic work ethics also weaken the direct negative impact of supervisory abuse that causes knowledge hiding (Khalid et al., 2018). According to Di Vaio et al. (2021), organizational justice also remedies supervisory abuse that prevents knowledge sharing because of emotional exhaustion. Group trust also weakens the negative impact brought about by supervisory abuse that prevents sharing of knowledge due to psychological capital (Nguyen et al., 2022). Self-reliance and psychological contract fulfillment can also reduce supervisory abuse on sharing knowledge by the leader to

member exchange (Xiao and Cooke, 2019). But studies on how organizational factors like motivation climate that is likely to cause hiding of knowledge either directly or indirectly are still lacking in extant literature (Han et al., 2021).

Supervisory abuse is a negative leadership trait that causes various deleterious and harmful work outcomes to an organization and an individual (Fischer et al., 2021). Employees only tend to share critical information with others when they find the managers or supervisors to be transformational or authentic (Islam et al., 2021). But when the supervisor happens to be destructive and toxic, employees will be reluctant to share knowledge hence displaying knowledge hiding actions (Khalid et al., 2018). Studies conducted reveal that when a supervisor is abusive, there will be some form of retaliation from the employees searching for fairness. The employees will retaliate as revenge for the abusive supervision displayed by the supervisor or manager (Ambrose and Ganegoda, 2020). But when the retaliation is direct and overt, it will not do any good for the employee due to some restraining factors like differences in positional power and the organizational hierarchy (Naseem et al., 2020; Teng et al., 2021). In return, the employee will resolve to use covert retaliation, which champions creating fairness without getting punished or identified (Low et al., 2021). Hence, we proposed following hypotheses:

H1a: Abusive Supervision has significant relationship with evasive hiding

H1b: Abusive Supervision has significant relationship with playing dumb

H1c: Abusive Supervision has significant relationship with rationalized hiding

Mediating Role of Psychological Contract Breach

A psychological contract breach (PCB) is a cognitive perception showing that an employee is yet to receive everything promised to them by the organization either formally or informally. The PCB occurs when an organization or their representatives, for instance, managers, do not live up to the employee's expectations. Usually, a psychological contract refers to an individuals' beliefs shared by an organization regarding the conditions of exchange agreement spelled out between an organization and an employee (Vogelgesang et al., 2021). It refers to an employee's belief about the obligations explicitly or implicitly, or formally or informally made by the organization they are working for. Whenever the employee feels like the organization is not honoring its promises or commitments, they will likely feel betrayed and consider a psychological contract breach (Zacher and Rudolph, 2021). The employees who are subjected to abusive supervision are the ones likely to experience psychological contract breaches. The abusive supervisors always degrade, belittle, mock, and display related hostile behaviors to employees (Vogelgesang et al., 2021).

Employees expect proper and fair treatment at the workplace; therefore, when the employee feels like they are being abused or mistreated by the organization's representative, such as a manager, he or she will consider it unjust treatment and a grave breach of faith (Kaya and Karatepe, 2020). To the employee, if the manager or supervisor who is a representative of the organization acts abusive, then he or she holds the thought that the entire organization has indeed breached the contract on respectful, just, and fair treatment. In this regard, the organization will be considered a serious culprit, whereas the manager or supervisor is a representative who exercises abusive supervision on behalf of the organization (Karatepe et al., 2021). Besides, the employee will also lay the blame on other employees for not supporting or helping him or her in such an ordeal. The aggrieved employee might even consider other employees to be equally guilty of supervisory abuse in the case that they are not supporting him or her (Jayaweera et al., 2021). As a result, such an employee resolves to hide knowledge from others. Ampofo (2021) stated, coworker support is likely to compensate for the outcomes of abusive supervision. According to DiFonzo et al. (2020), there is a relationship between knowledge hiding and abusive supervision. The procedural justice theory states that a person who receives constant abuse and humiliation from a supervisor will certainly believe that an organization is not doing enough to create and enforce measures to protect the aggrieved employee or punish rogue supervisors (Agarwal et al., 2021b). As a result, an employee who is exposed to consistent supervisory abuse will display knowledge hiding behavior, which will not do any good in stopping mistreatment but instead will be like supporting the perpetrator of the supervisory abuse (Arunachalam, 2021).

Psychological contract breach emanates from employee performance, civic virtue behaviors, employee commitment, employee intentions to remain in the organization, citizenship behaviors, job satisfaction, and trust in the management (Stanway et al., 2020). However, PCB is also likely to be supported by revenge cognitions, higher absenteeism, employee cynicism, job burnout, neglecting job duties, and deviant behaviors and the workplace (Kraak et al., 2020). Hence, we proposed following hypotheses:

H2a: Psychological contract breach mediates the relationship of abusive supervision and evasive hiding

H2b: Psychological contract breach mediates the relationship of abusive supervision and playing dumb

H2c: Psychological contract breach mediates the relationship of abusive supervision and rationalized hiding (**Figure 1** show all the relationships)

Research Methodology

We gathered data from the sales employees of insurance companies working in Pakistan. Data were collected from employees working in all four provincial capitals (i.e., Lahore, Karachi, Quetta, Peshawar) as well as national capital Islamabad. The motive behind the selection of sales employees of insurance companies is that these employees have to face strict targets and most of the time they face short of targets which leads to face abusive behavior from their supervisors. A convenient sampling approach was employed (Kothari, 2004). The overall sample size of this research was 340 sales employees of insurance companies.

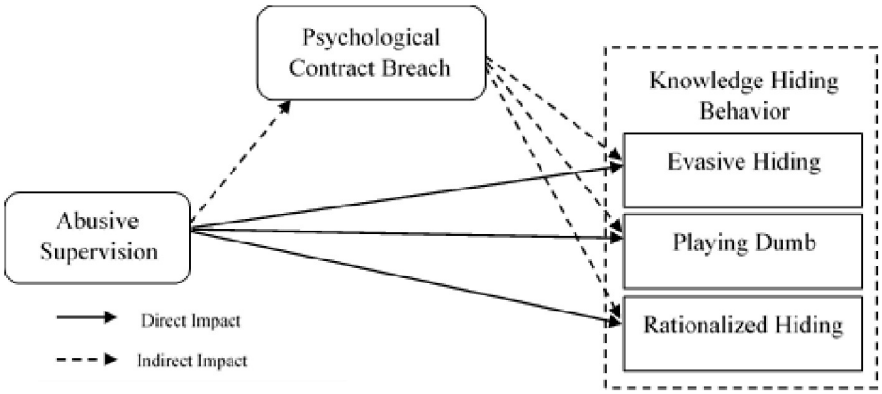

FIGURE 1 | Conceptual framework.

A total of 460 questionnaires were distributed, and 355 responses were received. There were 340 appropriate replies for the final analysis, with a response rate of 73.9%. Valid questionnaires are selected following the survey data cleaning procedure, which involves finding and eliminating responses from respondents who either do not meet our target requirements or did not react cautiously to the questionnaire survey, such as respondents only address part of our survey; respondents provide ambiguous answers or/and select the same answer option repetitively, and respondents provide incomprehensible suggestions for open-ended questions.

Measures

The study used items established from prior research to confirm the reliability and validity of the measures. All items are evaluated through five-point Likert-type scales where "1" (strongly disagree), "3" (neutral), and "5" (strongly agree). To analyze the three dimensions of knowledge hiding, we used twelve items adopted from prior studies. Evasive Hiding is determined by four items adopted from the studies of Connelly et al. (2012) and a sample item is "I agree to help other team members but intentionally not provide valuable information." Playing Dumb is evaluated by four items adapted from the work of Thornton et al. (2009) and a sample item is "When I ask some important information from my team member, he/she pretended that I did not know the information related to your work." Rationalized Hiding is measured by four items and adopted from the studies of Demirkasimoglu (2016) and a sample item is "When my team member asked me the required information, I explained that the information is confidential and only available to people on a particular project." To get response about independent variable we used eleven items adopted from the prior study of Tepper (2000), and the sample item is, "My boss is rude to me." Psychological contract breach was used as mediating variable. For the measurement of psychological contract breach, we used six items adopted from the study of Robinson and Wolfe Morrison (2000) and the sample item is, "I have not received everything promised to me in exchange for my contributions."

RESULTS

Smart PLS 3.2.9 software package was utilized for this research (Sarstedt et al., 2014). PLS-SEM analysis consists of two stages: the first is an evaluation of the measurement model, and the second is an evaluation of the structural model (Henseler et al., 2009). The measurement model requirement ensures that only constructs with adequate indicator loading, convergent validity, composite reliability (CR), and discriminant validity will be included in the structural model. The structural model assessment aims to determine path coefficients and evaluate their significance using the bootstrapping method. Concerning mediation assessment, Preacher and Hayes (2008) technique was pursued in the present study. It is the more exact method for determining mediating effects and is more compatible with the PLS-SEM method (Hayes, 2009). The majority of recent research studies in the field of knowledge management have used the PLS-SEM software to assess data (Shujahat et al., 2019; Sahibzada et al., 2020).

Common Method Bias

Common method Bias variance (CMV) is a critical concern when conducting survey research. When data was gathered from a single source, this problem arose (Podsakoff et al., 2012). A single-factor test was used to determine the existence of CMV among variables, as Harman (1976). proposed. Harman single-factor analysis is a *post hoc* technique for determining if a single factor accounts for employees' silence in a data collection (Tehseen et al., 2017). The "Harman's single-factor test" was conducted in this study using SPSS 25. The results obtained using the principal axis factoring and extraction approach revealed 31 unique factors. The first unrotated component accounted for just 34.910 percent of the variation in the data set, less than the 40% stated by Hair Joe et al. (2016) (see **Appendix 1**). Additionally, we ran a complete collinearity evaluation test in Smart PLS as Kock (2015), and many social science experts have proposed (Zafar et al., 2020). All VIF values are less than 5, indicating that common method bias is not a problem (Kock, 2015).

Measurement Model Assessment

The first phase evaluated the measuring model to validate the constructs' reliability and validity (Hair et al., 2014). We ran consistent PLS algorithm to validate the reflective constructs. Individual items' reliabilities are assessed through factor loadings of the items on the corresponding constructs. Only those Items containing factor loading equal to or greater than 0.6; have been considered significant and retained in the model and the Cronbach's alpha values of all constructs are greater than the suggested threshold of 0.7, which are acceptable (Sarstedt et al., 2014). Additionally, for further strengthens the assessment of the reliability of the construct. The composite reliability of the constructs is also assessed because it is commonly admitted that composite reliability is a more effective tool to measure the reliability than Cronbach's alpha (Werts et al., 2007). The composite reliability values of all the constructs are also greater than 0.7, which further toughens the reliability of all the variables (see **Table 1** and **Figure 2** for detailed values).

The Fornell–Larcker criteria and heterotrait–monotrait (HTMT) ratios are used to validate the current study's discriminant validity (Hair Joe et al., 2016). According to the Fornell and Larcker (1981) criteria, if each column's upper side initial value is greatest after calculating the square root of the AVE of each variable, discriminant validity has been established (Fornell and Larcker, 1981; Hair Joe et al., 2016). According to **Table 2**, discriminant validity has been demonstrated using the Fornell–Larcker criteria since the top value of variable correlation in each column is the greatest. According to the HTMT ratios criteria, HTMT ratios should be less than 0.85; nevertheless, values up to 0.90 are acceptable (Hair Joe et al., 2016). As shown in **Table 2**, all HTMT ratios are less than the recommended threshold, indicating that discriminant validity has been established for the current research model. The values that lie in off-diagonal are smaller than the average variance's square root (highlighted on the diagonal), supporting the scales' satisfactory discriminant validity. Consequently, the outcome affirmed that the Fornell and Larcker (1981) model is met.

Moreover, this research examined the variance inflation factor (VIF) values to confirm the model's collinearity problems. Experts believe that if the inner VIF values are less than 5, there are no collinearity problems in the data (Hair et al., 2014). According to the findings of this research, the inner VIF values of constructs are less the suggested cut off value. Thus, it demonstrates no collinearity issue in the current study's data and validates the model's robustness. The $R2$ and $Q2$ values of Psychological Contract Breach 0.439 ($Q2$ = 0.184), Evasive Hiding 0.362 ($Q2$ = 0.177), Playing Dumb 0.564 ($Q2$ = 0.2855), and Rationalized Hiding 0.510 ($Q2$ = 0.272), which support the model's in-sample predictive power (Sarstedt et al., 2014); and The results of blindfolding with an omission distance of

TABLE 1 | Reliability and validity measures.

Constructs	Items	Loadings	VIF	*T*-value	Cα	CR	AVE
Abusive supervision					0.865	0.865	0.517
	AS4	0.656	1.522	11.377			
	AS5	0.729	1.824	15.151			
	AS6	0.693	2.629	16.507			
	AS7	0.650	2.095	13.557			
	AS8	0.800	1.960	18.506			
	AS11	0.773	1.713	16.611			
Psychological contract breach					0.806	0.802	0.504
	PCB3	0.709	2.231	13.303			
	PCB4	0.647	2.555	11.706			
	PCB5	0.743	1.929	15.526			
	PCB6	0.736	1.201	16.611			
Evasive hiding					0.839	0.837	0.563
	EVH1	0.672	2.248	9.148			
	EVH2	0.749	2.511	12.527			
	EVH3	0.752	1.737	11.455			
	EVH4	0.821	1.694	13.977			
Playing Dumb					0.846	0.845	0.579
	PLD1	0.843	2.060	17.610			
	PLD2	0.804	1.764	17.771			
	PLD3	0.688	1.872	11.928			
	PLD4	0.696	1.961	14.009			
Rationalized hiding					0.858	0.859	0.606
	RAH1	0.656	1.707	10.024			
	RAH2	0.785	2.123	17.401			
	RAH3	0.821	2.085	19.050			
	RAH4	0.839	2.311	20.097			

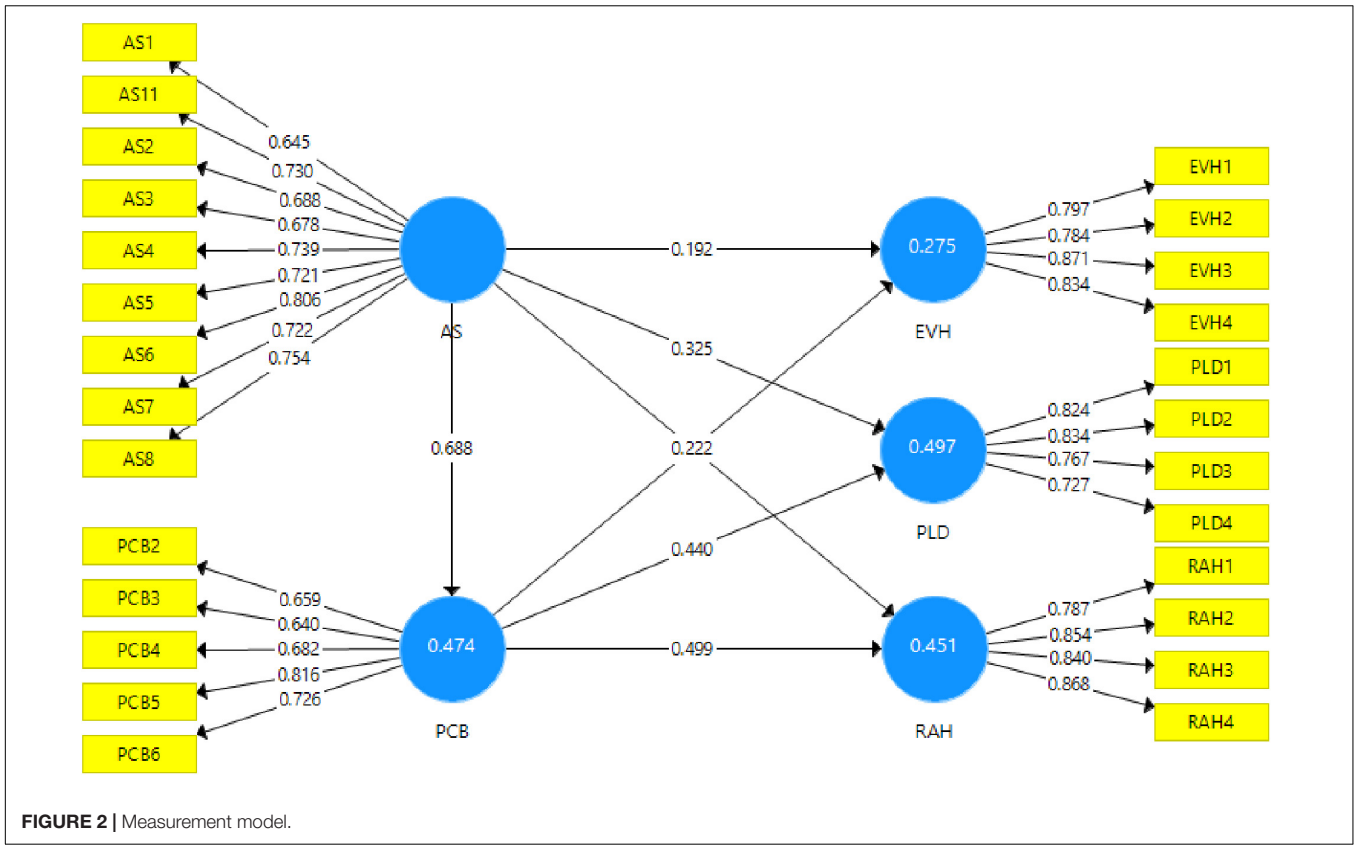

FIGURE 2 | Measurement model.

TABLE 2 | Discriminant validity.

	Fornell-Larcker criterion					Heterotrait-Monotrait ratio (HTMT)				
	AS	**EVH**	**PCB**	**PLD**	**RAH**		**AS**	**EVH**	**PCB**	**PLD**	**RAH**
AS	0.719					AS					
EVH	0.542	0.751				EVH	0.541				
PCB	0.663	0.555	0.710			PCB	0.654	0.545			
PLD	0.703	0.463	0.664	0.761		PLD	0.694	0.461	0.661		
RAH	0.646	0.587	0.656	0.742	0.779	RAH	0.647	0.587	0.649	0.742	

AS, Abusive Supervision; PCB, Psychological Contract Breach; EVH, Evasive Hiding; PLD, Playing Dumb; RAH, Rationalized Hiding.

seven provide $Q2$ values considerably above zero (**Table 3**), confirming the model's predictive relevance in terms of out-of-sample prediction (Hair et al., 2014).

Assessment of Structural Model

In the second phase of PLS SEM, structural model was assessed. The consistent PLS bootstrap resampling technique with 5,000 resamples (Hair Joe et al., 2016) was utilized to establish the significance of direct and mediating relationships. **Tables 4**, **5** lists the test results of hypotheses intended for direct and indirect associations.

As shown in **Table 4** and **Figure 3**, hypotheses H1a, H1b, and H1c related to Abusive supervision's positive effect on three aspects of knowledge hiding behavior, namely Evasive Hiding, Playing Dumb, and Rationalized Hiding. The findings indicate that Abusive supervision has significant associations with all the three aspects of knowledge hiding behavior. Specifically, Abusive supervision's influence on playing dumb ($\beta = 0.468$; $p < 0.001$) is more significant than its effect on Evasive Hiding ($\beta = 0.312$; $p = 0.004$) and Rationalized Hiding ($\beta = 0.376$; $p < 0.001$). Hence, H1a, H1b, and H1c are accepted.

Next to test the three mediating hypotheses, we performed the mediation analysis in Smart-PLS using the Hayes and Preacher (2010) bias-corrected bootstrapping approach at a 95% confidence interval.

TABLE 3 | Coefficient of determination and predictive relevance.

Endogenous constructs	R^2	Q^2
Psychological contract breach	0.439	0.184
Evasive hiding	0.362	0.177
Playing dumb	0.564	0.285
Rationalized hiding	0.510	0.272

TABLE 4 | Direct effects.

Hypotheses	Statistical paths	Beta	2.5%	97.5%	*P* values	*T* statistics	Conclusion
H1a	AS → EVH	0.312	0.129	0.500	0.001	0.312	Supported
H1b	AS → PLD	0.468	0.303	0.643	0.000	0.468	Supported
H1c	AS → RAH	0.376	0.210	0.549	0.000	0.376	Supported

AS, Abusive Supervision; EVH, Evasive Hiding; PLD, Playing Dumb; RAH, Rationalized Hiding.

TABLE 5 | Direct, indirect, and total effects.

	Direct effects		Indirect effects		Total effects		
Indirect path	**B**	***t***	**β**	***t***	**B**	***T***	**Conclusion**
AS -> PCB -> EVH	0.312	3.279	0.231	3.103	0.542	8.613	Partial Mediation
BCI LL	0.129		0.090		0.422		
BCI UL	0.500		0.379		0.664		
AS -> PCB -> PLD	0.468	5.320	0.235	3.967	0.703	15.115	Partial Mediation
BCI LL	0.303		0.120		0.613		
BCI UL	0.643		0.353		0.794		
AS -> PCB -> RAH	0.376	4.374	0.270	4.270	0.646	13.540	Partial Mediation
BCI LL	0.210		0.148		0.554		
BCI UL	0.549		0.395		0.738		

AS, Abusive Supervision; PCB, Psychological Contract Breach; EVH, Evasive Hiding; PLD, Playing Dumb; RAH, Rationalized Hiding; BCI LL, Bootstrapped Confidence Interval Lower level; BCI UL, Bootstrapped Confidence Interval Upper level.

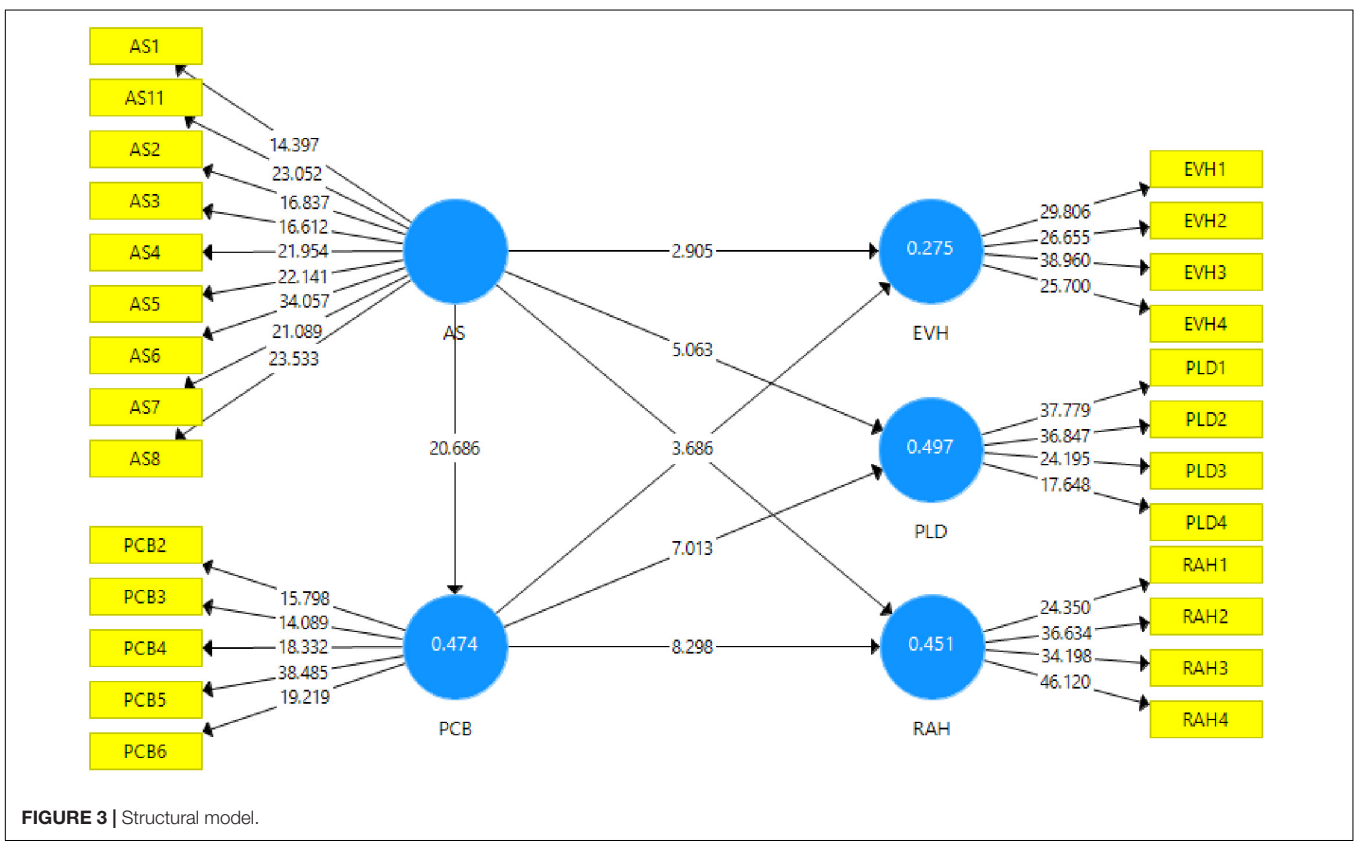

FIGURE 3 | Structural model.

H2a, H2b, and H2c the mediating role of Psychological contract breach in the relationship between abusive supervision and three dimensions of knowledge hiding (Evasive hiding, playing dumb, and Rationalized Hiding) was proposed. For H2a, Results reveal that Psychological contract breach significantly mediate the relationship between abusive

supervision and Evasive hiding (β = 0.231; t = 3.130), playing dumb (β = 0.235; p = 3.967) and Rationalized Hiding (β = 0.270; t = 4.270) which supports H2a, H2b, and H2c. Moreover, it can be seen that psychological contract breach partly mediates the association between abusive supervision and three dimensions of knowledge hiding namely, evasive hiding, playing dumb, and Rationalized Hiding, as seen in **Table 5**.

DISCUSSION

Our study aims to establish the relationship between abusive supervision on employees and knowledge hiding behaviors such as rationalized hiding, playing dumb and evasive hiding. The study also seeks to explore psychological contract breach to determine who the employee is likely to blame in the event of mistreatment and its impact on knowledge hiding. Despite the fact, there is an association between abusive supervision and knowledge hiding, the extent of literature is still lacking since the only available empirical evidence can be found in Khalid et al. (2018) study. For that reason, our research is determined to expound on the relationship between abusive supervision and knowledge hiding. Our findings are supported by the social exchange theory, which states that the employee tends to retaliate in the event of abusive supervision. Still, upon the realization that the perpetrator holds high positional power, the employee is likely to use a covert and safer retaliatory strategy such as knowledge hiding. The finding of this research also gets support from reactance theory, whereby an employee who experiences supervisory abuse tends to have limited personal control while at the workplace, this finding is parallel with the prior study of Ghani et al. (2020). Such employees will opt to take part in activities that will provide them with some sense of control to overcome the frustrations resulting from abusive supervision (Feng and Wang, 2019). In that regard, the employee will decide to hide or withhold information that might be valuable to the organization just because of having been subjected to supervisory abuse.

The study also explains the mediating role of psychological contract breach between abusive supervision and knowledge hiding behaviors like rationalized hiding, playing dumb and evasive hiding. According to the findings, psychological contract breach affects abusive supervision and knowledge hiding behavior. In a psychological contract breach, an employee regards the supervisor or manager as a representative of the organization; therefore, the organization ought also to be held equally responsible for the abuse in the instance of supervisory abuse. The employee is likely to complain that the organization has not laid down measures to prevent the occurrence of supervisory abuse, neither is it showing any support for the employee. As a result, the employee resolves to withhold crucial information that is valuable to the organization. Such an outcome confirms fairness heuristic theory, which explains how psychological contract breach affects abusive supervision and knowledge hiding this finding is in line with the previous study of Agarwal et al. (2021a).

THEORETICAL IMPLICATIONS

This study has several theoretical implications. Negative knowledge behaviors, i.e., information concealment, are our first addition to the literature in the field of knowledge management. The majority of prior research have concentrated on knowledge sharing, which is a positive knowledge-related activity, and have ignored knowledge hiding. Although many firms have implemented various knowledge management systems, they will not be as effective if we don't understand why employees choose to keep information from their peers a secret. Therefore, investigations on knowledge concealing are critical to the advancement of KM theory and practice. To better comprehend the negative intra-organizational knowledge-related behavior, this research attempts to investigate it and adds to the knowledge management literature.

The study also provides crucial theoretical implications through investigating the association between covert retaliation from employees and abusive supervision. This study aims to explain why the victim of abusive supervision decides to hide knowledge when subjected to abusive supervision in their workplace. Unfortunately, noticing the knowledge hiding traits can be a hard nut to crack for the supervisors. Therefore, it can be a challenge to issue additional punishment. Besides, due to exercising discretion, the employee might hide knowledge, and such an act will not be taken seriously by the manager or supervisor. This study also seeks to determine who holds the blame in the event of supervisory abuse at the workplace. Normally it is the manager, supervisor, coworkers, and organization. As a result, the employee seems to have gotten their revenge following the abusive supervision she was subjected to by hiding knowledge.

PRACTICAL IMPLICATIONS

According to the findings, there are various theoretical and managerial implications. Supervisory abuse affects many organizations and has negative effects, such as negatively impacting the profitability of an organization (Miminoshvili and Černe, 2021). The most affected organizations are those that are knowledge intensive. Such organizations are likely to fall prey to the employees' toxic behavior of intentionally hiding knowledge due to abusive supervision and other interpersonal animosities. Some industries at risk of suffering the negative effects of abusive supervision include the banking sector, which explicitly depends on intense knowledge to make decisions by considering real-time information or data. Therefore, having the wrong information or dealing with employees who withhold crucial information results in dire consequences. Organizations affected by abusive supervision and knowledge hiding are bound to become less competitive since they are deprived of the crucial knowledge to give them an edge over their competitors.

The impacts of knowledge hiding can seriously hurt the business in terms of innovation and creativity, whereby there is too much hoarding of information and secrecy. According to Khoreva and Wechtler (2020), it is quite challenging to eradicate

knowledge hiding from an organization. But the organization can put in place measures to ensure such an interpersonal nuisance is not affecting the organization. Some of the measures are through ensuring that employees are treated fairly in the workplace so that they have no reason to be tempted into hiding critical knowledge. The organization can also opt to train and sensitize managers or supervisors to avoid mistreating, discriminating or belittling employees. Lastly, the organization can also offer support and counseling services to employees who are facing abusive supervision.

LIMITATIONS AND RECOMMENDATIONS

Despite the study contributing immensely to demystifying the direct and indirect impact of supervisory abuse that triggers knowledge hiding traits among employees, it also has some limitations. First limitation of study is a small sample size, and cross-sectional data were used, thus making it hard to establish a relationship between the main focal constructs. Even though this study considered precautionary measures during gathering and analyzing data, still future studies are bound to integrate objective and multi-source data in a bid to expand on this relationship. It will also help if future studies determine the role played by coworkers to establish why the aggrieved employees decide to intentionally hide knowledge from other employees in the event of abusive supervision at the workplace. Another limitation is that this study collected data from services sector employees, it would be interesting if future studies will focus on other sectors such as manufacturing sector. Future studies should also explore organizational and individual factors like team dynamics, job interdependence, reward expectation, and psychological ownership. Researchers should also look at the knowledge being hidden by the employee whenever there is supervisory abuse at work. For instance, in case the knowledge happens to be discretionary or an intrinsic, then the employee will deem it best to hide it, unlike when it is extrinsic and explicit in nature.

CONCLUSION

Most previous studies have not focused on knowledge hiding instead of knowledge sharing. These two focal constructs have different motivations and antecedents, so they cannot be two ends in a similar continuum. So, this research belongs to the few empirical investigations seeking to test for the positive relationship between knowledge hiding behaviors and abusive supervision. The study also sought to investigate how psychological breach contract affects abusive supervision and knowledge hiding. Psychological contract breach explains the blame that the employee lays on not only the employee but also the organization in the event of abusive supervision, thus proving the dysfunctional nature depicted in knowledge hiding.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

FUNDING

This manuscript was partly supported by "National Social Science Foundation of China" (No. 19ZDA081).

REFERENCES

Abdillah, M. R., Wu, W., and Anita, R. (2020). Can altruistic leadership prevent knowledge-hiding behaviour? Testing dual mediation mechanisms. *Knowl. Manag. Res. Pract.* 2020, 1–15. doi: 10.1080/14778238.2020.1776171

Agarwal, U. A., Avey, J., and Wu, K. (2021a). How and when abusive supervision influences knowledge hiding behavior: evidence from India. *J. Knowl. Manag.* 2021:789. doi: 10.1108/JKM-10-2020-0789

Agarwal, U. A., Dixit, V., Nikolova, N., Jain, K., and Sankaran, S. (2021b). A psychological contract perspective of vertical and distributed leadership in project-based organizations. *Internat. J. Project Manag.* 39, 249–258. doi: 10.1016/j.ijproman.2020.12.004

Ambrose, M. L., and Ganegoda, D. B. (2020). Abusive according to whom? Manager and subordinate perceptions of abusive supervision and supervisors' performance. *J. Org. Behav.* 41, 737–756.

Ampofo, E. T. (2021). Do job satisfaction and work engagement mediate the effects of psychological contract breach and abusive supervision on hotel employees' life satisfaction? *J. Hosp. Market. Manag.* 30, 282–304. doi: 10.1080/19368623.2020.1817222

Anser, M. K., Ali, M., Usman, M., Rana, M. L. T., and Yousaf, Z. (2021). Ethical leadership and knowledge hiding: an intervening and interactional analysis. *Serv. Indust. J.* 41, 307–329. doi: 10.1080/02642069.2020.1739657

Arain, G. A., Bhatti, Z. A., Ashraf, N., and Fang, Y.-H. (2020). Top-down knowledge hiding in organizations: an empirical study of the consequences of supervisor knowledge hiding among local and foreign workers in the Middle East. *J. Bus. Eth.* 164, 611–625. doi: 10.1007/s10551-018-4056-2

Arunachalam, T. (2021). The interplay of psychological contract breach, stress and job outcomes during organizational restructuring. *Indust. Comm. Train.* 53, 15–28. doi: 10.1108/ICT-03-2020-0026

Awan, F. H., Dunnan, L., Jamil, K., Gul, R. F., Guangyu, Q., and Idrees, M. (2021). Impact of Role Conflict on Intention to leave Job with the moderating role of Job Embeddedness in Banking sector employees. *Front. Psychol.* 2021:4866. doi: 10.3389/fpsyg.2021.719449

Blau, P. M. (1968). Social exchange. *Internat. Encyclop. Soc. Sci.* 7, 452–457.

Bogilović, S., Černe, M., and Škerlavaj, M. (2017). Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity. *Eur. J. Work Org. Psychol.* 26, 710–723. doi: 10.1080/1359432x.2017.1337747

Butt, A. S. (2020). Mitigating knowledge hiding in firms: an exploratory study. *Balt. J. Manag.* 15, 631–645. doi: 10.1108/BJM-01-2020-0016

Butt, A. S., and Ahmad, A. B. (2021). Strategies to mitigate knowledge hiding behavior: building theories from multiple case studies. *Manag. Dec.* 59, 1291–1311. doi: 10.1108/MD-01-2020-0038

Connelly, C. E., Zweig, D., Webster, J., and Trougakos, J. P. (2012). Knowledge hiding in organizations. *J. Org. Behav.* 33, 64–88. doi: 10.3389/fpsyg.2021.748237

Cook, K. S., Cheshire, C., Rice, E. R. W., and Nakagawa, S. (2013). Social exchange theory. *Handbook Soc. Psychol.* 2013, 61–88.

Cropanzano, R., and Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *J. Manag.* 31, 874–900. doi: 10.1177/0149206305279602

Cropanzano, R., Prehar, C. A., and Chen, P. Y. (2002). Using social exchange theory to distinguish procedural from interactional justice. *Group Org. Manag.* 27, 324–351. doi: 10.1177/1059601102027003002

Demirkasimoglu, N. (2016). Knowledge Hiding in Academia: Is Personality a Key Factor? *Internat. J. High. Educ.* 5, 128–140. doi: 10.4337/9781781001820.00016

Di Vaio, A., Hasan, S., Palladino, R., Profita, F., and Mejri, I. (2021). Understanding knowledge hiding in business organizations: a bibliometric analysis of research trends, 1988–2020. *J. Busi. Res.* 134, 560–573. doi: 10.1016/j.jbusres.2021.05.040

DiFonzo, N., Alongi, A., and Wiele, P. (2020). Apology, restitution, and forgiveness after psychological contract breach. *J. Bus. Ethics* 161, 53–69. doi: 10.1007/s10551-018-3984-1

Feng, J., and Wang, C. (2019). Does abusive supervision always promote employees to hide knowledge? From both reactance and COR perspectives. *J. Knowl. Manag.* 23, 1455–1474. doi: 10.1108/JKM-12-2018-0737

Fischer, T., Tian, A. W., Lee, A., and Hughes, D. J. (2021). Abusive supervision: a systematic review and fundamental rethink. *Leadership Q.* 2021:101540. doi: 10.1016/j.leaqua.2021.101540

Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Market. Res.* 18, 39–50. doi: 10.2307/3151312

Ghani, U., Teo, T., Li, Y., Usman, M., Islam, Z. U., Gul, H., et al. (2020). Tit for tat: Abusive supervision and knowledge hiding-the role of psychological contract breach and psychological ownership. *Internat. J. Env. Res. Public Health* 17:1240. doi: 10.3390/ijerph17041240

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review* 1960, 161–178. doi: 10.2307/2092623

Gul, R. F., Liu, D., Jamil, K., Baig, S. A., Awan, F. H., and Liu, M. (2021). Linkages between market orientation and brand performance with positioning strategies of significant fashion apparels in Pakistan. *Fashion Textiles* 8, 1–19.

Hair, F. Jr., Sarstedt, M., Hopkins, L., and Kuppelwieser, G. (2014). Partial least squares structural equation modeling (PLS-SEM). *Eur. Bus. Rev.* 26, 106–121. doi: 10.1108/EBR-10-2013-0128

Hair Joe, F., Sarstedt, M., Matthews, L. M., and Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I – method. *Eur. Business Rev.* 28, 63–76. doi: 10.1108/EBR-09-2015-0094

Han, M. S., Masood, K., Cudjoe, D., and Wang, Y. (2021). Knowledge hiding as the dark side of competitive psychological climate. *Leadership Org. Dev. J.* 42, 195–207. doi: 10.1108/LODJ-03-2020-0090

Harman, H. H. (1976). *Modern factor analysis*. Chicago: University of Chicago press.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Comm. Monogr.* 76, 408–420.

Hayes, A. F., and Preacher, K. J. (2010). Quantifying and testing indirect effects in simple mediation models when the constituent paths are nonlinear. *Multiv. Behav. Res.* 45, 627–660. doi: 10.1080/00273171.2010.498290

Henseler, J., Ringle, C. M., and Sinkovics, R. R. (2009). *The use of partial least squares path modeling in international marketing. In New challenges to international marketing*. Bingley: Emerald Group Publishing Limited, 277–319.

Islam, T., Ahmad, S., Kaleem, A., and Mahmood, K. (2021). Abusive supervision and knowledge sharing: moderating roles of Islamic work ethic and learning goal orientation. *Manag. Dec.* 59, 205–222. doi: 10.1108/MD-08-2019-1069

Jahanzeb, S., Fatima, T., Bouckenooghe, D., and Bashir, F. (2019). The knowledge hiding link: a moderated mediation model of how abusive supervision affects employee creativity. *Eur. J. Work Org. Psychol.* 28, 810–819. doi: 10.1080/1359432x.2019.1659245

Jamil, K., Hussain, Z., Gul, R. F., Shahzad, M. A., and Zubair, A. (2021). The effect of consumer self-confidence on information search and share intention. *Inform. Dis. Del.* 2021:155. doi: 10.1108/IDD-12-2020-0155

Jayaweera, T., Bal, M., Chudzikowski, K., and de Jong, S. (2021). The impact of economic factors on the relationships between psychological contract breach and work outcomes: a meta-analysis. *Employ. Relat. Internat. J.* 43, 667–686. doi: 10.1108/ER-03-2020-0095

Karatepe, O. M., Rezapouraghdam, H., and Hassannia, R. (2021). Does employee engagement mediate the influence of psychological contract breach on pro-environmental behaviors and intent to remain with the organization in the hotel industry? *J. Hospit. Market. Manag.* 30, 326–353.

Kaya, B., and Karatepe, O. M. (2020). Attitudinal and behavioral outcomes of work-life balance among hotel employees: The mediating role of psychological contract breach. *J. Hospit. Tour. Manag.* 42, 199–209. doi: 10.1016/j.jhtm.2020.01.003

Khalid, M., Bashir, S., Khan, A. K., and Abbas, N. (2018). When and how abusive supervision leads to knowledge hiding behaviors. *Leadership Org. Dev. J.* 39, 794–806. doi: 10.1108/LODJ-05-2017-0140

Khoreva, V., and Wechtler, H. (2020). Exploring the consequences of knowledge hiding: an agency theory perspective. *J. Manag. Psychol.* 35, 71–84. doi: 10.1108/JMP-11-2018-0514

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *Internat. J. E-Collab.* 11, 1–10. doi: 10.4018/ijec.2015100101

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Delhi: New Age International.

Kraak, J. M., Lakshman, C., and Griep, Y. (2020). From top gun to the daily grind: contextualizing psychological contract breach for military pilots. *Eur. J. Work Org. Psychol.* 29, 243–261. doi: 10.1080/1359432x.2019.1681500

Kumar Jha, J., and Varkkey, B. (2018). Are you a cistern or a channel? Exploring factors triggering knowledge-hiding behavior at the workplace: evidence from the Indian R&D professionals. *J. Knowl. Manag.* 22, 824–849. doi: 10.1108/JKM-02-2017-0048

Lanke, P. (2018). Knowledge hiding: impact of interpersonal behavior and expertise. *Hum. Resour. Manag. Internat. Digest* 26, 30–32. doi: 10.1108/HRMID-01-2018-0010

Lin, M., Zhang, X., Ng, B. C. S., and Zhong, L. (2020). To empower or not to empower? Multilevel effects of empowering leadership on knowledge hiding. *Internat. J. Hospit. Manag.* 89:102540. doi: 10.1016/j.ijhm.2020.102540

Low, Y. M., Sambasivan, M., and Ho, J. A. (2021). Impact of abusive supervision on counterproductive work behaviors of nurses. *Asia Pacific J. Hum. Resour.* 59, 250–278. doi: 10.1111/jonm.12071

Miminoshvili, M., and Černe, M. (2021). Workplace inclusion–exclusion and knowledge-hiding behaviour of minority members. *Knowl. Manag. Res. Pract.* 2021, 1–14. doi: 10.1080/14778238.2021.1960914

Moh'd, S., Černe, M., and Zhang, P. (2021). An exploratory configurational analysis of knowledge hiding antecedents in project teams. *Proj. Manag. J.* 52, 31–44. doi: 10.1177/8756972820939768

Mohsin, M., Zhu, Q., Naseem, S., Sarfraz, M., and Ivascu, L. (2021). Mining Industry Impact on Environmental Sustainability, Economic Growth, Social Interaction, and Public Health: An Application of Semi-Quantitative Mathematical Approach. *Processes* 9:972. doi: 10.3390/pr9060972

Naseem, S., Fu, G. L., Mohsin, M., Aunjam, M. S., Rafiq, M. Z., Jamil, K., et al. (2020). Development of an inexpensive functional textile product by applying accounting cost benefit analysis. *Indust. Text.* 71, 17–22. doi: 10.35530/it.071.01.1692

Nguyen, T.-M., Malik, A., and Budhwar, P. (2022). Knowledge hiding in organizational crisis: The moderating role of leadership. *J. Bus. Res.* 139, 161–172. doi: 10.1016/j.jbusres.2021.09.026

Oubrich, M., Hakmaoui, A., Benhayoun, L., Söilen, K. S., and Abdulkader, B. (2021). Impacts of leadership style, organizational design and HRM practices on knowledge hiding: The indirect roles of organizational justice and competitive work environment. *J. Bus. Res.* 137, 488–499. doi: 10.1016/j.jbusres.2021.08.045

Podsakoff, P. M., MacKenzie, S. B., and Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annu. Rev. Psychol.* 63, 539–569. doi: 10.1146/annurev-psych-120710-100452

Preacher, K. J., and Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav. Res. Methods* 40, 879–891. doi: 10.3758/brm.40.3.879

Rezwan, R. B., and Takahashi, Y. (2021). The Psychology behind Knowledge Hiding in an Organization. *Administr. Sci.* 11:57. doi: 10.3390/admsci11020057

Robinson, S. L., and Wolfe Morrison, E. (2000). The development of psychological contract breach and violation: A longitudinal study. *J. Org. Behav.* 21, 525–546. doi: 10.1002/1099-1379(200008)21:5<525::aid-job40>3.0.co;2-t

Sahibzada, U. F., Cai, J., Latif, K. F., and Sahibzada, H. F. (2020). Knowledge management processes, knowledge worker satisfaction, and organizational performance. *Aslib J. Inform. Manag.* 72, 112–129. doi: 10.1108/AJIM-10-2019-0276

Sarfraz, M., Mohsin, M., Naseem, S., and Kumar, A. (2021). Modeling the relationship between carbon emissions and environmental sustainability during COVID-19: A new evidence from asymmetric ARDL cointegration approach. *Env. Dev. Sustainab.* 2021, 1–19. doi: 10.1007/s10668-021-01324-0

Sarstedt, M., Ringle, C. M., Henseler, J., and Hair, J. F. (2014). On the emancipation of PLS-SEM: A commentary on Rigdon (2012). *Long Range Plan.* 47, 154–160. doi: 10.1016/j.lrp.2014.02.007

Shujahat, M., Sousa, M. J., Hussain, S., Nawaz, F., Wang, M., and Umer, M. (2019). Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge-worker productivity. *J. Bus. Res.* 94, 442–450. doi: 10.1016/j.jbusres.2017.11.001

Singh, S. K. (2019). Territoriality, task performance, and workplace deviance: Empirical evidence on role of knowledge hiding. *J. Bus. Res.* 97, 10–19. doi: 10.1016/j.jbusres.2018.12.034

Stanway, A. R., Fein, E. C., and Bordia, S. (2020). The moderating role of conscientiousness between psychological contract breach and loyal boosterism. *Res. Dance Educ.* 21, 82–97. doi: 10.1080/14647893.2020.1727872

Sukumaran, R., and Lanke, P. (2021). "Un-hiding" knowledge in organizations: the role of climate for innovation, social exchange and social identification. *Dev. Learn. Org.* 35, 7–9. doi: 10.1108/DLO-08-2019-0185

Tehseen, S., Ramayah, T., and Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *J. Manag. Sci.* 4, 142–168. doi: 10.20547/jms.2014.1704202

Teng, H.-Y., Cheng, L.-Y., and Chen, C.-Y. (2021). Does job passion enhance job embeddedness? A moderated mediation model of work engagement and abusive supervision. *Internat. J. Hospit. Manag.* 95:102913.

Tepper, B. J. (2000). Consequences of abusive supervision. *Acad. Manag. J.* 43, 178–190. doi: 10.2307/1556375

Thornton, B., Lovley, A., Ryckman, M., and Gold, J. A. (2009). Playing Dumb and Knowing it All: Competitive Orientation and Impression Management Strategies. *Indiv. Diff. Res.* 7:4.

Vogelgesang, G. R., Crossley, C., Simons, T., and Avolio, B. J. (2021). Behavioral integrity: examining the effects of trust velocity and psychological contract breach. *J. Bus. Ethics* 172, 175–190. doi: 10.1007/s10551-020-04497-2

Weng, Q., Latif, K., Khan, A. K., Tariq, H., Butt, H. P., Obaid, A., et al. (2020). Loaded with knowledge, yet green with envy: leader–member exchange comparison and coworkers-directed knowledge hiding behavior. *J. Knowl. Manag.* 24, 1653–1680. doi: 10.1108/JKM-10-2019-0534

Werts, C. E., Linn, R. L., and Jöreskog, K. G. (2007). Intraclass Reliability Estimates: Testing Structural Assumptions. *Educ. Psychol. Meas.* 34, 25–33. doi: 10.1177/001316447403400104

Xiao, M., and Cooke, F. L. (2019). Why and when knowledge hiding in the workplace is harmful: a review of the literature and directions for future research in the Chinese context. *Asia Pacific J. Hum. Resour.* 57, 470–502. doi: 10.1111/1744-7941.12198

Zacher, H., and Rudolph, C. W. (2021). Relationships between psychological contract breach and employee well-being and career-related behavior: The role of occupational future time perspective. *J. Org. Behav.* 42, 84–99. doi: 10.1002/job.2495

Zafar, A. U., Qiu, J., and Shahzad, M. (2020). Do digital celebrities' relationships and social climate matter? Impulse buying in f-commerce. *Intern. Res.* 30, 1731–1762. doi: 10.1108/INTR-04-2019-0142

Zhang, Z., and Min, M. (2021). Organizational rewards and knowledge hiding: task attributes as contingencies. *Manag. Dec.* 59, 2385–2404. doi: 10.1108/MD-02-2020-0150

Zhao, H., and Jiang, J. (2021). Role stress, emotional exhaustion, and knowledge hiding: The joint moderating effects of network centrality and structural holes. *Curr. Psychol.* 2021, 1–13.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

APPENDIX

APPENDIX 1 | Harman's single-factor test.

Factor	Total variance explained					
	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	10.751	37.072	37.072	10.124	34.910	34.910
2	2.192	7.558	44.630			
3	1.695	5.846	50.475			
4	1.412	4.869	55.345			
5	1.157	3.991	59.336			
6	1.059	3.653	62.988			
7	0.962	3.316	66.304			
8	0.853	2.943	69.247			
9	0.810	2.794	72.041			
10	0.797	2.749	74.790			
11	0.695	2.395	77.186			
12	0.624	2.150	79.336			
13	0.559	1.926	81.262			
14	0.528	1.821	83.083			
15	0.508	1.752	84.834			
16	0.436	1.505	86.339			
17	0.424	1.461	87.801			
18	0.410	1.414	89.214			
19	0.390	1.345	90.559			
20	0.371	1.280	91.839			
21	0.353	1.218	93.057			
22	0.339	1.168	94.225			
23	0.323	1.114	95.340			
24	0.257	0.885	96.225			
25	0.244	0.841	97.066			
26	0.234	0.806	97.872			
27	0.232	0.799	98.671			
28	0.209	0.720	99.391			
29	0.177	0.609	100.000			

Extraction method: Principal axis factoring.

frontiers in Psychology

ORIGINAL RESEARCH
published: 04 January 2022
doi: 10.3389/fpsyg.2021.774688

Span of Supervision and Repercussions of Envy: The Moderating Role of Meaningful Work

Hafiz Muhammad Burhan Tariq[1], Asif Mahmood[2], Ayyaz Ahmad[3], Maria Khan[1], Shah Ali Murtaza[4], Asif Arshad Ali[3] and Edina Molnár[4]*

[1] Institute of Business and Management, University of Engineering and Technology, Lahore, Pakistan, [2] Department of Business Studies, Namal Institute, Mianwali, Pakistan, [3] Institute of Quality and Technology Management, University of the Punjab, Lahore, Pakistan, [4] Institute of Management and Organizational Sciences, University of Debrecen, Debrecen, Hungary

Though the current research stream has provided some risk factors for envy at the workplace, little is still known about the drivers and consequences of envy. Based on Vecchio's theory, this study investigates the ripple effect of the span of supervision on envy. Moreover, it sheds light on the moderating role of meaningful work in their relationship. The data comprising sample size 439 were collected from confrères of four fast food companies listed on the Stock Exchange of Pakistan. Partial Least Square Structural Equation Modeling (PLS-SEM) technique was implemented through SmartPLS 3.3.2 to analyze the measurement and structural relationships. The results demonstrate that a narrow span of supervision will increase work engagement, and reduce instigated incivility via decreasing envy and resource depletion in sequence. Moreover, meaningful work would help regulate the inimical stream of dénouement of envy. Theoretical and practical implications, along with the limitations and future directions, have also been discussed.

Keywords: envy, supervision, meaningful work, resource depletion, instigated incivility, work engagement, fast food

OPEN ACCESS

Edited by:
Martina Blašková, Police Academy of the Czech Republic, Czechia

Reviewed by:
Waldemar Karwowski, University of Central Florida, United States
Irena Figurska, Pomeranian University in Słupsk, Poland

***Correspondence:**
Shah Ali Murtaza
shah.ali.murtaza@econ.unideb.hu

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *12 September 2021*
Accepted: *29 November 2021*
Published: *04 January 2022*

Citation:
Tariq HMB, Mahmood A, Ahmad A, Khan M, Murtaza SA, Ali AA and Molnár E (2022) Span of Supervision and Repercussions of Envy: The Moderating Role of Meaningful Work. Front. Psychol. 12:774688. doi: 10.3389/fpsyg.2021.774688

INTRODUCTION

A wider span of supervision restricts the honcho's prowess to facilitate the subordinates in various aspects, such as emotional, instrumental, appraisal, and informational (Mueller, 2012). It is because a wider span of supervision, either through downsizing or increased centralization, puts a leader under enormous strain and expectations (Thompson and Li, 2010). This increased pressure may refrain a leader from supporting the followers when required. As a result, a wider span of supervision can goad the confrères into instigated incivility or work disengagement (Thompson et al., 2016). Similarly, the scarcity and competition for resources produce high levels of envy. Envy is a universal emotion aroused by another's good fortune (Li et al., 2021) that damages relationships because it can result in spiteful behavior (González-Navarro et al., 2018). Since envy and depletion could direct employees to take the emotional direction (Tandoc et al., 2015), it is vital to control their emotions to better an organization and enhance work engagement.

Envy is an emotion that people experience when they think someone is better than them (Van de Ven, 2017). Traditionally, it could be construed as painful and annoying emotions because of

inferiority feelings, facing antipathy behavior, and hostility (Kim et al., 2010). Besides this, envy is related to personal response-dependent variables like behavior and affective response (Puranik et al., 2019). In turn, behavior and affective response consist of actors such as a sense of rejection, distress, resentment, job dissatisfaction, anger, and fear (Lee et al., 2018). For, envy is a painful emotion by definition, therefore, employees deplete their self-regulatory resources to overcome this traumatic emotion (Christian et al., 2014). Hence, employees will be unable to make use of their full energy at the workplace. Thus, it can be concluded from this description that envy is a source of harmful or hostile behavior at the workplace. However, envy can also yield positive consequences, such as motivating increased performance or attempts at self-improvement. These contradictory understandings illustrate that the study of envy and its work-related outcomes have been surprisingly sparse (Shu and Lazatkhan, 2017). Shortly, there are two dimensions of envy: benign envy (motivate the envier to strive toward greater heights and causes people to invest more effort to be as successful as the other person); and malicious envy (envier aims to harm the envied and motivates people to level the other person down) (de Zoysa et al., 2021). The traditional view of envy at the workplace focuses on malicious envy (Shu and Lazatkhan, 2017). Envy can be categorized into three forms: envy others in a work setting (Vecchio, 1995; Duffy and Shaw, 2000); temperamental envy across all settings (Smith and Kim, 2007); and spasmodic envy associated with a particular person (Cohen-Charash, 2009). However, in this study, we are building our premise on the first type of envy in which an individual worker inimically compares himself or herself with the confrères.

Different studies have discussed antecedents and consequences of envy, but the broad conceptual perspective is lacking (Li et al., 2021). To address the dilemma that most current managers/leaders face in managing the emotions of subordinates, the current state of the research on envy is not informative enough (González-Navarro et al., 2018), and it is essential to fill this gap to understand the dynamics underlying the relationship between envy and counterproductive work behavior. Workplace envy significantly predicts counterproductive behaviors and organizational citizenship behavior (Ghadi, 2018). Yu et al. (2018) have investigated employees' downward envy for making supervisors abusive via threat to self-esteem of supervisor. Similarly, Demirtas et al. (2015) found that envy is positively linked with the depletion of resources. Moreover, envy has effects on social undermining via moral disengagement (Duffy et al., 2012), and engagement at work may reduce because of envy (Demirtas et al., 2015) as workplace envy is negatively associated with engagement (Li et al., 2021). Moreover, Mao et al. (2020) have discussed that envy is positively related to incivility. However, literature is far from the relevant variables of the competitive reward structure and meaningful work included in Vecchio's theory when examining the antecedents of envy (Thompson et al., 2016). Furthermore, the literature neglects the mechanism of envy: how the span of supervision predicts the association with work engagement via envy and depletion of resources in sequence, and how moderating role of meaningful work help break the domino effect of envious behavior.

Building on this body of research, this study contributes to the literature by advancing our understanding of the cause-effect relations regarding envy. First, we examine the span of supervision as a cause of envy. Given that managerial practices (e.g., meaningful work and compensation systems) substantially influence employees' lives in an organization and leaders' differential treatment of employees may induce unfavorable social comparisons that promote feelings of envy. Second, this research seeks to understand the varying consequences of envy. Existing research has focused on understanding the direct effect of envy on various behavioral outcomes (e.g., work engagement and instigated incivility). Mechanisms involved in producing behavioral effects of envy are not much clear. Researchers have called for more research to examine the other variable linking envy with behavioral outcomes. For example, mediating variables can clarify the underlying process of envy affecting employees' behaviors (Ghadi, 2018). To date, this research is in a nascent stage, with relatively few researchers directly exploring the mechanisms connecting envy to outcomes (Duffy et al., 2021). Responding to the call of researchers to examine the mechanism between envy–outcome relationships, resource depletion is presented as a potential mechanism in understanding the linkage between envy and work engagement and instigated incivility. The present study aims to examine the role of envy at work as a mediator between a set of antecedents and consequences. It also analyses meaningful work as a moderator between the span of supervision and envy; also the role of mediator between envy and consequences as recommended by Ghadi (2018) that it would be noteworthy for future studies to extend his hypothesized model by including mediating and moderating variables to clarify the underlying process by which envy affects employees' behaviors.

Based on this frame of reference, the theoretical framework of the study was developed. From the work unit, the span of control variable was selected as a predictor, while resource depletion was chosen as a reasonable response of envy, and finally, work engagement was selected as the behavioral response. Moreover, with the further development in envy, it has been argued that meaningful work can be used as a moderator to reduce envy. Through SEM using the Smart partial least square (PLS) software, statistical verification analysis was done in this research.

Theoretically, this research contributes in multiple ways. It enriches the literature by suggesting that the supervisory span is linked to incivility by a process that sequentially reduces envy and resources. This research proposes that if the span of supervision is significantly more, employees may engage in destructive behavior at the workplace, such as paying less attention to work and embroiling in uncivil behavior as the instigator. In this context, this is the first study that links the span of supervision to the work engagement mechanism. Moreover, this study is essential for all honchos as it highlights the factors which cause an increase in organizational, operational costs. Furthermore, this research is drawn on Vecchio's (1997) theory to test the impact of the span of supervision on work engagement via two mediations— envy and depletion of resources— in sequence.

Vecchio (1997) developed a theory that indicates three independent sets of variables that influence envy. First is

"individual differences," which consist of work ethics, in-group status, dependency, gender, and self-monitoring. The second is "work unit," which composes of supervisory differentiation of attitudes, job rotation, unit size, supervisory considerations, and reward system. The third is "national culture attributes," which comprise collective norms, cooperative norms, employee participation norms. The theory further elaborates that department heads are institutions that regulate employees' natural envy phenomenon. Thus, a supervisor can improve or reduce envy among employees using supportive or non-supporting conduct. Moreover, differentiation of control actions may enhance competition in the workforce among workers.

The article is organized into five sections: first, the literature on workplace envy and the theoretical background of envy at work are reviewed. The following section deals with methods used to analyze data. After that, the empirical results of the theoretical model are presented. Finally, this article concludes with a discussion of the findings and implications and future research recommendations with limitations.

LITERATURE REVIEW

Inclusion Criteria

In November 2020, we searched the following databases: Web of Science, PsycINFO, EBSCO, and Theses Global. "Envy" was used as the keyword. We also searched the Academy of Management 2009–2020 to identify all relevant published or unpublished empirical studies. Considering our inclusion criteria (empirical studies that measured envy with quantitative statistics), initially, we retrieved 965 sources containing articles, dissertations, and unpublished data. We narrowed the database pool by excluding any irrelevant research or lacking the necessary statistical information, like sample size (N) and correlation coefficient (r). This reduced the sample to 69 sources. The sample was reduced to 47 sources after eliminating studies that did not provide the key variables for a relationship of interest and an appropriate theoretical model.

Hypotheses Development

Building on the available literature, this section develops theoretical justifications of the relationships between antecedents and consequences of workplace envy.

The Span of Supervision and Envy

According to Vecchio's (1997) theory, the span of supervision is positively associated with envy because a supervisor can reduce envy among his/her followers by providing leadership to their followers. Conversely, a supervisor may enhance envy among followers if he has a different relationship with the followers. The reason is that followers who think their supervisor is closer to other followers enhance envy among followers who have not such a relationship. Supervisors increase the covetous to give promotion to some employees with whom they have a close relationship on the one hand (Vecchio, 1997). While on the other hand, followers who receive such malicious behavior compared to other employees may enhance envy among them (Kim et al., 2010). So, from this description, it can be concluded that the span of supervision positively predicts envy. Considering the above discussion, the current research study proposes the following hypothesis:

H_1: Span of supervision is positively associated with envy.

The Span of Supervision and Resource Depletion via Envy

Lange et al. (2018) indicate that envy consists of three factors, malicious, pain, and benign envy. Moreover, envy is positively associated with schadenfreude in malicious form and not with the other two forms. In general, the researchers in the literature have studied that organizations are facing problems because of envy.

Though the span of supervision is positively associated with envy, it is predicted that the span of supervision may trigger resource depletion among employees. Here, resources represent self-control which aligns with energy and attention (Lilius, 2012). Self-regulate resources are to devote full energy at the workplace in a positive way; hence these contribute to performance (Thau and Mitchell, 2010). Empirically, these types of help may replenish or deplete because of interpersonal events at the workplace (Bono et al., 2013).

It is suggested in this study that resources deplete as a result of envy (Koopman et al., 2020; Duffy et al., 2021), is a consequence of a wider span of supervision (Thompson et al., 2016). The basis of this assumption is envy. Vecchio (1997) represented this assumption by indicating that the span of supervision is a predictor of envy, and resource depletion is an adequate response. Koopman et al. (2020) conducted a survey study to test this hypothesis, and the result indicated a positive relationship between envy and resource depletion. This is because envy is painful (Tai et al., 2012), and to overcome this pain, employees deplete their self-regulatory resources (Christian et al., 2014). Moreover, Thompson et al. (2016) tested the relationship between the span of supervision and envy, and the result provided a positive association between the span of supervision and envy. So, from all this evidence, it is assumed that the span of supervision positively impacts resource depletion via envy. Considering the above discussion, the current research study propounds the following hypothesis:

H_2: Span of supervision is positively associated with resource depletion, via envy.

Span of Supervision and Work Engagement via Envy and Resource Depletion

Having surmised that the span of supervision is positively linked with resource depletion via envy, we propose that work engagement wanes by a wider span of supervision. Work engagement is defined as a relatively enduring state of mind, referring to the simultaneous investment of personal energies in work performance (Yam et al., 2018). Research indicates that work engagement is connected with physical energy, emotions, and cognition (Rich et al., 2010). Empirical evidence provides that work engagement may also be linked with leader behavior

(Yam et al., 2018). It is, therefore, postulated here that dwindled work engagement is a dénouement of depletion of resources (Weiss et al., 2018), resulting from envy (Koopman et al., 2020), and triggered by the span of supervision (Thompson et al., 2016). In other words, envy leads to an unpleasant mood and anxiety that reduces work engagement and performance (Lee et al., 2018). Theoretically, from Vecchio's (1997) point of view, this postulate can be described as that span of supervision may be used as a predictor of envy. As employees think that supervisors give less attention to them than some other workers, it whips up envy among such employees. This envy leads toward depletion of resources among employees as a compelling response to this envy. Hence, this depletion of resources leads to less work engagement as a behavioral response from the depletion of resources. Empirically, there is an eventual obliteration from the span of supervision to work engagement. So, from all this detail, it can be concluded that the span of supervision negatively predicts work engagement via envy and depletion of resources in sequence. Considering the above discussion, the current research study proposes the following hypotheses:

H_3: Span of supervision is negatively associated with work engagement via envy and resource depletion in sequence.

H_4: Resource depletion is negatively associated with work engagement.

Span of Supervision and Instigated Incivility via Envy and Resource Depletion

Employees are likely to use counterproductive work behavior when they feel envy at the workplace, but such behaviors may differ depending on the ownership of organizations (González-Navarro et al., 2018). Granted that span of supervision is negatively associated with envy and depletion of resources in sequence, we are also propounding here that span of supervision is likely to enhance instigated incivility. Instigated incivility is one type of incivility; the other two beings witness incivility and experienced incivility. Instigated incivility is opposite to experienced incivility. In a broader term, incivility by nature is instigated because incivility encourages spiral negativity in the workplace due to mutual benefits (Schilpzand et al., 2016). Here, we contend that instigated incivility stems from a span of supervision (Thompson et al., 2016) due to the depletion of resources (Koopman et al., 2020). In other words, a span of supervision can be used as a predictor of envy, and depletion of resources is a compulsive response of envy that leads to behavioral riposte such as instigated incivility (Vecchio, 1997). On a rational footing— from the span of supervision to instigated incivility— it is posited that the supervisor cannot provide time and support to every employee because of time constraints. The employees who are unable to get the supervisor's attention get engaged in instigated incivility by backbiting their colleagues as proved by Mao et al. (2020) that envy is positively related to the incivility of employees toward coworkers. The relationship between resource depletion and instigated incivility has been tested by Thompson et al. (2016) and found a positive relationship between these two variables. So, from all this description, it can be concluded that span of supervision positively predicts instigated incivility via envy and resource depletion in sequence. Considering the above discussion, the present research study put forward the following hypotheses:

H_5: Span of supervision is positively associated with instigated incivility via envy and resource depletion in sequence.

H_6: Resource depletion is positively associated with instigated incivility.

Meaningful Work as Moderator in the Relationship Between Span of Supervision and Envy

In addition to the direct effect of the span of supervision on envy, this study also intends to examine meaningful work as a moderating factor in understanding the linkages between these two variables of the study. At this point, we argue that meaningful work reduces the envy element among employees caused by a wider span of supervision. Meaningful work can be characterized by the state when employees think that their work has a positive significance (Demirtas et al., 2015). When employees perceive the importance of their work, they put their cognitive resources, pay full attention and energy to that work (Rosso et al., 2010). In this sense, it is assumed that employees do not pay heed to the factors such as a wider span of supervision, and only be attentive toward their work. From this point of view, it can be concluded that when there is a perception of meaningful work, the employees do not think about the span of supervision, which is a predictor of envy. In this way, there is less vehemence of envy among employees, which leads them to utilize their resources for work performance behavior such as work engagement. Considering the above discussion, we put forward the following hypothesis:

H_7: The positive relationship between the span of supervision and envy is moderated by meaningful work such that the relationship is weaker when there is high knowledge about meaningful work, and strong when there is a low level of knowledge about meaningful work.

Encapsulating all the relationships, the theoretical can be outlined as shown in **Figure 1**.

MATERIALS AND METHODS

Research Design

To empirically test the proposed hypotheses, a statistical technique "Structural Equation Modeling" (SEM) using Partial Least Squares (PLS) was used as the structural model is complex and includes many constructs, indicators, and/or model relationships. PLS-SEM is recommended when the analysis is concerned with testing a theoretical framework from a prediction perspective, primarily used for exploratory research and when distribution issues are a concern, such as lack of normality (Hair et al., 2019). In contrast to AMOS-SEM, the statistical

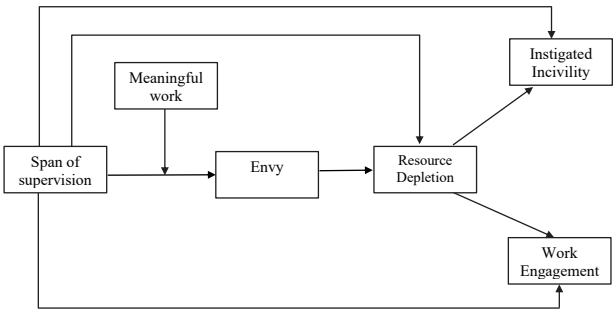

FIGURE 1 | The hypothesized model.

objective of PLS-SEM is to maximize the variance explained in the dependent variable(s), and it is based on the composite model. Also, PLS-SEM achieves greater statistical power at all sample sizes (Hair et al., 2017).

Respondents and Procedure

The study was conducted on employees working in four different food organizations listed with Pakistan Stock Exchange, located in Pakistan. Such organizations have to serve their customers better and, thus, require their employees to be engaged. Adopting a cross-sectional design, a self-report questionnaire was used to collect data from Burger King, Fat Burger, KFC, and McDonald's, and a convenient sampling technique was used. The condition for participating in the study was to be currently working. In all, 689 respondents were approached for taking data, but the present study is based on 439 respondents (63.74% response rate). Some of the remaining questionnaires were not returned by employees and some were not usable because of the incomplete filled-in questionnaires. Data were gathered from employees working at various organizational levels. The researcher approached respondents personally. Both genders were included in the study sample, and the majority were male (78% approximately). The age of respondents ranged from 20 to 40 years, with the average being 24 years approximately. The minimum qualification of the study sample was intermediate. Respondents were provided with all the necessary information such as study objectives, methods of responding to the questionnaire, etc. Respondents were also assured that their responses would be kept confidential and that there were no right or wrong answers. **Table 1** indicates the values of descriptive statistics for the 439 respondents of the research study.

Measures

Already established scales were used for measuring the response of the participants, as reported in the **Supplementary Appendix**. All the items were listed on a five-point Likert scale (1 = strongly disagree and 5 = strongly agree). The single item scale of the span of supervision has been taken from Thompson et al. (2016). The only item reads, "Leaders reported the number of their subordinates in each workgroup." The reliability of the scale was not checked due to the single-item construct. Envy was measured by using five items taken from Thompson et al. (2016).

TABLE 1 | Demographics of the respondents.

Items	Frequency	Percentage
Marital status:		
Divorced	16	3.7
Married	126	28.7
Single	297	67.6
Gender:		
Female	97	21.9
Male	342	78.1
Age:		
20–25	233	53.01
26–30	90	20.47
31–35	83	18.89
36–40	33	7.63
Education:		
12 Years	86	19.7
14 Years	229	52.1
16 and Above	124	28.3
Experience:		
1 and Less	116	26.3
2–5	289	65.9
6–10	34	7.8

The sample item is "My Supervisor values the efforts of others more than she/he values my efforts." The reported Cronbach's alpha value was 0.86 of these five items. Twenty-six items of the resource depletion scale from Christian and Ellis (2011) were used to capture the response of the participants. The sample item is "I feel mentally exhausted." The alpha value was 0.96. The scale for work engagement was adopted from Yam et al. (2018) to measure the response of the respondents. The total number of items on this scale is eighteen. A sample item is "I work with intensity on my job." The alpha value for this scale was 0.91. Instigated incivility was measured with four items from Rosen et al. (2016). An example item is "Put you down or was condescending to you." Cronbach's alpha value for this scale was 0.87. Meaningful work was assessed by ten items (Steger et al., 2012). An example item is "I understand how my work contributes to my life's meaning." The stated alpha value was 0.92.

DATA ANALYSIS AND RESULTS

The analysis has been conducted through Partial Least Square-based Structural Equation Modeling (PLS-SEM) with the help of SmartPLS 3.2.2. The prime reason for applying this technique is the presence of a single item construct "span of supervision."

Measurement Model

The reliability assessment of the reflective constructs employed in the study was undertaken by Cronbach's alpha and composite reliability (Hair et al., 2011). The acceptable threshold value is 0.70, whereas, in exploratory research, the value greater than 0.60 is also adequate (Raykov, 2007). **Table 2** shows the results of the reliability test using SmartPLS for the variables— Span

of Supervision, Envy, Resource Depletion, Work Engagement, Instigated Incivility, and Meaningful Work.

It can be observed that the Cronbach's alpha values of all the constructs are greater than the threshold of 0.7. The Cronbach's alpha values for Envy, Instigated Incivility, Meaningful Work, Resource Depletion, Work Engagement are 0.935, 0.924, 0.959, 0.961, and 0.949, respectively, while Span of Supervision has a value of 1.00 because it is a single item construct.

The construct validity was established through convergent and discriminant validities. The convergent validity assesses whether a particular construct is measuring that construct. It is evaluated through outer loadings and Average Variance Extracted (AVE) for each variable under consideration. The suggested acceptable

TABLE 2 | Outer loadings, Cronbach's alpha and AVE.

Variable	Symbols	Loadings	Cronbach's Alpha	Average Variance Extracted (AVE)
Envy (En)	Envy1	0.827	0.935	0.795
	Envy2	0.899		
	Envy3	0.918		
	Envy4	0.905		
	Envy5	0.905		
Instigated incivility (II)	Instigate1	0.851	0.924	0.815
	Instigate2	0.921		
	Instigate3	0.919		
	Instigate4	0.918		
Meaningful work (MW)	Mean_1	0.821	0.959	0.730
	Mean_2	0.879		
	Mean_3	0.824		
	Mean_4	0.862		
	Mean_5	0.827		
	Mean_6	0.859		
	Mean_7	0.834		
	Mean_8	0.873		
	Mean_9	0.861		
	Mean_10	0.903		
Resource depletion (RD)	ResDep1	0.709	0.961	0.539
	ResDep2	0.717		
	ResDep3	0.774		
	ResDep4	0.745		
	ResDep6	0.726		
	ResDep7	0.714		
	ResDep8	0.736		
	ResDep9	0.753		
	ResDep10	0.713		
	ResDep11	0.756		
	ResDep12	0.711		
	ResDep13	0.768		
	ResDep14	0.707		
	ResDep15	0.756		
	ResDep16	0.702		
	ResDep17	0.730		
	ResDep18	0.721		
	ResDep19	0.745		
	ResDep20	0.702		
	ResDep21	0.794		
	ResDep22	0.735		
	ResDep23	0.751		
	ResDep24	0.715		

(Continued)

TABLE 2 | (Continued)

Variable	Symbols	Loadings	Cronbach's Alpha	Average Variance Extracted (AVE)
Span of supervision (SS)	Span	1.000	1.000	1.000
Work engagement (WE)	Work1	0.741	0.949	0.564
	Work3	0.730		
	Work4	0.762		
	Work5	0.782		
	Work6	0.745		
	Work7	0.744		
	Work8	0.737		
	Work9	0.779		
	Work10	0.708		
	Work11	0.785		
	Work12	0.737		
	Work13	0.717		
	Work14	0.779		
	Work15	0.771		
	Work16	0.769		
	Work17	0.719		

TABLE 3 | Fornell-Larcker criterion.

	En	II	MW	ME	RD	SS	WE
En	0.891						
II	0.143	0.903					
MW	−0.339	−0.089	0.855				
ME	−0.336	−0.022	0.328	1.000			
RD	0.319	0.298	−0.076	−0.029	0.734		
SS	0.466	0.226	−0.215	−0.381	0.267	1.000	
WE	−0.130	−0.030	0.017	0.057	−0.202	−0.227	0.751

value of AVE is >0.50, which indicates 50 percent of the variance in the variable is because of explaining indicators of the variable (Henseler et al., 2014). Similarly, the threshold value for outer loadings is 0.7. It can be seen that the values of loadings for all the constructs are greater than 0.7. Likewise, **Table 2** also reports AVE values for each construct. It can be noticed that AVE values for all the constructs are greater than the threshold value. Consequently, the construct validity of the scale has been established. On the other hand, discriminant or divergent validity gauges the independence of one measure from the other measures of the same construct (Drost, 2011). The criterion defined by Fornell and Larcker (1981) has been used to assess the discriminant validity, which states that the square root of the AVE value for each construct should be greater than all its correlations with other constructs.

Table 3 shows the results of discriminant validity for Envy, Instigated Incivility, Meaningful Work, Resource Depletion, Span of Supervision, and Work Engagement. The diagonal values indicating the square roots of AVE for all the constructs are higher than their corresponding correlations. Hence, discriminant validity has also been established for the scale.

Structural Model Analysis (Hypotheses Testing)

The association among the latent variables is examined by evaluating the inner model once after the satisfactory results of validity and reliability (Garson, 2016). The reason for the inner model assessment is to check the path coefficients, and how much variance is explained in the endogenous variable by the exogenous variable within the model under study. SmartPLS, by its built-in analysis, give multiple criteria to examine the inner model (Wong, 2013). This analysis includes path coefficients (beta values), t-statistics, and *p*-values for each path. The *p*-values have been estimated by adopting bootstrapping procedure. **Figure 2** shows the output of the structural equation model, whereas **Tables 4**, **5** summarize the path coefficient values along with t-statistic and *p*-values for each path.

Table 4 indicates that all the direct paths are substantial and statistically significant. For instance, the path from Envy to Resource Depletion has a beta value of 0.248, which is positive and significant with a *p*-value of 0.000 and a t-statistic value of 5.932.

On the other hand, **Table 5** shows the indirect effects for three mediations; one is single while two are double mediations in sequence. The indirect impact of Span of Supervision on Resource depletion via Envy is positive and significant with coefficient value = 0.093 and *p*-value = 0.000. Considering the results, it is proved that the Span of Supervision is Positively associated with Resource Depletion via Envy. Similarly, the indirect effect of Span of Supervision on Work Engagement via Envy and Resource depletion is negative and significant with coefficient value = −0.014 and *p*-value = 0.004. In the light of the above results, it is confirmed that Span of Supervision is negatively associated with Work Engagement via Envy and Resource Depletion. While the indirect effect

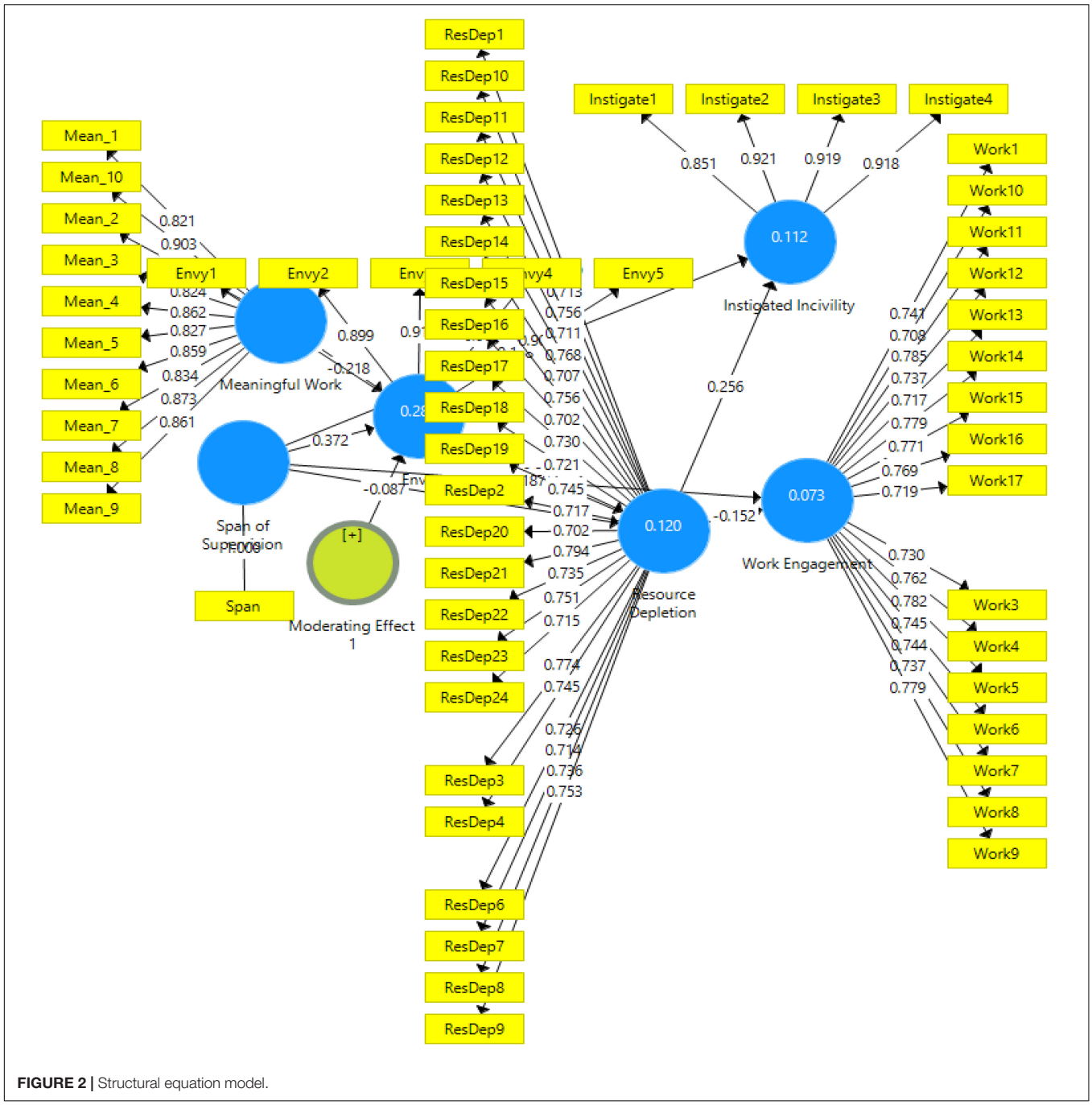

FIGURE 2 | Structural equation model.

of Span of Supervision on Instigated Incivility via Envy and Resource depletion is positive and significant with coefficient value = 0.024 and *p*-value = 0.000. Taking into account the results, it is verified that the Span of Supervision is positively associated with Instigated Incivility via Envy and Resource Depletion.

Although the magnitude of mediations is smaller, they still show significant effects. These meager indirect effects have been reinforced by introducing Meaningful Work as a moderator to offset the inimical positive effect between Span of Supervision and Envy. **Table 6** exhibits that the direct relationship between Span of supervision and Envy is positive and significant; the link between Meaningful Work and Envy is negatively significant.

Moreover, the interaction term (moderating effect) of Meaningful Work on the relationship of Span of supervision and envy is negatively significant. It means that meaningful work moderates the relationship between the span of supervision and Envy. In other words, the relationship between the span of supervision and envy has been moderated by meaningful work such that the relationship weakens significantly when there is

TABLE 4 | Direct effects.

Direct effects	Path coefficients	T statistic	*P* values
Envy – > Resource Depletion	0.248	5.932	0.000
Resource Depletion– > Instigated Incivility	0.256	6.125	0.000
Resource Depletion – > Work Engagement	(−0.153	3.718	0.000
Span of Supervision – > Envy	0.375	7.484	0.000
Span of Supervision– > Instigated Incivility	0.157	4.456	0.000
Span of Supervision– > Resource Depletion	0.154	3.549	0.000
Span of Supervision – > Work Engagement	−0.191	4.404	0.000

TABLE 5 | Mediation analysis (indirect effects).

Mediation effects	Path coefficients	T statistic	*P* values
SS – > En – > RD	0.093	5.022	0.000
SS – > En – > RD – > WE	−0.014	2.863	0.004
SS – > En– > RD – > II	0.024	3.779	0.000

TABLE 6 | Moderation effects.

Moderation effects	Sample mean	T statistics (|O/STDEV|)	*P* values
Meaningful Work – > Envy	−0.214	4.076	0.000
Moderating Effect (SS × MW) – > Envy	−0.088	2.129	0.034
Span of Supervision – (Envy	0.375	7.484	0.000

high knowledge about meaningful work and stronger when there is a low level of knowledge about meaningful work as depicted in **Figure 3**.

DISCUSSION

The theoretical model of workplace envy used in this study would provide a new foundation for studying the phenomenon of envy at the workplace. It was predicted that envy, referred to as pain at other's good fortune, is a homeostatic feeling aroused by a wider span of supervision. The feeling of envy can stimulate both kinds of tendencies like threat-oriented and challenge-oriented. However, the current study has only focused on the threat-oriented approach. In self-control attempts due to the absence of a proper supervisory role, the employee shows the behavior of instigated incivility and less work engagement as a result of resource depletion. But meaningful work can minimize and even cast favorable effects of the span of supervision on envy by reversing the relationships.

This study implicates Vecchio's theory, as hypothesis 1 predicts that span of supervision is associated with envy directly. Supervisors are entities who can control the natural phenomenon of envy among subordinates. A supervisor may enhance as well as reduce envy among confrères by using supportive or non-supportive behavior. Unfairness in supervisors' conduct for their employees can be a reason to increase envy at a workplace (Vecchio, 1997). Favorable support only to some fellows can create envy among those receiving unfavorable behavior from their supervisor (Kim et al., 2010). While studying antecedents and consequences of Envy, Thompson et al. (2016) have suggested that a wider span of supervision would consequently limit the abilities of a supervisor. Failure in emotional support, informational support, and care to followers are the consequences of a large span of supervision. Hence, the current study supports Vecchio's assumption that a span of supervision is a predictor of envy.

The "supernatural force," which links the span of supervision with envy as its predictor, also triggers employee resource depletion. According to Hypothesis 2, resource depletion and span of supervision are interlinked positively via envy. Behavioral consequences of envy have their explanation in equity theory. Compared to other employees in the organization, people equate their outputs with their inputs in a ratio to assess equity (Adams, 1965). After such social comparison, if they find any inequality, they would feel the pain, which would lead them to envy (Heider, 1958). After feeling such pain and unfavorable comparison, they would try to minimize the pain in different ways to restore their equity (Pinder, 2008). Resource depletion, associated with vitality and energy, and considered self-control, can arise due to envy (Lilius, 2012). Koopman et al. (2020) also confirmed resource depletion among confrère as a result of envy. Therefore, in line with the previous studies, the span of supervision results in envy, which, in turn, strongly connects to resource depletion.

Whereas, Hypothesis 3 postulates that the span of supervision is negatively associated with work engagement through envy and resource depletion in sequence. If an open expression of envy at the workplace is not supported, it can put an employee in a more harmful situation. Therefore, people usually find alternate resources to restore equity with their targets (Schweitzer et al., 2006). Organizations can suffer due to this behavioral outcome of employees as a result of envy, which is further ignited by a larger span of supervision. There are alternate ways a person can react to this unfavorable situation. The comparison of outputs to inputs would cause an employee to be less productive to restore equity (Pinder, 2008). It may make a person less engaged in work-related activities. While in a result of social comparison relationship, the envious employee would impose the responsibility of such unfavorable behavior to the organization- the phenomenon explained in the past research of perceived injustice (Konovsky and Folger, 1991). Thus, the suggested postulate in this study is supported by the literature that the span of supervision via envy can decrease work engagement when resources depletion is sequenced.

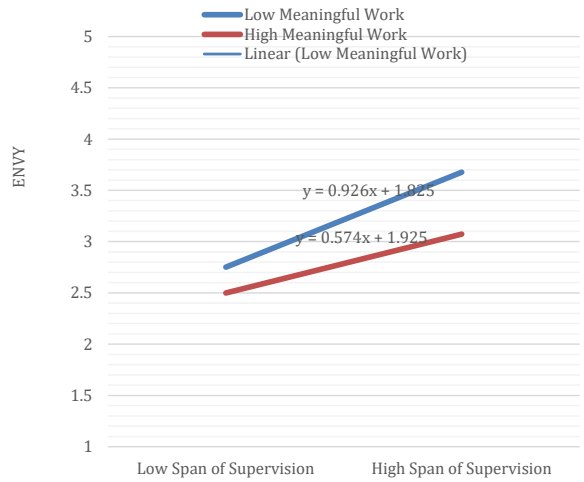

FIGURE 3 | The moderation graph.

Hypothesis 4 of the study suggests that resource depletion, as a behavioral outcome aroused by envy, would not give positive results when directly linked with work engagement. An envious employee would respond to the unfavorable situation by minimizing his positive contribution to the organization (Hannah-Moffat and Shaw, 2000). Supervisors can not pay equal attention to every employee in larger workgroups. Hence, they differentiate among them to address the essential matters. So, this kind of employee considers their supervisors, which leads other employees to envy, as suggested by the first hypothesis of the study. It could further lead to resource depletion, which means they sometimes lose control over the situation and may become low productive employees by fear of rejection or to restore their equity. By following Vecchio (1995), it can be assumed that an employee with a feeling of low self-esteem would make some response to regain his worth in the eyes of the supervisor. A counterproductive work behavior can detract him from work engagement to other malicious work activities. Liu et al. (2019) argued further that envy is a negative emotion that could be hostile to an organization, resulting in job turnover intention and absenteeism. Similarly, Leach et al. (2008) observed that many organizations are commonly facing the situation in which the workforce of their organization is experiencing adverse circumstances due to a large span of supervision. Hence, the results of hypothesis 4 are in line with the past studies.

Like many other studies, the current research has focused on the adverse effects of envy on organizations. Koopman et al. (2016) follows the routing path toward instigated incivility as envisaged in this study. Another negative work behavior among envious employees can be seen as instigated incivility through resource depletion. Instigated incivility is the contradiction of experienced incivility in which envied employees encourage to spread negativity in the workplace for personal gain or to gain the status of recognition among other employees (Schilpzand et al., 2016). Since the supervisor's role is not enough in a large span of supervision, people who envy those who have close relationships with supervisors start to engage in civil activities like backbiting others (Thompson et al., 2016). Thus, the past research findings are consistent with hypothesis 5, which states that the span of supervision is associated with instigated incivility positively via envy and resource depletion in sequence. Similarly, hypothesis 6 is supported through the literature, which states that resource depletion is positively associated with incivility.

Lastly, hypothesis 7 of the current study suggests that in a meaningful work environment, the relationship of the span of supervision with envy can be mended. The past studies indicated that the span of supervision could create envy, which would give adverse outcomes. However, the perception of meaningful work may enable employees to understand the importance of their work and put all their cognitive resources and energies into work (Rosso et al., 2010). Hence, hypothesis 7, which is the contribution of the study, is indirectly supported by the previous outcomes.

THEORETICAL AND MANAGERIAL IMPLICATIONS

The present study is the validation of Vecchio's theory in the food organizations of Pakistan listed with the stock exchange. The basis of the study lies in positivism, which beliefs in the logical mixing of data. Previous research literature has suggested the positive relationship between the span of supervision and envy by implicating Vecchio's theory. Still, no study has indicated that how the span of supervision can be minimized. This research gap has been identified and bridged by using meaningful work as a moderator in the current study. The study would help supervisors minimize envy among the subordinates created by a wider span of supervision. If the depletion of resources produced by envy is addressed positively, then this problem can be solved before taking confrères to the instigated incivility level. Group leaders or supervisors can provide their support and aid to employees to repress the dénouements of envy, which is the source of

resource depletion (Mueller, 2012). This approach can reduce envy among employees.

This study can be applied to all organizations because every organization has similar problems engendered by workplace envy. This study has importance for all levels of honchos. The direct supervisors should highlight the importance of meaningful work because this study has proven that meaningful work can minimize the adverse dénouements of envy. The current research suggests that the engagement and performance of employees can be enhanced by giving proper attention to understanding the importance of their work. The study also implicates the importance of depletion resources in the presence of a wider span of supervision. It has indirectly suggested that focusing on each employee by making subgroups and effectively may contract the destructive role of envy. Therefore, organizations should pay attention to minimizing the conflicts among confrères to control envy, and enhance work engagement for the betterment of organizations. Organizations should recognize that the toxic and destructive nature of emotion (envy) has a positive and constructive side and should not work on removing the triggers of envy; instead may be promoted and managed. Furthermore, insights generated from this study may be helpful for organizations to take steps to reap the benefits of envy experienced by employees adequately. Honchos should focus on meaningful work allocation and favorable resource distribution to the right people within the organizations. Furthermore, the proposed model of this study may provide managers with new insights into reducing envy at work.

CONCLUSION

A theoretical framework for envy in workplace research has been provided by the analytical envy paradigm used in this analysis. Many studies have been conducted on Envy, but the information available is still scarce about its domino effect. This research is based on the principle of Vecchio, which assumes that supervisory span is related explicitly to envy. Supervisors are individuals who are capable of managing workers' inherent jealousy. By utilizing positive or unsupportive behaviors, the honcho may enhance and evoke envy among confrères. Differentiating their employee's supervisory actions, caused by a wider span of control, can increase their jealousy in the workplace (Vecchio, 1997). The results of the current research study align with a traditional view of envy as an unpleasant emotion that triggers negative or irrational behavior causing a detrimental conflict in the workplace and discussed several managerial and theoretical implications for the higher management of the fast-food industry of Pakistan. Following these guidelines, the honchos of the fast-food industry should pay more attention to the betterment of the performance of their employees to create a healthy organizational climate as the findings indicate that the span of supervision functions as an imperative antecedent of envy. Furthermore, envy at work has counterproductive consequences such as resource depletion.

The study assumed that envy or envying-others dimension, being a homeostatic emotion as a wider field of surveillance, can be named as pain for the good fortune of others. The sense of envy can stimulate both types of vehemence, such as threats and challenges. However, this study focused on a threat-oriented approach or dark side of envy that may lead to gloating or even committing a crime and it is necessary to reduce the negative consequences of envy for creating healthy organizations. When employees demonstrate the behavior of instigated incivility and reduced involvement in the sequential presence of resource depletion, control efforts in the form of meaningful work are required. At work, meaningful work plays an important role in moderating the effect of the span of supervision on envy, and to our knowledge, this is the first empirical test examining the role of meaningful work as a significant moderator in the relationship between span of supervision and envy. Further analysis of complexities associated with the existing model would require bolt-on work by incorporating various specific parameters. This study contributes to the literature and can serve as a foundation for future research into workplace envy. Thus, the novel findings provide notable insights and paint a more comprehensive picture of the antecedents and consequences of envy.

LIMITATIONS AND FUTURE DIRECTIONS

One of the limitations of the current research study starts with the basic and primary elements of the research. Since this research study is based on the data collected from the food industry of Pakistan listed with the stock exchange, it may limit the scope to a particular context. Envy as a severe threat to organizations should be studied in other organizational and regional contexts. Moreover, the study can also be conducted on non-profit organizations to implicate the review in different contexts.

In the processes of theory building and concept improvement, the space for the developments always remains open. Since envy has been acknowledged as an interpersonal phenomenon in the current study setting, it has addressed only the behavioral outcomes of envy from envious parties. However, in future researches, it would be helpful to study the experience of being envied, and how it affects the behaviors. Furthermore, the investigation has explored the results associated with coveting, as if it may be a cause of personal strain. In this context, the current study has suggested minimizing the level of envy only by meaningful work. However, some other relevant constructs have yet to be explored, which may help further reduce the uncongenial series of dénouements created by envy. Future studies can examine whether different types of envy exist and explore their potential antecedents and consequences. Furthermore, qualitative nature, where the reasons for envy could be studied, may be another future research activity.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethical Review Committee of Namal. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

HT, AM, and AAh contributed to the conception and design of the study. MK organized the database. SM performed the statistical analysis. HT wrote the first draft of the manuscript. AAA, EM, AM, and AAh wrote sections of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.774688/full#supplementary-material

REFERENCES

Adams, J. S. (1965). "Inequity in social exchange," in *Advances in experimental social psychology*, ed. L. Berkowitz (Cambridge, Massachusetts: Academic Press), 267–299. doi: 10.1016/s0065-2601(08)60108-2

Bono, J. E., Glomb, T. M., Shen, W., Kim, E., and Koch, A. J. (2013). Building positive resources: effects of positive events and positive reflection on work stress and health. *Acad. Manag. J.* 56, 1601–1627. doi: 10.5465/amj.2011.0272

Christian, M. S., and Ellis, A. P. J. (2011). Examining the Effects of Sleep Deprivation on Workplace Deviance: a Self-Regulatory Perspective. *Acad. Manage. J.* 54, 913–934. doi: 10.5465/amj.2010.0179

Christian, M. S., Eisenkraft, N., and Kapadia, C. (2014). Dynamic Associations among Somatic Complaints, Human Energy, and Discretionary Behaviors. *Adm. Sci. Q.* 60, 66–102. doi: 10.1177/0001839214553655

Cohen-Charash, Y. (2009). Episodic envy. *J. Appl. Soc. Psychol.* 39, 2128–2173. doi: 10.1111/j.1559-1816.2009.00519.x

de Zoysa, P., Kumar, S., and Amarasuriya, S. D. (2021). An Assessment of Envy in Undergraduates of a State University in Sri Lanka. *Psychol. Stud.* 66, 191–199.

Demirtas, O., Hannah, S. T., Gok, K., Arslan, A., and Capar, N. (2015). The Moderated Influence of Ethical Leadership, Via Meaningful Work, on Followers' Engagement, Organizational Identification, and Envy. *J. Bus. Ethics* 145, 183–199. doi: 10.1007/s10551-015-2907-7

Drost, E. A. (2011). Validity and Reliability in social Science Research. *Educ. Res. Perspect.* 1, 105–122.

Duffy, M. K., and Shaw, J. D. (2000). The Salieri syndrome: consequences of envy in groups. *Small Group Res.* 31, 3–23. doi: 10.1177/104649640003100101

Duffy, M. K., Lee, K., and Adair, E. A. (2021). Workplace envy. *Annu. Rev. Organ. Psychol. Organ. Behav.* 8, 19–44.

Duffy, M. K., Scott, K. L., Shaw, J. D., Tepper, B. J., and Aquino, K. (2012). A Social Context Model of Envy and Social Undermining. *Acad. Manage. J.* 55, 643–666. doi: 10.5465/amj.2009.0804

Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 39–50. doi: 10.2307/3151312

Garson, J. (2016). *A critical Overview of Biological Functions*. Cham: Springer International Publishing. doi: 10.1007/978-3-319-32020-5_2

Ghadi, M. Y. (2018). Empirical examination of theoretical model of workplace envy: evidences from Jordan. *Manage. Res. Rev.* 41, 1438–1459.

González-Navarro, P., Zurriaga-Llorens, R., Tosin Olateju, A., and Llinares-Insa, L. I. (2018). Envy and counterproductive work behavior: the moderation role of leadership in public and private organizations. *Int. J. Environ. Res. Public Health* 15:1455. doi: 10.3390/ijerph15071455

Hair, J. F. jr., Matthews, L. M., Matthews, R. L., and Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *Int. J. Multivar. Data Anal.* 1, 107–123.

Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *J. Mark. Theory Pract.* 19, 139–152. doi: 10.2753/mtp1069-6679190202

Hair, J. F., Risher, J. J., Sarstedt, M., and Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* 31, 2–24. doi: 10.1108/ebr-11-2018-0203

Hannah-Moffat, K., and Shaw, M. (2000). Thinking about cognitive skills? Think again! *Crim. Justice Matters* 39, 8–9. doi: 10.1080/09627250008552836

Heider, F. (1958). "The naive analysis of action," in *The Psychology of Interpersonal Relations*, ed. F. Heider (Hoboken, NJ: John Wiley & Sons Inc.), 79–124. doi: 10.1037/10628-004

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., et al. (2014). Common beliefs and reality about PLS: comments on Rönkkö and Evermann (2013). *Organ. Res. Methods* 17, 182–209. doi: 10.1177/1094428114526928

Kim, S., O'Neill, J. W., and Cho, H.-M. (2010). When does an employee not help coworkers? The effect of leader-member exchange on employee envy and organizational citizenship behavior. *Int. J. Hosp. Manage.* 29, 530–537. doi: 10.1016/j.ijhm.2009.08.003

Konovsky, M. A., and Folger, R. (1991). *The Effects Of Procedural And Distributive Justice On Organizational Citizenship Behavior*. New Orleans: Tulane University A. B. Freeman Business School.

Koopman, J., Lanaj, K., and Scott, B. A. (2016). Integrating the bright and dark sides of OCB: a daily investigation of the benefits and costs of helping others. *Acad. Manag. J.* 59, 414–435. doi: 10.5465/amj.2014.0262

Koopman, J., Lin, S. H., Lennard, A. C., Matta, F. K., and Johnson, R. E. (2020). My coworkers are treated more fairly than me! A self-regulatory perspective on justice social comparisons. *Acad. of Manage. J.* 63, 857–880. doi: 10.5465/amj.2016.0586

Lange, J., Weidman, A. C., and Crusius, J. (2018). The painful duality of envy: evidence for an integrative theory and a meta-analysis on the relation of envy and schadenfreude. *J. Pers. Soc. Psychol.* 114, 572–598. doi: 10.1037/pspi0000118

Leach, C. W., Van Zomeren, M., Zebel, S., Vliek, M. L., Pennekamp, S. F., Doosje, B., et al. (2008). Group-level self-definition and self-investment: a hierarchical (multicomponent) model of in-group identification. *J. Pers. Soc. Psychol.* 95, 144–165. doi: 10.1037/0022-3514.95.1.144

Lee, K., Duffy, M. K., Scott, K. L., and Schippers, M. C. (2018). The Experience of being envied at work: how being envied shapes employee feelings and motivation. *Pers. Psychol.* 71, 181–200. doi: 10.1111/peps.12251

Li, M., Xu, X., and Kwan, H. K. (2021). The antecedents and consequences of workplace envy: a meta-analytic review. *Asia Pac. J. Manage.* 38, 1–35. doi: 10.5465/ambpp.2009.44265118

Lilius, J. M. (2012). Recovery at Work: understanding the Restorative Side of "Depleting" Client Interactions. *Acad. Manage. Rev.* 37, 569–588. doi: 10.5465/amr.2010.0458

Liu, J., Zheng, J., Liu, K., Liu, X., Wu, Y., Wang, J., et al. (2019). Workplace violence against nurses, job satisfaction, burnout, and patient safety in Chinese hospitals. *Nurs. Outlook* 67, 558–566. doi: 10.1016/j.outlook.2019.04.006

Mao, Y., He, J., and Yang, D. (2020). The dark sides of engaging in creative processes: coworker envy, workplace ostracism, and incivility. *Asia Pac. J. Manage.* 38, 1261–1281. doi: 10.1007/s10490-020-09707-z

Mueller, J. S. (2012). Why individuals in larger teams perform worse? *Organ. Behav. Hum. Decis. Process.* 117, 111–124. doi: 10.1016/j.obhdp.2011.08.004

Pinder, C. C. (2008). *Work motivation in organizational behavior*. New York: Psychology Press.

Puranik, H., Koopman, J., Vough, H. C., and Gamache, D. L. (2019). They Want What I've Got (I Think): the Causes and Consequences of Attributing Coworker Behavior to Envy. *Acad. Manage. Rev.* 44, 424–449. doi: 10.5465/amr.2016.0191

Raykov, T. (2007). Reliability if deleted, not 'alpha if deleted': evaluation of scale reliability following component deletion. *Br. J. Math. Stat. Psychol.* 60, 201–216. doi: 10.1348/000711006X115954

Rich, B. L., Lepine, J. A., and Crawford, E. R. (2010). Job Engagement: antecedents and Effects on Job Performance. *Acad. Manage. J.* 53, 617–635. doi: 10.5465/amj.2010.51468988

Rosen, C. C., Koopman, J., Gabriel, A. S., and Johnson, R. E. (2016). Who strikes back? A daily investigation of when and why Incivility begets Incivility. *J. Appl. Psychol.* 101, 1620–1634. doi: 10.1037/apl0000140

Rosso, B. D., Dekas, K. H., and Wrzesniewski, A. (2010). On the meaning of work: a theoretical integration and review. *Res. Organ. Behav.* 30, 91–127. doi: 10.1016/j.riob.2010.09.001

Schilpzand, P., De Pater, I. E., and Erez, A. (2016). Workplace incivility: a review of the literature and agenda for future research. *J. Organ. Behav.* 37, S57–S88.

Schweitzer, R., Melville, F., Steel, Z., and Lacherez, P. (2006). Trauma, post-migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. *Aust. N. Z. J. Psychiatry* 40, 179–187. doi: 10.1080/j.1440-1614.2006.01766.x

Shu, C.-Y., and Lazatkhan, J. (2017). Effect of leader-member exchange on employee envy and work behavior moderated by self-esteem and neuroticism. *Rev. Psicol. Trab. Las Organ.* 33, 69–81.

Smith, R. H., and Kim, S. H. (2007). Comprehending envy. *Psychol. Bull.* 133, 46–64. doi: 10.1037/0033-2909.133.1.46

Steger, M. F., Dik, B. J., and Duffy, R. D. (2012). Measuring Meaningful Work: the Work and Meaning Inventory (WAMI). *J. Career Assess.* 20, 322–337. doi: 10.1177/1069072711436160

Tai, K., Narayanan, J., and McAllister, D. J. (2012). Envy As Pain: rethinking the Nature of Envy and Its Implications for Employees and Organizations. *Acad. Manage. Rev.* 37, 107–129. doi: 10.5465/amr.2009.0484

Tandoc, E. C., Ferrucci, P., and Duffy, M. (2015). Facebook use, envy, and depression among college students: is facebooking depressing? *Comput. Hum. Behav.* 43, 139–146. doi: 10.1016/j.chb.2014.10.053

Thau, S., and Mitchell, M. S. (2010). Self-gain or self-regulation impairment? Tests of competing explanations of the supervisor abuse and employee deviance relationship through perceptions of distributive justice. *J. Appl. Psychol.* 95, 1009–1031. doi: 10.1037/a0020540

Thompson, G., and Li, J. (2010). *Leadership. In search of effective influence strategies*. Oslo: Gyldendal Akademisk.

Thompson, G., Glasø, L., and Martinsen, Ø (2016). Antecedents and consequences of Envy. *J. Soc. Psychol.* 156, 139–153.

Van de Ven, N. (2017). Envy and admiration: emotion and motivation following upward social comparison. *Cogn. Emot.* 31, 193–200. doi: 10.1080/02699931.2015.1087972

Vecchio, R. P. (1995). It's not easy being green: jealousy and envy in the workplace. *Res. Pers. Hum. Resour. Manage.* 13, 201–244.

Vecchio, R. P. (1997). *It's not easy being green: jealousy and envy in the workplace*. Notre Dame, IN, US: University of Notre Dame Press.

Weiss, M., Razinskas, S., Backmann, J., and Hoegl, M. (2018). Authentic leadership and leaders' mental well-being: an experience sampling study. *Lead. Quart.* 29, 309–321. doi: 10.1016/j.leaqua.2017.05.007

Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Market. Bull.* 24, 1–32.

Yam, K. C., Christian, M. S., Wei, W., Liao, Z., and Nai, J. (2018). The Mixed Blessing of Leader Sense of Humor: examining Costs and Benefits. *Acad. Manage. J.* 61, 348–369. doi: 10.5465/amj.2015.1088

Yu, L., Duffy, M. K., and Tepper, B. J. (2018). Consequences of Downward Envy: a Model of Self-esteem Threat, Abusive Supervision, and Supervisory Leader Self-improvement. *Acad. Manage. J.* 61, 2296–2318. doi: 10.5465/amj.2015.0183

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 13 January 2022
doi: 10.3389/fpsyg.2021.804947

The Impact That Different Types of Organizational Cultures Have on the Adjustment of Self-Initiated Expatriates

Vilmantė Kumpikaitė-Valiūnienė[1], Ineta Žičkutė[1], Irma Banevičienė[1], Junhong Gao[2] and Denisse Torres[1]*

[1] School of Economics and Business, Kaunas University of Technology, Kaunas, Lithuania, [2] College of Economics and Management, Shandong University of Science and Technology, Qingdao, China

This paper investigates the adjustment of self-initiated expatriates, with a particular emphasis on organizational culture. One hundred and twenty-five self-initiated expatriates around the globe participated in the online survey. We examined the impact that organizational culture has on self-initiated expatriate work and non-work-related adjustment using multiple linear regression analysis. Four types of organizational culture (clan, adhocracy, market, and hierarchy) were explored. The results revealed that Clan culture has a positive effect on the work and non-work-related adjustment of self-initiated expatriates.

Keywords: organizational culture, culture types, self-initiated expatriates, adjustment, work adjustment, non-work adjustment

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Bernadeta Gostautaite, ISM University of Management and Economics, Lithuania
Marek Szarucki, Kraków University of Economics, Poland

****Correspondence:***
Junhong Gao
gaojunhong2015@163.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *29 October 2021*
Accepted: *09 December 2021*
Published: *13 January 2022*

Citation:
Kumpikaitė-Valiūnienė V, Žičkutė I, Banevičienė I, Gao J and Torres D (2022) The Impact That Different Types of Organizational Cultures Have on the Adjustment of Self-Initiated Expatriates. Front. Psychol. 12:804947. doi: 10.3389/fpsyg.2021.804947

INTRODUCTION

Economic globalization requires an increasing number of people to work abroad for short or long periods of time (Cappellen and Janssens, 2010). This includes expatriates (Al Ariss and Özbilgin, 2010; Andresen et al., 2014; Cerdin and Le Pargneux, 2014) and migrants (Guo and Al Ariss, 2015; Hajro et al., 2019) who move abroad for work-related reasons. All of these individuals need to adjust to their new countries and organizations (Black et al., 1991; Haslberger et al., 2014). The multidimensionality of this adjustment process has been discussed in both acculturation and expatriation literature. Researchers who study the adjustment process that expatriates undertake focus on different aspects of their experience, such as adjustment models and types of adjustment (Lysgaard, 1955; Black et al., 1991; Waxin, 2004; Liu and Lee, 2008; Haslberger et al., 2014), adjustment processes (Shaffer et al., 1999; Chen et al., 2002; Rosenbusch and Cseh, 2012), cultural shock (Oberg, 1960; Sims and Schraeder, 2004; Qin and Baruch, 2010; Rajasekar and Renand, 2013), or factors that influence adjustment (Black, 1990; Black and Gregersen, 1991; Aycan, 1997; Hechanova et al., 2003; Mezias and Scandura, 2005; Selmer and Lauring, 2009; Barner-Rasmussen et al., 2014; Feitosa et al., 2014). Moreover, most of the research on expatriate adjustment focuses on individual factors that predict adjustment and performance without paying adequate attention to organizational antecedents (e.g., Black, 1990; Barner-Rasmussen et al., 2014).

The type of organizational culture (Pinto et al., 2011) and cultural novelty (Black and Gregersen, 1991) have been noted to be organizational antecedents of adjustment. Even though

some studies identified a negative association between culture novelty and adjustment (e.g., Black and Stephens, 1989; Shaffer et al., 1999; Bhaskar-Shrinivas et al., 2005; Pinto et al., 2011), less attention has been paid to the influence that a given type of organizational culture has on adjustment. Therefore, the lack of research on organizational factors, particularly on the influence of organizational culture type, is apparent. Cultural novelty is defined as a person's perception of how different from each other are home and host country (Black and Stephens, 1989). An organization's cultural novelty is usually analyzed by comparing the organizational cultures of an assigned expatriate's home and host countries; however, there is currently an increasing demand for self-initiated expatriates and their growing mobility (Fee and Gray, 2020). Two types of expatriates are most commonly analyzed in the scientific literature: assigned expatriates (AEs) and self-initiated expatriates (SIEs). AEs are described as employees (mostly professionals or managers) who are sent by their employer to a foreign subsidiary (Suutari and Brewster, 2000; Andresen et al., 2014; Przytuła, 2015; McNulty and Brewster, 2017). In comparison with AEs, SIEs could be described as individuals who are not sent abroad by their organization but instead decide to look for international work experience on their own (Suutari and Brewster, 2000; Meuer et al., 2019; Andresen et al., 2020). By their initiative, SIEs join a new organization, which usually has nothing in common with the previous company that they worked for in their home country.

Most studies on expatriate adjustment focus on AEs (e.g., Aycan, 1997; Andreason, 2003; Pinto et al., 2012). The same could be said about research that centers on organizational culture type and adjustment (e.g., Black et al., 1991; Pinto et al., 2011, 2012). This means that current research overlooks the potential influence of organizational culture type on the adjustment of SIEs, which is a gap that this study aims to fill.

Our paper is organized in the following way. First, our theoretical framework is presented. This initial section begins with a discussion about the adjustment of expatriates and is followed by an introduction to the different organizational culture typologies and the links between organizational culture types and expatriate adjustment. The research instrument, research sample, and procedure are explained in the methodology section, as are the results of the quantitative research. A final discussion and an overview of conclusions, limitations, future research directions, and practical implications appear at the end of the paper.

THEORETICAL FRAMEWORK

Self-Initiated Expatriate Adjustment

The intercultural adjustment of expatriates is defined as a ratio of human psychological comfort and knowledge of a foreign culture (Waxin and Panaccio, 2005). Unlike AEs, SIEs are not sent abroad by a company and thus do not undergo any preparation for their adjustment to a new organization abroad. Therefore, in their case, anticipatory adjustment, which is utilized in the case of AEs (e.g., Black and Gregersen, 1991), is not formalized, so only in-country adjustment should be highlighted.

According to the most popular classification system, which was created by Black (1990), adjustment after arriving in the host country could be divided into (1) work adjustment, which refers to the comfort associated with the new job requirements abroad; (2) interaction adjustment, which refers to the adjustment associated with the socialization that takes place between the expatriate and their host country's nationals, both at work and beyond; and (3) general or cultural adjustment, which refers to the foreign culture and living conditions abroad.

Some additional classifications of expatriate adjustment could be noted. While exploring individual- and organizational-level predictors for expatriate adjustment, Aycan (1997) analyzed the relationship between general adjustment and work adjustment and did not include interaction adjustment. Similarly, in presenting a framework of international adjustment, Haslberger et al. (2014) highlighted work adjustment and non-work adjustment dimensions. The authors consider interaction adjustment to be a subset of both work and general (non-work) adjustment, explaining that interaction takes place in the work environment (e.g., with other employees or customers) and in general non-work environments (e.g., with people in public or neighbors) (Haslberger et al., 2014, p. 342). We agree with this type of approach and thus focus on work and general non-work adjustment in our study.

Non-work adjustment is related to the environment and factors outside of an organization. Country culture novelty, spouse or family adjustment, and individual features, such as previous international experience, host-language skills, and personal characteristics, could be highlighted as non-work factors that influence expatriate adjustment (Andreason, 2003; Bhaskar-Shrinivas et al., 2005; Pinto et al., 2012).

The work adjustment of expatriates is characterized by both good performance and positive attitudes toward their new work role (Aycan, 1997). While analyzing antecedents of adjustment, Black and Gregersen (1991) highlighted the role of work-related factors, such as job factors and organizational factors. Job factors include role clarity, role discretion, role novelty, and role conflict (Stroh et al., 1994; Pinto et al., 2011). Organizational factors include organizational cultural novelty and social support (Andreason, 2003). As studies on organizational factors' influence on work adjustment concentrated on AEs; the direct application of the terms is not suited for analysis of SIEs work adjustment. Social support for AEs consists of support from the home office, support from co-workers in the host country's subsidiary, and as SIEs had no home office to expect support from, we will not expand on the types of support SIEs receives. Organizational cultural novelty in previous studies concentrated on differences between the cultures at overseas subsidiary and at the home office where AE was sent from Black et al. (1991). In association with SIEs, the organizational cultural novelty would compare differences between the previous workplace and the new workplace taking different countries out of the context. Therefore, SIEs are more similar to national employees entering a new organization, and so we propose that organizational culture type rather than

organization culture novelty could have an impact on SIEs work adjustment.

Links Between Organizational Culture Typologies and Expatriate Adjustment

Organizational culture could be defined as "shared values and basic assumptions that explain why organizations do what they do and focus on what they focus on" (Schneider et al., 2017, p. 468). These shared values are grounded in the history of an organization and are valid because they have been proven to be effective (Schein, 2010). New members in an organization should adjust to the values that are a part of the organizational culture. If the values are similar to the individual values of the acceptance of these values and transition into the organization become easier. How well a new employee fits into an organization could be described using the person-organization (P-O) fit theory. P-O fit theory is defined as "the compatibility between people and organizations which occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both" (Kristof, 1996, p. 45). Fit in managerial literature is identified by how similar an individual's characteristics (personality, values, goals, and attitudes) are to an organization's characteristics (organizational culture, values, goals, and norms) (Kristof, 1996; Lee and Wu, 2011). O'Reilly et al. (1991) revealed that organizational culture helps determine a person's "fit" within a particular organization because "fit" includes feeling comfortable with the culture. Hofstede (1993) research highlighted that individual values and organizational practices need to be integrated to increase the degree of P-O fit. Based on these findings, we propose that a particular type of organizational culture increases P-O fit and has a positive impact on the adjustment of expatriates.

Studies that focus on expatriate adjustment also highlight the importance of organizational culture (e.g., Black, 1988; Black et al., 1991; Pinto et al., 2011, 2012). The similarity between a parent organization's culture and the host's organization's culture also positively influences expatriate adjustment (Liu and Shaffer, 2005). As noted before, though, these types of studies mostly focus on AEs and proposed features, such as organizational culture novelty, social support, and logistical help (Black et al., 1991), which do not apply to SIEs because they are not connected to a parent organization; however, based on previous studies on expatriation (Black et al., 1991; Pinto et al., 2011, 2012), organizational culture could foster the work and non-work adjustment of expatriates, and one of the traditional typologies of organizational culture could measure it.

There are many typologies of organizational culture (e.g., Quinn and McGrath, 1985; Cameron et al., 1991; Trompenaars, 1994; Schneider et al., 1995; Goffee and Jones, 1988; Cameron and Quinn, 1999), but the majority of classifications are similar. However, probably the most popular classification is by dividing culture to *Clan, Adhocracy, Market*, and *Hierarchy* (e.g., Quinn and Rohrbaugh, 1983; Cameron et al., 1991; Cameron and Quinn, 1999).

The Clan and Adhocracy types could be described as dynamic and flexible cultures; however, the Clan culture is focused on employee involvement and friendly communication in the organization (Hartnell et al., 2011). Clan culture is characterized by high sociability, friendly relationships, and informality between group members. It is based on high communication and the values of loyalty and interpersonal connections, such as family or teamwork (Barner-Rasmussen et al., 2014). Furthermore, Clan culture is marked by employee commitment and concern and trust in people. We assume that this kind of employee-friendly culture supports new employees and fosters informal interactions that allow expatriates to gather more information related to non-work-related factors, which could be useful for their everyday lives.

Adhocracy culture is oriented around creativity and growth, risk-taking, and autonomy (Hartnell et al., 2011). Focus on community impact and a need for a high degree of flexibility and individuality are the key values for Adhocracy culture. The glue that holds the organization together is a commitment to creativity and innovation (Boggs, 2004). Furthermore, the culture encourages individual initiative and the freedom of employees. We assume that freedom and initiative could help expatriates better adjust and fit the organization. In addition, Adhocracy organization has external focus and differentiation (Cameron and Quinn, 1999), which, as we propose, could foster better non-work adjustment outside the organization.

While exploring the impact of organizational culture types on marketing professionals in the United States, Lund (2003) pointed out that organizational cultures that are guided by fraternal relationships, good mentors, and respect for the individual foster a higher level of adjustment. Focusing on the organizational culture typology created by Cameron et al. (1991), Lund (2003) highlighted that the Clan and Adhocracy types, which emphasize spontaneity and flexibility, encourage better adjustment. Therefore, we propose:

> *H1. Clan culture is positively associated with (a) expatriate work adjustment and (b) expatriate non-work adjustment.*

> *H2. The* Adhocracy *culture is positively associated with (a) expatriate work adjustment and (b) expatriate non-work adjustment.*

The Market culture is centered on competitiveness and achievement among employees (Cameron and Quinn, 1999). The main priority in this type of organization is competition and getting the job done. Its efficiency is measured in terms of achieving the objective. Stability, control, external focus, and differentiation are the main pillars of such an organization (Cameron and Quinn, 1999). The leader is a strict supervisor and demands excellence from the employees. This could influence the stress of employees. Looking at the provided characteristics of the Market culture, we propose that they do not promote the adjustment of expatriates and their fit into the organization. Therefore, the following hypothesis can be formulated:

> *H3. Market culture is negatively associated with (a) expatriate work adjustment and (b) expatriate non-work adjustment.*

The Hierarchy type emphasizes clearly defined roles for employees and highly formalized structures (Cameron and Quinn, 2006). The key value is control in the hierarchy organization. In addition to a high level of control, this culture could be described by bureaucracy, rules, and regulations and is characterized by the security of employment, conformity, predictability, and stability in relationships. Hierarchy culture focuses on internal maintenance and integration and a need for stability (Cameron and Quinn, 1999). The leaders pride themselves on being good coordinators and organizers who are efficiency-minded (Boggs, 2004). This type of culture does not develop deeper relationships among employees and is not friendly to new employees. We propose that a high level of control with plenty of rules and procedures, lack of flexibility and inner orientation do not help new expatriates to adjust either to the organization or outside it. Therefore, we formulate this final hypothesis:

> *H4. The Hierarchical culture type is negatively associated with (a) expatriate work adjustment and (b) expatriate non-work adjustment.*

Based on the expatriate adjustment models of Quinn and McGrath's (1985) and Black et al. (1991) and Haslberger et al. (2014) organizational culture typology, our research model is presented in **Figure 1**.

METHODOLOGY

Measures

Measures for the study were selected based on the expatriation model of Haslberger et al. (2014), the expatriate adjustment questionnaire of Black et al. (1991), and Cameron and Quinn (1999) organizational culture typology.

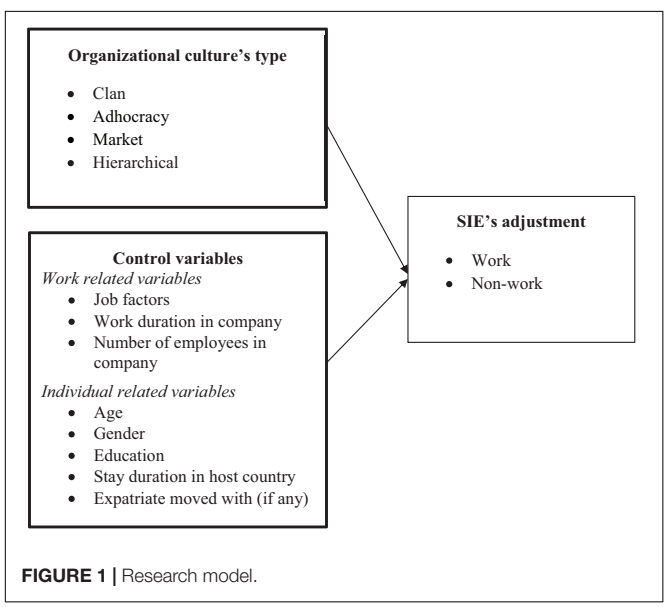

FIGURE 1 | Research model.

Dependent Variables

Work and non-work adjustment were evaluated according to the expatriate adjustment model of Black et al. (1991). The questionnaire was adapted for SIEs, and all questions related to AEs were excluded (e.g., *"I would like to stay longer than assigned"*). *Work adjustment* was determined by four statements, such as *"The work in this organization so far has been successful"* or *"I feel adjusted to my organization."* The Cronbach Alpha of the scale was 0.886. Five statements, including reversed (R) items, measured *non-work adjustment* (e.g., *"The move so far has been successful," "It is difficult for me to adjust (R)," "I feel adjusted to this country"*). The Cronbach Alpha of the scale was 0.887.

Independent Variables

We used Cameron and Quinn (1999) organizational culture typology (i.e., Clan, Adhocracy, Market, and Hierarchical). Organization culture typology was assigned using an organizational culture assessment instrument (David et al., 2018). Each organizational culture typology was evaluated by providing six statements for every culture. For instance, Clan culture examples consisted of statements such as *"The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves"* and *"The management style in the organization is characterized by teamwork, consensus, and participation."* The Cronbach Alpha of the scale was 0.814. Adhocracy culture examples consisted of statements such as "*The organization is a very dynamic entrepreneurial place. People are willing to stick their necks out and take risks*" and *"The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued."* The Cronbach Alpha of the scale was 0.818. Examples that fell under the Market culture classification included statements such as *"The organization is very results-oriented. A major concern is getting the job done. People are very competitive and achievement oriented*" and *"The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key."* The Cronbach Alpha of the scale was 0.744. Finally, Hierarchical culture was described through statements such as *"The organization is a very controlled and structured place. Formal procedures generally govern what people do"* and *"The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling and low-cost production are critical."* The Cronbach Alpha of the scale was 0.803.

Controlling Variables

Additional individual and work-related variables were incorporated into the questionnaire. *Individual related variables* consisted of age, gender, education, stay duration in the host country, the people who an expatriate moved with (if any), and citizenship status in the host country. Meanwhile, *work-related variables* included job factors, work duration in the company, and the number of employees in the company. Job factors, such as role clarity and freedom of actions, were measured according to the Black et al. (1991) questionnaire and evaluated using five statements, including reversed item: *"My job responsibilities are clearly defined," "It is difficult to figure out my work role (R)," "I*

am given the freedom to define my work role." The Cronbach Alpha of the scale was 0.642.

A five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) was used for the measurement of work and non-work adjustment, organizational culture, and job factors.

Sample and Procedure

Data for this empirical study have been collected from expatriates around the world by distributing the surveymonekey.com online survey through the system portal surveymonekey.com. We shared the questionnaire on social media, especially in expatriate groups with members who lived across the globe. We also distributed the questionnaire to contacts around the world and shared it with expatriates on the www.internations.org contact page through direct messages. The questionnaire was written in English.

We collected data in March-May and September-December of 2019. We found many uncompleted questionnaires after the first phase, and therefore we shared our questionnaire link again after summer. In total, we received questionnaires from 259 respondents, of whom 43.2% of the questionnaires were incomplete. Thus, due to insufficient data, incomplete questionnaires were not further analyzed. The focus of the study was SIEs. The status of SIE was tested by the question "By whose initiative did you move abroad?" and all answers if respondents were sent by the organization were excluded from the final analysis. The final sample used for the analysis consisted of 125 SIEs working all over the world. All analysis was carried out using SPSS, version 27.

RESULTS

The Descriptive Statistics

The respondent group was very diverse. The total sample includes 125 respondents from 41 different countries working in 33 host countries. The descriptive statistics of the sample are presented in **Table 1**.

The mean of the SIEs age was 35 years old. Slightly more respondents were female (58.4%). The majority of SIEs had a BA, MA, or Ph.D. (88.8%). Stay duration in the host country varied. The majority of SIEs stayed in their host country for more than 5 years (43.2%), 1–2 years (20.0%), or 3–5 years (16.8%). Approximately half of the respondents (52.8%) moved abroad alone, and approximately one quarter moved with a spouse (24.0%) or their whole family (22.4%).

The work-in-company duration was similarly distributed. It varied between 15.2 and 25.6% of SIEs working up to 6 months and 20.8% working for a period of more than 5 years. The size of the companies that they worked for varied from organizations with 2–9 people (8.0%) to companies with over 1,000 employees (33.6%).

Results of Correlation and Regression Analysis

Correlation and multiple linear regression analyses were conducted to examine the relationship between adjustment and potential predictors (i.e., organizational culture and controlling variables such as individual and work-related predictors). **Table 2** summarizes the correlation analysis results. As the results illustrate, Clan and Adhocracy cultures and job factors are positively and significantly correlated with work adjustment. The SIEs with higher scores on indicated variables tend to be more adjusted to work. Meanwhile, Clan culture and controlling variables such as job factors and stay duration positively and significantly correlated with non-work adjustment.

Multiple linear regressions were run to predict the degree of expatriate work and non-work adjustment abroad in relation to organizational culture and individual and work-related variables (see **Table 3**). Multiple regression models with variables related to (1) individual, (2) individual and work, and (3) individual, work, and organizational culture were produced. The multiple regression models with all 12 predictors (see Step 3) to the work and non-work adjustment produced the following results, respectively: $F(12, 110) = 8.420$, $p < 0.001$, R Square = 0.479 and $F(12, 110) = 5.671$, $p < 0.001$, R Square = 0.382. As **Table 3** shows, job factors ($b = 0.599$, $p < 0.001$) and clan organizational culture ($b = 0.338$, $p < 0.01$) have a significantly positive impact on work adjustment. These two variables [respectively, job factors ($b = 0.480$, $p < 0.001$) and clan culture ($b = 0.322$, $p < 0.05$)] also positively influence non-work adjustment. This indicates that SIEs with higher scores on these scales were expected to have a better adjustment in work and non-work adjustment, which corresponds to H1. Furthermore, the duration of stay in the host country ($b = 0.173$, $p < 0.05$) also has a significantly positive impact on non-work adjustment. All other individual-related variables and work-related variables, such as work duration in the company and the number of employees in the company, did not contribute to the multiple regression model on work adjustment. The same can be said for all the other organizational culture types.

Our study revealed a significant positive correlation between Adhocracy culture and work adjustment ($r = 0.226$, $p < 0.05$); however, the regression analysis did not indicate the impact of Adhocracy culture on work adjustment. Therefore, H2a is not supported. These findings correspond in part to Lund's (2003) study, where a positive impact on work adjustment was discovered while studying local employees. No statistically significant relation was found between Adhocracy culture and general non-work adjustment, not supporting H2b.

Our assumptions that less people-oriented and not flexible Marketing and Hierarchical organizational cultures negatively influence work adjustment and non-work adjustment and our H3 and H4 were not supported. No statistically significant relationship was found between these constructs. Therefore, it could be explained that Marketing and Hierarchical cultures do not influence adjustment and fit organization of expatriates neither helping nor harming this process.

DISCUSSION

This study examined the influence that organizational culture type has on self-initiated expatriate adjustment. The empirical analysis attempted to assess the extent to which the work and

TABLE 1 | Descriptive statistics.

		N	%	Mean	*SD*
Dependent variables					
Work adjustment		125		3.94	0.85
Non-work adjustment		125		3.97	0.80
Individual related variables					
Age*				35.14	9.87
Gender	Female	73	58.4		
	Male	52	41.6		
Education	High school degree	14	11.2		
	BA, MA, PhD	111	88.8		
Stay duration in host country	Up to 6 months	15	12.0		
	6–11 months	10	8.0		
	1–2 years	25	20.0		
	3–5 years	21	16.8		
	More than 5 years	54	43.2		
Expatriate moved with (if any)*	Alone	66	52.8		
	Spouse	30	24.0		
	All family	28	22.4		
Work related variables					
Job factors		125		3.49	0.71
Work in company duration	Up to 6 months	32	25.6		
	6–11 months	19	15.2		
	1–2 years	24	19.2		
	3–5 years	24	19.2		
	More than 5 years	26	20.8		
Number of employees in company	2–9 people	10	8.0		
	10–50 people	18	14.4		
	51–100 people	13	10.4		
	101–250 people	8	6.4		
	251–500 people	18	14.4		
	501–1,000 people	16	12.8		
	Over 1,000	42	33.6		
Organization culture					
Clan				3.44	0.77
Adhocracy				3.01	0.80
Market				3.32	0.73
Hierarchical				3.52	0.76

**N = 124.*

non-work adjustment of SIEs, in particular, could be explained by organizational culture type. Several interesting results emerged from the analysis.

Hypothesis 1 suggests that organizational culture types that promote close relationships, communication, and teamwork positively correlate with work and non-work adjustment. Results showed a positive impact of Clan culture on work and non-work-related adjustment and supported H1. Clan culture thus appears to offer the best fit between the organization and the person, corresponding with the P-O fit theory. As Pinto et al. (2011) noted, frequent social interactions are required to establish relationships in an organization, and expatriates who do not have local networks have trouble meeting these conditions. Clan culture is like an extended family and characterized by teamwork, consensus, and participation, which makes it easier for expatriates to make social connections. In this type of work environment, SIEs can establish friendships, which is important for foreigners living in a host country. These insights align with Haslberger et al.'s (2014) belief that interaction with people is important for both work and non-work adjustment. Moreover, we note that the work-related adjustment of SIEs could be explored in relation to new local employees. Our findings correspond with Lund's (2003) results, showing that family-relation-based culture helps new employees adjust inside an organization.

The results revealed that individual-related control variables, such as age, gender, and education, do not correlate with work and non-work adjustment. These results do not support the findings of Pinto et al. (2011), who explored assigned expatriates; however, with respect to gender issues, Selmer and Leung (2003) also did not find a relationship between gender difference

TABLE 2 | Correlation analysis.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Work Adj.		0.664**	0.123	−0.028	0.021	0.156	0.003	0.546**	0.201*	0.103	0.403**	0.226*	0.012	0.160
2. Non-work Adj.			0.078	−0.151	0.028	0.225*	−0.006	0.353**	0.123	0.094	0.299**	0.053	−0.122	0.164
3. Age				−0.165	0.048	0.419**	0.422**	0.128	0.554**	0.033	−0.141	−0.047	−0.031	0.000
4. Gender					−0.112	−0.007	−0.164	0.080	−0.096	−0.056	−0.015	0.138	0.182*	0.022
5. Education						0.058	−0.119	0.063	0.073	0.210*	−0.096	−0.113	−0.014	0.148
6. Stay duration							0.179*	0.110	0.721**	0.033	0.029	0.049	0.071	0.150
7. Expatriate moved with (if any)								−0.030	0.231**	−0.001	0.029	−0.123	−0.054	−0.032
8. Job factors									0.271**	0.016	0.386**	0.364**	0.079	0.148
9. Work duration										0.024	−0.022	0.067	−0.011	−0.004
10. Number of employees											−0.200*	−0.267**	−0.090	0.267**
11. Clan												0.575**	0.022	0.212*
12. Adhocracy													0.410**	0.030
13. Market														0.040
14. Hierarchical														

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

and non-work adjustment, though they did find that female expatriates had higher levels of work adjustment than males. In relation to gender, more contradicting results could be found. Pinto et al. (2011) found that female expatriates have more non-work adjustment difficulties than male expatriates, but this does not correspond with the results of our study or the work of Selmer and Leung (2003). This difference may stem from the fact that SIEs differ from AEs in that they are more self-oriented. Also, more females recently decided to take international assignments on their own, so these gender issues could become less prevalent in the future. Nevertheless, these insights need deeper support and need to be explored in more detail in future studies.

It was also indicated that stay duration has a positive impact on non-work adjustment. This finding was unsurprising, as time spent abroad allows individuals to become more familiar with a country's culture and environment.

After analyzing work-related control variables, years spent in an organization did not predict work adjustment, which aligns with the findings of Stroh et al. (1994); however, interestingly enough, time spent in an organization was negatively associated with non-work adjustment, which calls for additional analysis that explores this issue in more detail. Finally, job factors related to role clarity and freedom at work positively contribute to work and non-work adjustment and confirm the previous findings of Black (1988) and Stroh et al. (1994).

Overall, our results highlight that Clan culture type and job factors affect the work and general non-work adjustment of self-initiated expatriates.

Theoretical Contributions

First, this study expands our understanding of SIE adjustment. It contributes to the scarce SIE management literature by investigating the understudied topic of the role that organizational culture typology plays in the adjustment process. Second, this study in relation to O'Reilly et al. (1991) research, who revealed the importance between an individual's preference for a particular culture features in P-O fit, adds primary insights that particular organizational culture such as Clan culture that is based on friendly and supportive relations and values fits SIE's values foster SIEs adjustment and fit to the organization.

Implications for Managerial Practice

This study is important from a practical point of view. Retention of employees is a serious concern for organizations. If employees do not adjust, they leave the organization, and then the organization spends extra time and money on new employee hiring, training, and adjustment. As the flow of SIEs is growing globally, their adjustment issues are becoming very important. Moreover, foreign employees are becoming a norm in both international and local organizations. As local organizations do not have deep experience and have developed procedures to employ foreign employees, they could face more problems with SIE adjustment and retention. To successfully adjust in local organizations, SIEs need support from inside the organization; however, not much research has been done exploring how human resource groups in local organizations train local managers for an influx of foreign

TABLE 3 | Multiple linear regression predicting the degree of expatriates' adjustment abroad.

Predictors	Work adjustment			Non-work adjustment		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
(Constant)	3.609***	1.461*	0.513	3.781***	2.057***	1.907**
Step 1—Individual related variables						
Age	0.009	0.004	0.008	0.006	0.006	0.010
Gender	−0.033	−0.133	−0.088	−0.220	−0.318*	−0.230
Education	−0.026	−0.215	−0.185	0.003	−0.142	−0.143
Stay duration in host country	0.086	0.108	0.048	0.131*	0.218**	0.173*
Expatriate moved with (if any)	−0.126	−0.053	−0.099	−0.113	−0.063	−0.126
Step 2—Work related variables						
Job factors		0.774***	0.599***		0.576***	0.480***
Work in company duration		−0.080	−0.016		−0.170*	−0.121
Number of employees in company		0.027	0.042		0.032	0.037
Step 3—Organization culture						
Clan			0.338**			0.322*
Adhocracy			−0.085			−0.217
Market			0.102			−0.018
Hierarchical			0.022			−0.019
F	0.961	10.431***	8.420***	2.083	6.956***	5.671***
R Square	0.039	0.423	0.479	0.082	0.328	0.382
Change in R Square	0.039	0.384	0.056	0.082	0.246	0.054

*Significant at *p < 0.05, **p < 0.01, ***p < 0.001.*

employees. Based on our results, we could suggest that companies hiring SIEs should develop an organizational culture based on trust, flexibility, and high sociability. Its key features should be friendly relationships, open communication, and informality between group members. This will bring satisfaction, loyalty, and commitment to the work of employees and will increase their retention. Furthermore, SIEs influence the organizational culture of their companies, and local employees also need support and training to adapt to working within international teams to understand cultural, communication, and work-related differences. Therefore, the SIE adjustment issues should be studied more widely and expanded to all aspects of organizational existence.

CONCLUSION

The main conclusion of this study is that organizational culture type could foster the adjustment of self-initiated expatriates self-initiated at work and in their host country. The study's findings encourage the use of the P-O fit theory to explain the work adjustment of SIEs. Following the P-O fit theory's approach, we determined that the best fitting culture (i.e., the one that corresponds with SIE needs and values and helps them adjust) is Clan culture. This type of culture has a positive relation to the work and non-work adjustment of self-initiated expatriates. Moreover, the results demonstrate that organizational culture type rather than time spent in an organization influences expatriate work adjustment, which highlights the importance of this study.

Limitations and Future Research Directions

The first limitation of this research is the use of a cross-sectional design, as all variables were collected through the same questionnaire. The second limitation concerns the use of self-reported data, which may be under the influence of common method variance. To prevent this, however, we shortened the questions and the questionnaire as much as we could, but we still received a low percentage of responses. Actually, larger international samples are difficult to access and, as Shaffer et al. (2006) have noted, the response rate for expatriates is low, averaging only 15%. Therefore, this study design was considered adequate to address the research questions. Another limitation is that the survey was limited to those with access to the Internet and who self-selected to participate; however, this kind of mean is adequate, and the majority of expatriates use the Internet for their communication, especially in their home country. Consequently, we suggest that future studies use multiple data collecting methods. Our research was also limited with respect to the different periods of time that SIEs spent in their host countries. Larger samples that include respondents who spent a similar amount of time in their host country or samples that focus on fixed short-term stays could be used in future studies. This study neglected the culture of the host country, as the research focused on a world sample. Studies that center nationals from a single country who expatriated to different countries or expatriates from different home countries who reside in the same host country could be pursued in the future. We also did not test culture novelty, spouse or family adjustment, previous

international experience, and host language skills in the current study, which should be explored in future studies.

Finally, a theoretical limitation relates to the P-O fit theory. It is limited when applied to organizational levels and work adjustment and thus could be expanded by person-environment fit theory if researching the non-work adjustment of expatriates. Moreover, other typologies of organizational culture could be analyzed in future studies.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

AUTHOR CONTRIBUTIONS

All authors contributed to the design and implementation of the research, the analysis of the results, and the writing of the manuscript.

FUNDING

This research was funded by the "Research on the risk and avoidance of Chinese students studying abroad" (BIA190209), General Topics of Pedagogy of the National Social Science Foundation of China.

REFERENCES

Al Ariss, A., and Özbilgin, M. (2010). Understanding self-initiated expatriates: career experiences of Lebanese self-initiated expatriates in France. *Thunderbird Int. Bus. Rev.* 52, 275–285.doi: 10.1002/tie.20355

Andreason, A. W. (2003). Expatriate adjustment to foreign assignments. *Int. J. Commer. Manage.* 13, 42–60. doi: 10.1108/eb047459

Andresen, M., Bergdolt, F., Margenfeld, J., and Dickmann, M. (2014). Addressing international mobility confusion – developing definitions and differentiations for self-initiated and assigned expatriates as well as migrants. *Int. J. Hum. Resour. Manage.* 25, 2295–2318. doi: 10.1080/09585192.2013.877058

Andresen, M., Pattie, M. W., and Hippler, T. (2020). What does it mean to be a 'self-initiated'expatriate in different contexts? A conceptual analysis and suggestions for future research. *Int. J. Hum. Resour. Manage.* 31, 174–201. doi: 10.1080/09585192.2019.1674359

Aycan, Z. (1997). Expatriate adjustment as a multifaceted phenomenon: individual and organizational level predictors. *Int. J. Hum. Resour. Manage.* 8, 434–456. doi: 10.1080/095851997341540

Barner-Rasmussen, W., Ehrnrooth, M., Koveshnikov, A., and Mäkelä, K. (2014). Cultural and language skills as resources for boundary spanning within the MNC. *J. Int. Bus. Stud.* 45, 886–905. doi: 10.1057/jibs.2014.7

Bhaskar-Shrinivas, P., Harrison, D. A., Shaffer, M. A., and Luk, D. M. (2005). Input-based and time-based models of international adjustment: meta-analytic evidence and theoretical extensions. *Acad. Manage. J.* 48, 257–281. doi: 10.5465/amj.2005.16928400

Black, J. S. (1988). Work role transitions: a study of American expatriate managers in Japan. *J. Int. Bus. Stud.* 19, 277–294. doi: 10.1057/palgrave.jibs.8490383

Black, J. S. (1990). The relationship of personal characteristics with adjustment of Japanese expatriate managers. *Manage. Int. Rev.* 30, 119–134.

Black, J. S., and Gregersen, H. B. (1991). Antecedents to cross-cultural adjustment for expatriates in Pacific Rim assignments. *Hum. Relat.* 44, 497–515. doi: 10.1177/001872679104400505

Black, J. S., Mendenhall, M., and Oddou, G. (1991). Toward a comprehensive model of international adjustment: an integration of multiple theoretical perspectives. *Acad. Manage. Rev.* 16, 291–317. doi: 10.2307/258863

Black, J. S., and Stephens, G. K. (1989). The influence of the spouse on American expatriate adjustment and intent to stay in Pacific Rim overseas assignments. *J. Manage.* 15, 529–544. doi: 10.1177/014920638901500403

Boggs, W. B. (2004). TQM and organizational culture: a case study. *Qual. Manag. J.* 11, 42–52. doi: 10.1080/10686967.2004.11919110

Cameron, K. S., Freeman, S. J., and Mishra, A. K. (1991). Best practices in white-collar downsizing: managing contradictions. *Acad. Manag. Perspect.* 5, 57–73. doi: 10.5465/ame.1991.4274469

Cameron, K. S., and Quinn, R. E. (1999). *Diagnosing And Changing Organizational Culture*. Boston: Addison-Wesley.

Cameron, K. S., and Quinn, R. E. (2006). *Diagnosing And Changing Organizational Culture: Based On The Competing Values Framework (Rev. Ed.)*. San Francisco: Jossey-Bass.

Cappellen, T., and Janssens, M. (2010). The career reality of global managers: an examination of career triggers. *Int. J. Hum. Resour. Manag.* 21, 1884–1910. doi: 10.1080/09585192.2010.505090

Cerdin, J. L., and Le Pargneux, M. (2014). The impact of expatriates' career characteristics on career and job satisfaction, and intention to leave: an objective and subjective fit approach. *Int. J. Hum. Resour. Manag.* 25, 2033–2049. doi: 10.1080/09585192.2013.870291

Chen, X., Liu, M., Rubin, K. H., Cen, G. Z., Gao, X., and Li, D. (2002). Sociability and prosocial orientation as predictors of youth adjustment: a seven-year longitudinal study in a Chinese sample. *Int. J. Behav. Dev.* 26, 128–136. doi: 10.1080/01650250042000690

David, S. N., Valas, S., and Raghunathan, R. (2018). "Assessing organization culture-a review on the OCAI instrument," in *Proceedings of the International Conference on Management and Information Systems,* Vol. 21, Shenyang, 182–188.

Fee, A., and Gray, S. J. (2020). Expatriates as catalysts: what and how Vietnamese locals learn from self-initiated expatriates. *Cross Cult. Strateg. Manag.* 27, 389–416. doi: 10.1108/CCSM-08-2019-0145

Feitosa, J., Kreutzer, C., Kramperth, A., Kramer, W. S., and Salas, E. (2014). Expatriate adjustment: considerations for selection and training. *J. Glob. Mobil.* 2, 134–159. doi: 10.1108/JGM-06-2013-0042

Goffee, R., and Jones, G. (1998). *The Character of a Corporation.* London: HarperCollins.

Guo, C., and Al Ariss, A. (2015). Human resource management of international migrants: current theories and future research. *Int. J. Hum. Resour. Manag.* 26, 1287–1297. doi: 10.1080/09585192.2015.1011844

Hajro, A., Stahl, G. K., Clegg, C. C., and Lazarova, M. B. (2019). Acculturation, coping, and integration success of international skilled migrants: an integrative review and multilevel framework. *Hum. Resour. Manag. J.* 29, 328–352. doi: 10.1111/1748-8583.12233

Hartnell, C. A., Ou, A. Y., and Kinicki, A. (2011). Organizational culture and organizational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions. *J. Appl. Psychol.* 96, 677–94. doi: 10.1037/a0021987

Haslberger, A., Brewster, C., and Hippler, T. (2014). *Managing Performance Abroad: A New Model for Understanding Expatriate Adjustment.* New York, NY: Routledge.

Hechanova, R., Beehr, T. A., and Christiansen, N. D. (2003). Antecedents and consequences of employees' adjustment to overseas assignment: a meta-analytic review. *Appl. Psychol.* 52, 213–236. doi: 10.1111/1464-0597.00132

Hofstede, G. (1993). Cultural constraints in management theories. *Acad. Manag. Exec.* 7, 81–94. doi: 10.5465/ame.1993.9409142061

Kristof, A. L. (1996). Person-organization fit: an integrative review of its conceptualizations, measurement, and implications. *Pers. Psychol.* 49, 1–49. doi: 10.1111/j.1744-6570.1996.tb01790.x

Lee, F. H., and Wu, W. Y. (2011). The relationships between person-organization fit, psychological climate adjustment, personality traits, and innovative climate: evidence from Taiwanese high-tech expatriate managers in Asian countries. *Afr. J. Bus. Manag.* 5, 6415–6428.

Liu, C. H., and Lee, H. W. (2008). A proposed model of expatriates in multinational corporations. *Cross Cult. Manag.* 15, 176–193. doi: 10.1108/13527600810870615

Liu, X., and Shaffer, M. A. (2005). An investigation of expatriate adjustment and performance: a social capital perspective. *Int. J. Cross Cult. Manag.* 5, 235–254. doi: 10.1177/1470595805058411

Lund, D. B. (2003). Organizational culture and job satisfaction. *J. Bus. Indust. Market.* 18, 219–236. doi: 10.1108/0885862031047313

Lysgaard, S. (1955). Adjustment in a foreign society: Norwegian Fulbright grantees visiting the United States. *Int. Soc. Sci. Bull.* 7, 45–51.

McNulty, Y., and Brewster, C. (2017). Theorizing the meaning(s) of 'expatriate': establishing boundary conditions for business expatriates. *Int. J. Hum. Resour. Manag.* 28, 27–61. doi: 10.1080/09585192.2016.1243567

Meuer, J., Kluike, M., Backes-Gellner, U., and Pull, K. (2019). Using expatriates for adapting subsidiaries' employment modes to different market economies: a comparative analysis of US subsidiaries in Germany, the UK and Switzerland. *Eur. J. Int. Manag.* 13, 328–353. doi: 10.1504/EJIM.2019.099423

Mezias, J. M., and Scandura, T. A. (2005). A needs-driven approach to expatriate adjustment and career development: a multiple mentoring perspective. *J. Int. Bus. Stud.* 36, 519–538. doi: 10.1057/palgrave.jibs.8400159

Oberg, K. (1960). Culture shock: adjustment to new cultural environment. *Pract. Anthropol.* 7, 177–178. doi: 10.1177/009182966000700405

O'Reilly, C. A. III., Chatman, J., and Caldwell, D. F. (1991). People and organizational culture: a profile comparison approach to assessing person-organization fit. *Acad. Manag. J.* 34, 487–516. doi: 10.5465/256404

Pinto, L. H., Cabral-Cardoso, C., and Werther, W. B. Jr. (2011). Why solidarity matters (and sociability doesn't): the effects of perceived organizational culture on expatriation adjustment. *Thunderbird Int. Bus. Rev.* 53, 377–389. doi: 10.1002/tie.20415

Pinto, L. H., Cabral-Cardoso, C., and Werther, W. B. Jr. (2012). Adjustment elusiveness: an empirical investigation of the effects of cross-cultural adjustment on general assignment satisfaction and withdrawal intentions. *Int. J. Intercult. Relat.* 36, 188–199. doi: 10.1016/j.ijintrel.2011.06.002

Przytuła, S. (2015). Migrants, Assigned Expatriates (AE) and Self-initiated Expatriates (SIE)—dfferentiation of terms and literature-based research review. *J. Intercult. Manag.* 7, 89–111. doi: 10.1515/joim-2015-0012

Qin, C., and Baruch, Y. (2010). The impact of cross-cultural training for expatriates in a Chinese firm. *Career Dev. Int.* 15, 296–318. doi: 10.1108/13620431011053758

Quinn, R. E., and McGrath, M. R. (1985). "The transformation of organizational cultures: a competing values perspective," in *Organizational Culture*, eds P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg, and J. Martin (Thousand Oaks: Sage Publications, Inc), 315–334.

Quinn, R. E., and Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis. *Manag. Sci.* 29, 363–377. doi: 10.1287/mnsc.29.3.363

Rajasekar, J., and Renand, F. (2013). Culture shock in a global world: factors affecting culture shock experienced by expatriates in Oman and Omani expatriates abroad. *Int. J. Bus. Manag.* 8, 144–160. doi: 10.5539/ijbm.v8n13p144

Rosenbusch, K., and Cseh, M. (2012). The cross-cultural adjustment process of expatriate families in a multinational organization: a family system theory perspective. *Hum. Resour. Dev. Int.* 15, 61–77. doi: 10.1080/13678868.2011.646895

Schein, E. H. (2010). *Organizational Culture And Leadership*, Vol. 2. Hoboken: John Wiley & Sons.

Schneider, B., Goldstiein, H. W., and Smith, D. B. (1995). The ASA framework: an update. *Pers. Psychol.* 48, 747–773. doi: 10.1111/j.1744-6570.1995.tb01780.x

Schneider, B., Gonzalez-Roma, V., Ostroff, C., and West, M. A. (2017). Organizational climate and culture: reflections on the history of the constructs in the journal of applied psychology. *J. Appl. Psychol.* 102, 468–482. doi: 10.1037/apl0000090

Selmer, J., and Lauring, J. (2009). Cultural similarity and adjustment of expatriate academics. *Int. J. Intercult. Relat.* 33, 429–436. doi: 10.1016/j.ijintrel.2009.06.007

Selmer, J., and Leung, A. (2003). International adjustment of female vs. male business expatriates. *Int. J. Hum. Resour. Manag.* 14, 1117–1131. doi: 10.1080/0958519032000114237

Shaffer, M. A., Harrison, D. A., and Gilley, K. M. (1999). Dimensions, determinants, and differences in the expatriate adjustment process. *J. Int. Bus. Stud.* 30, 557–581. doi: 10.1057/palgrave.jibs.8490083

Shaffer, M. A., Harrison, D. A., Gregersen, H., Black, J. S., and Ferzandi, L. A. (2006). You can take it with you: individual differences and expatriate effectiveness. *J. Appl. Psychol.* 91, 109–125. doi: 10.1037/0021-9010.91.1.109

Sims, R. H., and Schraeder, M. (2004). An examination of salient factors affecting expatriate culture shock. *J. Bus. Manag.* 10, 73–87.

Stroh, L. K., Dennis, L. E., and Cramer, T. C. (1994). Predictors of expatriate adjustment. *Int. J. Organ. Anal.* 2, 176–192. doi: 10.1108/eb028807

Suutari, V., and Brewster, C. (2000). Making their own way: international experience through self-initiated foreign assignments. *J. World Bus.* 35, 417–436. doi: 10.1016/S1090-9516(00)00046-8

Trompenaars, F. (1994). *In The Waves Of Culture: How To Understand Cultural Diversity In Business*. São Paulo: Educator Publishing Service, Inc.

Waxin, M. F. (2004). Expatriates' interaction adjustment: the direct and moderator effects of culture of origin. *Int. J. Intercult. Relat.* 28, 61–79. doi: 10.1016/j.ijintrel.2003.12.006

Waxin, M. F., and Panaccio, A. (2005). Cross-cultural training to facilitate expatriate adjustment: it works! *Pers. Rev.* 34, 51–67.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 14 January 2022
doi: 10.3389/fpsyg.2021.806388

Reducing Red Tape's Negative Consequences for Leaders: The Buffering Role of Autonomous Motivation

Jolien Muylaert[1], Robin Bauwens[2], Mieke Audenaert[1] and Adelien Decramer[1]*

[1] Department of Marketing, Innovation, and Organisation, Ghent University, Ghent, Belgium, [2] Department of Human Resource Studies, Tilburg University, Tilburg, Netherlands

In a context where the amount of red tape in healthcare organizations continues to rise, head nurses' job satisfaction is constantly under pressure. By building on the Job Demands-Resources model, we developed a theoretical model investigating the relationship between red tape and job satisfaction. By investigating the mediating role of discretionary room and the moderating role of autonomous motivation in this relationship, this study does not only aim to provide additional knowledge regarding the underlying mechanisms in this relationship, but also to increase our understanding of how this suffering at work can be mitigated. Our conditional process analyses (N = 277 head nurses) indicate that red tape undermines head nurses' job satisfaction and that discretionary room acts as an underlying mechanism in this process. By revealing the mediating role of discretionary room, this study advances our understanding of the risks originating from red tape for leaders. Furthermore, our findings also indicate that autonomous motivation mitigates the negative relation between red tape and discretionary room and between red tape and job satisfaction. As autonomous motivation turns out to be an important protection mechanism against the negative consequences of red tape, organizations should put extra effort into stimulating the autonomous motivation of their leaders. When organizations make sure that their leaders' job designs and work environments meet the need for autonomy, competence, and relatedness, leaders will become more autonomously motivated, which will buffer the negative impact of red tape.

Keywords: administrative burden, autonomous motivation, discretionary room, elderly care homes, head nurses, job satisfaction, red tape

OPEN ACCESS

Edited by:
Živile Stankeviciute, Kaunas University of Technology, Lithuania

Reviewed by:
Ieva Meidutė-Kavaliauskienė, General Jonas Žemaitis Military Academy of Lithuania, Lithuania
Vilmante Kumpikaite-Valiuniene, Kaunas University of Technology, Lithuania

****Correspondence:***
Jolien Muylaert
Jolien.Muylaert@UGent.be

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *31 October 2021*
Accepted: *21 December 2021*
Published: *14 January 2022*

Citation:
Muylaert J, Bauwens R, Audenaert M and Decramer A (2022) Reducing Red Tape's Negative Consequences for Leaders: The Buffering Role of Autonomous Motivation. Front. Psychol. 12:806388. doi: 10.3389/fpsyg.2021.806388

INTRODUCTION

Red tape is an increasing problem in many organizations around the world (e.g., Kaufmann et al., 2019). When rules, regulations, and procedures entail a compliance burden, but lack functionality, they can be categorized as red tape (Bozeman and Feeney, 2014). Healthcare workers in particular are complaining about the increasing levels of red tape they are facing in their job (e.g., Steijn and Van der Voet, 2019). This is alarming as past research demonstrates that red tape is negatively related to numerous outcomes (George et al., 2021). This study explores how

red tape affects head nurses' job satisfaction, by investigating the mediating role of discretionary room and the moderating role of autonomous motivations. With this focus, this study does not only address a call for research to investigate the underlying mechanisms that explain why workers are affected by red tape in a certain way (George et al., 2021), particularly leaders, but also explores how red tape induced suffering at work can be mitigated. While the previous research efforts have focused on demonstrating the negative relation between red tape and job satisfaction, this study provides a coping strategy that helps leaders deal with this work-related stressor (van Dorssen-Boog et al., 2021).

By building on the Job Demands-Resources (JD-R) model (Bakker and Demerouti, 2007), we focus on red tape as a hindering job demand with negative consequences for head nurses' job satisfaction. Job satisfaction can be defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (Locke, 1976, p. 1,300). Studying job satisfaction is highly relevant because it is directly related to numerous important outcomes, such as job performance (e.g., Willem et al., 2007), workers' health (e.g., Thielgen et al., 2015), and turnover intentions (e.g., Lu et al., 2019). Importantly, specifically head nurses' job satisfaction is also crucial given its positive association with patient satisfaction, and quality and safety of patient care (e.g., Tzeng and Ketefian, 2002; Kvist et al., 2014). However, despite its importance, head nurses' job satisfaction is continuously challenged by multiple phenomena. For example, there is an acute lack of head nurses, which increases the workload for those in this particular position (De Broeck, 2011; Zhang et al., 2020). At the same time, head nurses are confronted with an aging population and rising patient expectations (Kowalski et al., 2010; van Oostveen et al., 2015). Given these concerns, it is important to obtain additional knowledge about which variables affect head nurses' job satisfaction. Accordingly, in order to obtain more insights into the underlying mechanisms explaining why red tape affects head nurses' job satisfaction in a certain way, this study explores the mediating role of discretionary room. Discretionary room refers to "the degree of freedom and authority managers have to decide what to do" (Knies and Leisink, 2014, p. 118). As line managers, head nurses are responsible for managing a team of nurses. In order to perform this task, head nurses must experience sufficient discretionary room (Rutz et al., 2017). However, in this study, we argue that head nurses' discretionary room is limited by the presence of red tape, which in turn will lower head nurses' job satisfaction.

Although red tape should be eliminated wherever possible, it might not be feasible for organizations to remove externally imposed regulations (Walker and Brewer, 2009; Moynihan et al., 2012). If the elimination of red tape is impossible, head nurses would benefit from the development of coping strategies to help them deal with the presence of red tape in their job (van Dorssen-Boog et al., 2021). One such coping strategy that could be particularly relevant, is the extent to which head nurses are autonomously motivated. Autonomously motivated head nurses engage in their job out of free will, are interested in their work, and take pleasure in performing their tasks (Ryan and Deci, 2002; Gagné and Deci, 2005). Consequently, this study will investigate whether autonomously motivated head nurses are less negatively affected by red tape, as this form of motivation might help them cope with the presence of red tape. If our results confirm that autonomous motivation does indeed mitigate the negative relationship between red tape and discretionary room and/or job satisfaction, interventions with the purpose of increasing head nurses' autonomous motivation would help them to deal with the presence of this hindering demand. Since past research shows that organizations can foster the autonomous motivation of their employees and leaders (Fernet et al., 2021), organizations should put extra effort into stimulating autonomous motivation. When directors make sure that job designs and work environments meet the need for autonomy, competence, and relatedness, their workers, including those with managerial responsibilities, will become more autonomously motivated (Stone et al., 2009; De Cooman et al., 2013; Li et al., 2021), which, as argued in this study, will buffer the negative impact of red tape.

In testing our theoretical model, we aim for a two-fold contribution. First of all, more research is needed to reveal the *underlying mechanisms* that explain why employees' (here i.e., leaders') attitudes and behaviors are affected by red tape in a certain way (Quratulain and Khan, 2015; Kaufmann et al., 2019; George et al., 2021). By exploring the mediating role of discretionary room, this study will advance our understanding of the risks that originate from red tape. More specifically, this study adds to the literature on the negative relationship between red tape and job satisfaction (e.g., Steijn and Van der Voet, 2019), as there is a lack of research investigating possible mediators between red tape and behavioral outcomes (Quratulain and Khan, 2015; George et al., 2021). While addressing this gap, this study is also innovative by focusing on a mediator that is of particular importance in leadership roles (i.e., discretionary room; Knies and Leisink, 2014, 2018). Secondly, while previous literature focused on demonstrating the negative relation between red tape and job satisfaction, the present study explores a way to actually mitigate red tape's negative consequences. By focusing on autonomous motivation as a personal resource, this study contributes to research regarding the impact of personal resources, when being confronted with red tape (Bakker and Demerouti, 2018). By doing so, this study contributes to our understanding of how leaders can cope with the negative effects of red tape. Additionally, it is important to note that the implications of our findings go beyond the healthcare context, as past research shows that the negative impact of red tape is quite stable across different contexts (George et al., 2021).

BACKGROUND AND HYPOTHESES

Red Tape and Job Satisfaction

Bozeman (2000) defined red tape as "rules, regulations, and procedures that remain in force and entail a compliance

burden, but do not advance the legitimate purposes the rules were intended to serve" (p. 12). Following this definition, rules, regulations, and procedures have to score high on two characteristics before they can be categorized as red tape. The first characteristic is compliance burden, which refers to the effort and time it takes to comply with a certain rule (van Loon, 2017). However, having a high compliance burden alone is not sufficient to declare a rule 'red tape,' since some burdensome rules are worth the trouble, for example, hospital safety guidelines (van Loon et al., 2016). Therefore, a second characteristic, namely lack of functionality, is necessary to make a distinction between red tape and burdensome rules in general (van Loon et al., 2016). Lack of functionality refers to the extent to which a rule serves the purpose that it is intended to regulate (van Loon, 2017). Nevertheless, it is important to note that this characteristic should be interpreted as the *perceived* degree to which rules, regulations, and procedures lack functionality rather than as having absolutely no functionality at all (Bozeman, 2012; van Loon et al., 2016).

Red tape in healthcare organizations originates from a rising focus on quality assurance and performance indicators, in combination with rising accountability expectations imposed by governments and organizations alike (Savaya et al., 2006; Bail et al., 2009; Borst et al., 2020; George et al., 2021). Contemporary healthcare organizations are required to provide data on quality, safety, performance, and efficiency, resulting in growing levels of red tape perceptions (Scott and Pandey, 2005; Lega and Sartirana, 2016). While the purpose of this increasing amount of paperwork is to benefit patient safety and performance in general, it often results in the opposite, since this paperwork is generally experienced as an extra burden on a staff that is already overworked (Hansen et al., 2003). Moreover, red tape also reduces the time spent with patients and hinders head nurses, and healthcare workers in general, to handle complex cases well (Brodkin, 2012; van Oostveen et al., 2015; van Loon, 2017).

By building on the JD-R model, we expect red tape to be negatively related to job satisfaction. The JD-R model presumes that all job characteristics can be divided into job demands and job resources (Bakker and Demerouti, 2007, 2018). Job demands refer to the aspects of a job that cost energy, whereas job resources refer to the aspects of work that help people to deal with job demands, help them to satisfy their basic psychological needs, and help them to achieve organizational goals (Bakker, 2015). Moreover, people can also possess personal resources. Personal resources are "aspects of the self that are generally linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully" (Xanthopoulou et al., 2007, pp. 123–124). Additionally, job demands can be divided into challenging and hindering job demands. Challenging job demands, such as complex tasks, can motivate people to perform well (Quratulain and Khan, 2015; Bakker and Demerouti, 2018). Hindering job demands, on the other hand, refer to working conditions that involve undesirable or excessive constraints that inhibit individuals' abilities to attain goals and undermine their performance.

The JD-R model proposes that hindering job demands have a negative effect on well-being (Steijn and Van der Voet, 2019; Shin et al., 2020). Well-being can be defined as the overall quality of an individual's experience and functioning at work, and can be understood as a three-dimensional model, consisting of a psychological, a physical, and a social dimension (Grant et al., 2007). Consequently, as job satisfaction is an indicator of psychological well-being, job satisfaction is positively related to well-being (Grant et al., 2007).

Since red tape is an aspect of work that costs energy and inhibits individuals' abilities to achieve goals (Quratulain and Khan, 2015), red tape is by its nature a hindering job demand (e.g., Bakker and Demerouti, 2018; Wang and Guan, 2018), which will negatively affect job satisfaction (Steijn and Van der Voet, 2019). More specifically, two recent red tape meta-analyses revealed that red tape enhances different forms of alienation, such as feelings of powerlessness and meaninglessness, which, in turn, are harmful to numerous well-being outcomes, including job satisfaction (Blom et al., 2021; George et al., 2021). Additionally, and more specifically to our research context, although red tape is a hindrance for all types of workers, it can be especially impeding for healthcare personnel (Borst, 2018). Healthcare workers often experience their work as a calling and want to focus their time on taking care of patients (Tuckett et al., 2015; Borst, 2018). They experience time spent on paperwork as lost time, since they can no longer spend it on healing patients (Borst, 2018). For them, the human aspect of their job is far more important than the administrative aspect (Tuckett et al., 2015). Seeing patients well taken care of is what brings them job satisfaction, administrative burden brings the opposite (Nolan et al., 2007; Tuckett et al., 2015).

In sum, since the JD-R model states that hindering job demands negatively influence well-being (Kahn, 1990; Schaufeli, 2015; Borst et al., 2019), we expect that head nurses will have a lower job satisfaction when they perceive a great amount of red tape. In support of this reasoning, previous research found that red tape is indeed negatively associated with job satisfaction (Borst, 2018; Steijn and Van der Voet, 2019; Blom et al., 2021). Given these arguments, we hypothesize that:

> Hypothesis 1: Head nurses' red tape perceptions are negatively related to their job satisfaction.

The Mediating Role of Head Nurses' Discretionary Room

Only recently, scholars started to build on the JD-R model in order to explain the negative relation between red tape and well-being outcomes (Blom et al., 2021). Underlying this literature is the assumption that red tape reduces individuals' autonomy, which alienates them from their work, which, in turn, is detrimental to their well-being, including their job satisfaction (Borst et al., 2019; Blom et al., 2021; George et al., 2021). Moreover, as a more recent, and extended, version of the JD-R model states that job demands do not occur in isolation from other job characteristics, researchers claim that the presence of red tape also negatively affects other

job characteristics (Burton and Van den Broek, 2009; Bakker and Demerouti, 2017, 2018; Steijn and Van der Voet, 2019). Consequently, we expect discretionary room to mediate the relationship between red tape and job satisfaction. Discretionary room relates to managers' freedom in adapting the job, making tailor-made arrangements for their staff, and making use of career opportunities (Knies and Leisink, 2014).

Past research shows that organizational characteristics affect the degree of managerial discretion leaders experience within their organization (Hambrick and Finkelstein, 1987; Knies and Leisink, 2018). Accordingly, we argue that red tape will limit head nurses' discretionary room, as the presence of rules, regulations, and procedures that comprise a compliance burden, but have no functionality, will inhibit their freedom and authority to decide what to do (Bozeman, 1993; Knies and Leisink, 2014; Steijn and Van der Voet, 2019). When leaders experience insufficient room to shape individual arrangements with their employees, they will perceive less managerial autonomy (Knies and Leisink, 2014, 2018). Since autonomy is an important condition for healthcare workers' job satisfaction (Hackman and Oldham, 1976; Finn, 2001; Dysvik and Kuvaas, 2011; Steijn and Van der Voet, 2019), we argue that lower levels of discretionary room will result in a declining job satisfaction.

In line with the above reasoning, several studies suggest that rules and regulations limit managerial discretion (Boyne et al., 1999; Truss, 2008; Rainey, 2009; Brown, 2010; Knies and Leisink, 2018). In turn, a study by Van der Voet and Van de Walle (2018), as well as a study by Brunetto et al. (2017), shows that managerial autonomy positively predicts job satisfaction. Taken together, these arguments suggest that head nurses' red tape perceptions are negatively associated with their discretionary room, ultimately decreasing their job satisfaction. Consequently, we hypothesize:

> Hypothesis 2: Head nurses' discretionary room partially mediates the negative relationship between red tape and job satisfaction. More specifically, red tape is negatively related to discretionary room (H2a), which in turn is positively related to job satisfaction (H2b).

The Moderating Role of Autonomous Motivation

Next, we identify head nurses' autonomous motivation as a potential moderating condition, attenuating the relationship between red tape and discretionary room and between red tape and job satisfaction. Autonomous motivation refers to "the full endorsement of one's own activities, as these are in concordance with personal goals, needs, interests, and values" (van Dorssen-Boog et al., 2021, p. 260).

The JD-R model states that not everyone is equally affected by the hindering aspects of their job, since personal resources can act as a buffer against the negative impact of hindering job demands on well-being (Trépanier et al., 2013; Bakker, 2015). More specifically, personal resources can help people to actively approach their hindering job demands and can help them to deal with these demands in an effective way (Bakker and Demerouti, 2018). Autonomous motivation can be categorized as such a personal resource (Trépanier et al., 2013).

We argue that autonomously motivated head nurses are better equipped to handle red tape since their autonomous motivation helps them to arm themselves with the resources it takes to cope with red tape (Trépanier et al., 2013; Bakker and Demerouti, 2018). Applied to the impact on job satisfaction, we argue that head nurses who experience high levels of autonomous motivation will initiate personal initiatives to modify their work environment and mobilize their job resources in order to remain satisfied in their job, while being confronted with high levels of red tape (Bakker, 2015; Steijn and Van der Voet, 2019). Moreover, past literature revealed that motivated individuals are more involved in their jobs, demonstrate greater goal attainment, are more persistent, and are more self-driven (Gagné and Deci, 2005; Kuvaas and Dysvik, 2010; Dysvik and Kuvaas, 2011; Kusurkar, 2019). Applied to the impact on discretionary room, these observations suggest that autonomously motivated individuals will respond less negatively to the presence of red tape, because their goal-driven orientation makes them eager to find, and apply, discretion in any possible domain of their job, regardless of the level of red tape (Dysvik and Kuvaas, 2011). Consequently, we argue that when head nurses are confronted with red tape in their job, while at the same time having high levels of autonomous motivation, that they will be persistent to modify their work environment in order to obtain more discretionary room (Bakker, 2015).

In support of the above reasoning, past research suggests that nurses who possess many personal resources are better able to cope with bureaucracy (Bakker and Demerouti, 2018). Additionally, a study by Trépanier et al. (2013) identified autonomous motivation as an important personal resource, as the results of their study revealed that the well-being of highly autonomously motivated employees was less negatively affected by the presence of different job demands, as compared to the well-being of those employees who were less autonomously motivated. Thus, we predict:

> Hypothesis 3a: The relationship between head nurses' red tape perceptions and their job satisfaction is moderated by autonomous motivation, in such a way that the negative relationship between red tape and job satisfaction is weaker when autonomous motivation is high.

> Hypothesis 3b: The relationship between head nurses' red tape perceptions and their discretionary room is moderated by autonomous motivation, in such a way that the negative relationship between red tape and discretionary room is weaker when autonomous motivation is high.

Finally, considering that discretionary room is hypothesized to mediate the relationship between red tape and job satisfaction (Hypothesis 2) and that the red tape-discretionary room relationship is predicted to be dependent on autonomous motivation (Hypothesis 3b), we expect autonomous motivation to act as a moderator in determining the strength of the indirect relation of red tape with job satisfaction via discretionary room. Such that this mediated relationship is expected to be weaker

when autonomous motivation is high. Consequently, moderated mediation is expected. Stated formally:

> Hypothesis 4: Head nurses' autonomous motivation will moderate the mediated relationship between red tape and job satisfaction via discretionary room, such that the mediated relationship will be weaker when autonomous motivation is higher.

MATERIALS AND METHODS

Participants and Procedure

We recruited a convenience sample of head nurses in elderly care homes in Flanders. We only included head nurses from public elderly care homes, as these types of homes are especially susceptible to mounting rules and regulations (Knies et al., 2018).

To collect the data, structured paper-and-pencil questionnaires were distributed in elderly care homes in October 2017. The directors of the nursing homes were informed about the aim and scope of the research. To ensure anonymity, responses were collected in sealed envelopes. Perceptual data from surveys is well suited to study red tape, discretionary room, autonomous motivation, and job satisfaction, as 'private experiences' for which no other data is available (Conway and Lance, 2010). However, this kind of data is also susceptible to common source bias (CSB). Therefore, we took into account a series of provisions before and after the data collection to mitigate such bias (Podsakoff et al., 2012; George and Pandey, 2017). First of all, we only included measures with established psychometric properties. Secondly, we stressed respondents' anonymity, as well as the importance of their personal opinions and voluntary participation. Thirdly, we induced a psychological time lag by isolating independent and dependent variables in different questionnaire chapters. Finally, the severity of CSB was established through a one-factor model.

We contacted the directors of all 293 public elderly care homes in Flanders, which mostly employ 2–3 head nurses. We received responses from 108 public elderly care homes (36.86%), to which we send out 330 questionnaires. These were returned by 277 head nurses (83.94%). The average head nurse was 45 years old (range 22–77, *SD* = 9.67) and had 11.04 years of experience in this role (range 0–35, *SD* = 8.06). The majority of head nurses were female (79.78%) and were responsible for about 19.24 nurses (range 2–50, *SD* = 8.89).

Measures

All measures were administered in Dutch on a seven-point Likert scale (1 = totally disagree, 7 = totally agree). Back translation was used where Dutch items were unavailable.

Red tape is not only determined by objective organizational conditions, but also depends on individuals' subjective perceptions (Rainey et al., 1995; Scott and Pandey, 2005; Kaufmann et al., 2019). Accordingly, we used a perceptual measure, being van Loon et al.'s (2016) nine-item scale (e.g., 'The rules I have to adhere to take a lot of time to comply with'). Cronbach's alpha was 0.81.

Discretionary room was measured using Knies and Leisink's (2014) five-item scale (e.g., 'I experience sufficient room to make individual arrangements with an employee about doing their job'). Cronbach's alpha was 0.81.

Job satisfaction was gauged by a single item: 'All things considered, I am satisfied with my job.' Past research which specifically focused on investigating the reliability and validity of a single-item measure of job satisfaction, including a meta-analysis, suggests that a single-item approach is a reliable way to measure job satisfaction (e.g., Wanous et al., 1997; Nagy, 2002; Dolbier et al., 2005). Consequently, this single-item measure of job satisfaction has often been used by researchers in the past (e.g., Steijn, 2004; Vermeeren et al., 2011).

Autonomous motivation was assessed using Gagné et al.'s (2015) six-item scale (e.g., 'I would put effort into the job because the work I do is interesting'). Cronbach's alpha was 0.86.

In line with Bernerth and Aguinis's (2016) guidelines, we added *control variables* that altered perceptions of discretionary room and job satisfaction in past research, like gender (e.g., Zou, 2015), age (e.g., Piosik et al., 2019), and span of control (e.g., Davison, 2003; Lee and Cummings, 2008).

Data Analysis

Intraclass correlation coefficients (ICCs) for red tape (ICC1 = 0.07; ICC2 = 0.16), autonomous motivation (ICC1 = 0.08; ICC2 = 0.18), discretionary room (ICC1 = 0.18; ICC2 = 0.35), and job satisfaction (ICC1 = −0.02; ICC2 = −0.05) indicated little common variance of head nurses (level 1) clustered within elderly care homes (level 2) (Fleiss, 1986; LeBreton and Senter, 2008). Therefore, we analyzed a 1–1–1 mediation with a level-1 moderator, following two steps. First, we tested the latent variable structure of the model (measurement model) by means of confirmatory factor analysis (CFA). Since our dependent variable is an endogenous categorical variable, we adopted diagonally weighted least squares estimation (DWLS), which is more robust than maximum likelihood and takes into account the categorical nature of the survey items (Li, 2016). In comparing alternative measurement and structural models, we used prominent fit indices and thresholds, like a comparative fit index (CFI) and Tucker-Lewis index (TLI) close to 0.90, as well as a mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) close to 0.08 and 0.07, respectively (Hair et al., 2013). Second, we tested our hypotheses using conditional process analysis with the PROCESS macro for SPSS developed by Hayes (2013) (SPSS Version 27.0 and PROCESS macro version 4.0). This software calculates bootstrapped 95% confidence intervals (CI) for the (conditional) direct and indirect effects. The advantage of this approach is that it presents a more stringent way to calculate (conditional) indirect effects, given potential non-normality (MacKinnon et al., 2004). Model 4 in the PROCESS macro allowed us to test the effect of red tape on job satisfaction (Hypothesis 1), as well as the mediation effect through discretionary room (Hypothesis 2) (Hayes and Scharkow, 2013). Additionally, model 8 in the PROCESS macro allowed us to test the moderating effects of autonomous motivation (Hypothesis 3) and also enabled us to investigate the potential presence of moderated mediation

(Hypothesis 4) through estimating conditional indirect effects and the index of moderated mediation. Prior to any analyses, the interaction variables were mean-centered (Cohen et al., 2003).

RESULTS

Preliminary Analyses

Confirmatory factor analysis was performed to test our measurement model. An overview of these models and fit indices can be found in **Table 1**. The hypothesized model with 21 items on four factors fits the data relatively well (χ^2 = 327.17, df = 182, CFI = 0.96, TLI = 0.95, RMSEA = 0.06, SRMR = 0.08). All items loaded sufficiently on their factors. Furthermore, the one-factor model showed a significantly lower fit to the data ($\Delta\chi^2$ = 789.52, Δdf = 7, $p < 0.001$). Accordingly, we can endorse the convergent and discriminant validity of the measurement model and we can conclude that significant CSB was absent. Additionally, we investigated the potential presence of multicollinearity. Our variance inflation factors (VIFs) ranged between 1.01 and 1.25, which indicates that multicollinearity is not a problem (Hair et al., 2013).

Table 2 reports the descriptive statistics and Pearson correlation coefficients of all variables that were included in our hypothesized model. The correlation coefficients indicate that age was associated with higher job satisfaction. Gender and span of control showed no significant relations with other variables. In line with the hypotheses, red tape correlated negatively with autonomous motivation, discretionary room, and job satisfaction. Additionally, autonomous motivation showed a positive association with job satisfaction. Lastly, discretionary room and job satisfaction were positively related.

Hypothesis Testing

Table 3 reports the effect sizes of our hypothesized model. This table consists of five different models, allowing us to test our different hypotheses. To facilitate the interpretation of these models, the table clearly states which model tests which hypothesis. Also, the dependent variable of every model is clearly stated in this table. A visualization of our model is provided in **Figure 1**. The control variables age, gender, and span of control were included in all the analyses. Only the relation between age and job satisfaction turned out to be significant ($B = 0.01$, $p < 0.01$).

TABLE 1 | Models and fit indices.

	χ^2	df	CFI	TLI	RMSEA	SRMR
Measurement models						
Hypothesized four-factor model	327.17	182	0.96	0.95	0.06	0.08
One-factor model (CSB)	1116.69	189	0.72	0.69	0.14	0.16
Structural model						
Partial moderated mediation	394.42	258	0.96	0.95	0.05	0.08

CFI, comparative fit index; TLI, Tucker–Lewis index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; CSB, common source bias.

Models 1, 2, and 3 in **Table 3** allow us to test our first two hypotheses. Model 1 shows the total effect of red tape on job satisfaction. Model 2 shows the main effect of red tape on discretionary room, whereas model 3 shows us the main effects of red tape and discretionary room on job satisfaction. Supporting Hypothesis 1, our analysis demonstrates that red tape is indeed negatively associated with job satisfaction (total effect of red tape on job satisfaction: $B = -0.60$, $p < 0.001$). Supporting Hypothesis 2a, red tape showed a negative relation with discretionary room ($B = -0.42$, $p < 0.001$). In turn, discretionary room had a positive relation with job satisfaction ($B = 0.16$, $p < 0.01$), supporting Hypothesis 2b. Bootstrapping in 10,000 samples revealed a significant negative indirect effect for the relation red tape and job satisfaction, mediated by discretionary room ($B = -0.07$; CI: −0.13, −0.02, at a 95% CI), supporting Hypothesis 2. However, the relation between red tape and job satisfaction remained significant after adding discretionary room as a mediator ($B = -0.53$, $p < 0.001$), indicating, as we hypothesized, a partial mediation.

Models 4 and 5 in **Table 3** allow us to test Hypotheses 3 and 4. Model 4 shows the main effects of red tape, autonomous motivation, and the interaction between these variables on discretionary room. Model 5, on the other hand, shows the main effects of red tape, autonomous motivation, the interaction between these variables, and discretionary room on job satisfaction. The interaction between red tape and autonomous motivation was significantly related to job satisfaction ($B = 0.24$, $p < 0.001$), supporting Hypothesis 3a. As shown in **Table 4**, this interaction effect was significant at both moderator values, as the confidence intervals both times excluded zero [respectively, between −0.70 and −0.39 when head nurses' autonomous motivation was low (−1 SD), and between −0.37 and −0.06 when head nurses' autonomous motivation was high (+1 SD), at a 95% CI]. This means that head nurses' autonomous motivation reduces the negative influence red tape has on their job satisfaction. This interaction is depicted in **Figure 2**, showing that while red tape decreases job satisfaction, head nurses' autonomous motivation buffers this effect. Next, our analysis shows that head nurses' autonomous motivation also reduces the negative influence of red tape on discretionary room ($B = 0.20$, $p < 0.05$), supporting Hypothesis 3b. As shown in **Table 4**, this effect was significant at both moderator values [respectively, between −0.75 and −0.33 when head nurses' autonomous motivation was low (−1 SD), and between −0.48 and −0.04 when head nurses' autonomous motivation was high (+1 SD), at a 95% CI]. **Figure 3** gives a visual representation of this interaction, showing that while red tape decreases discretionary room, head nurses' autonomous motivation buffers this effect. However, it is important to note that autonomous motivation is not capable of reversing the negative relationship between red tape and both discretionary room and job satisfaction.

Given the joint presence of mediation and moderation, we proceeded to test the presence of moderated mediation. The index of moderated mediation indicated that autonomous motivation moderates the mediated relationship between red tape and job satisfaction via discretionary room (Index of moderated mediation: 0.03; *SE*: 0.02; CI: 0.0041, 0.07), supporting

TABLE 2 | Descriptive statistics and correlations.

		Mean	*SD*	1	2	3	4	5	6
(1)	Age (in years)	45.38	9.69	–					
(2)	Gender (1 = female)	0.80	0.40	0.02	–				
(3)	Span of control	19.24	8.89	0.08	−0.01	–			
(4)	Red tape	3.29	0.74	0.04	−0.01	0.05	–		
(5)	Autonomous motivation	5.98	0.68	0.07	0.08	−0.02	−0.34***	–	
(6)	Discretionary room	4.76	0.99	−0.03	0.02	0.08	−0.30***	0.09	–
(7)	Job satisfaction	5.95	0.87	0.14*	0.09	−0.05	−0.50***	0.52***	0.28***

*$p < 0.05$, ***$p < 0.001$.*

TABLE 3 | Regression results.

Model	**Model 1 (H1)**		**Model 2 (H2a)**		**Model 3 (H2b)**		**Model 4 (H3b)**		**Model 5 (H3a)**	
Dependent variable	**Job satisfaction**		**Discretionary room**		**Job satisfaction**		**Discretionary room**		**Job satisfaction**	
	B	***SE***	***B***	***SE***	***B***	***SE***	***B***	***SE***	***B***	***SE***
Constant	7.21***	0.33	6.03***	0.42	6.26***	0.45	4.71***	0.33	4.85***	0.32
Age (in years)	0.01**	0.01	0.00	0.01	0.01**	0.00	0.00	0.01	0.01*	0.00
Gender (1 = female)	0.18	0.12	0.02	0.15	0.18	0.12	0.04	0.15	0.15	0.10
Span of control	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00
Red tape	−0.60***	0.06	−0.42***	0.08	−0.53***	0.07	−0.40***	0.09	−0.38***	0.06
Autonomous motivation	–	–	–	–	–	–	0.00	0.10	0.42***	0.07
Discretionary room	–	–	–	–	0.16**	0.05	–	–	0.12**	0.05
Red tape × autonomous motivation	–	–	–	–	–	–	0.20*	0.10	0.24***	0.07
F-value	23.93***		7.10***		21.76***		5.56***		29.34***	
R^2	0.28		0.11		0.31		0.12		0.46	

*N = 247; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.*
$\chi^2 = 394.42$, df = 258, CFI = 0.96, TLI = 0.95, RMSEA = 0.05, SRMR = 0.08.

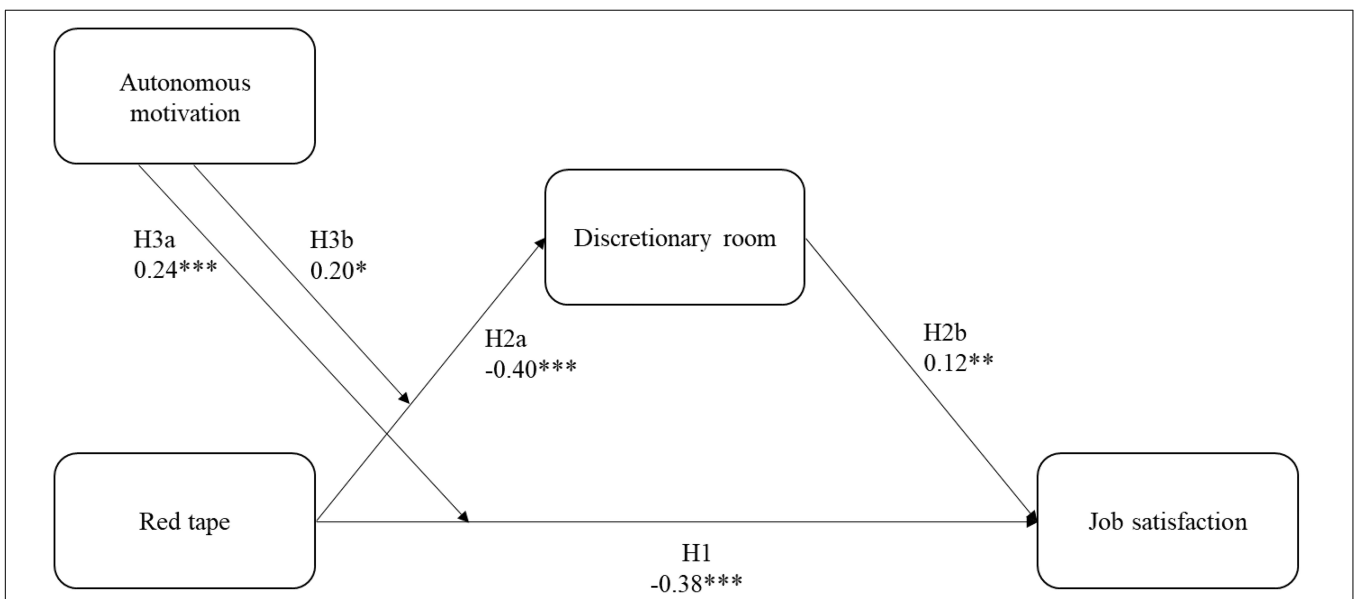

FIGURE 1 | Results of the hierarchical regression analyses of the moderated mediation model. Participants' age, gender, and span of control are included as control variables. *N* = 247; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

TABLE 4 | Results of the conditional direct and indirect effects for different levels of autonomous motivation.

	Effect	*SE*	LL 95% CI	UL 95% CI
The conditional direct effect of red tape on job satisfaction				
Low autonomous motivation (−1 *SD*)	−0.54	0.08	−0.6982	−0.3869
High autonomous motivation (+1 *SD*)	−0.22	0.08	−0.3706	−0.0609
The conditional direct effect of red tape on discretionary room				
Low autonomous motivation (−1 *SD*)	−0.54	0.11	−0.7458	−0.3260
High autonomous motivation (+1 *SD*)	−0.26	0.11	−0.4756	−0.0416
The conditional indirect effect of red tape on job satisfaction (via discretionary room)				
Low autonomous motivation (−1 *SD*)	−0.07	0.03	−0.1283	−0.0197
High autonomous motivation (+1 *SD*)	−0.03	0.02	−0.0745	−0.0016

Participants' age, gender, and span of control are included as control variables. Bootstrap sample size = 10,000. N = 247; CI, confidence interval; LL, lower limit; UL, upper limit.

Hypothesis 4. As can be seen in **Table 4**, the bootstrap results for the conditional indirect effect of red tape on job satisfaction, via discretionary room, indicated that this effect was significant at both moderator values [respectively, between −0.13 and −0.02 when head nurses' autonomous motivation was low (−1 SD), and between −0.07 and −0.0016 when head nurses' autonomous motivation was high (+1 SD), at a 95% CI].

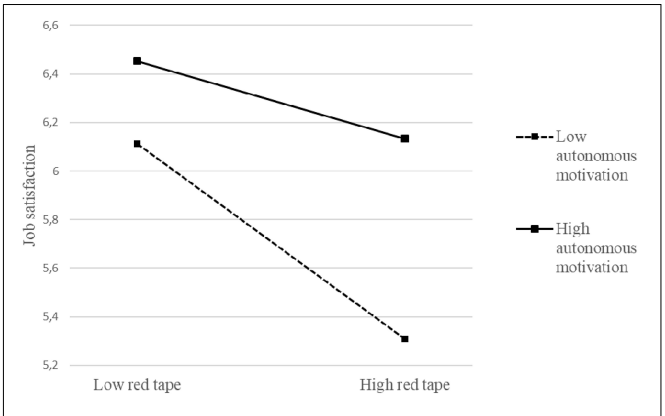

FIGURE 2 | Interaction between red tape and autonomous motivation in predicting job satisfaction.

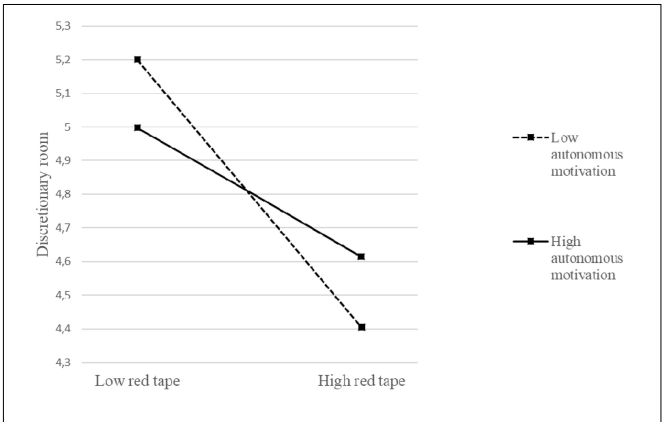

FIGURE 3 | Interaction between red tape and autonomous motivation in predicting discretionary room.

DISCUSSION

By investigating the role of discretionary room and autonomous motivation in the relationship between head nurses' red tape perceptions and their job satisfaction, this study did not only aim to provide additional knowledge regarding the underlying mechanisms in this relationship, but also to increase our understanding of how this suffering at work can be mitigated. Our analyses provide empirical evidence supporting each one of our hypotheses. Specifically, our results indicate that red tape undermines head nurses' job satisfaction and that discretionary room acts as an underlying mechanism in this process. In addition, autonomous motivation mitigated the relationships between red tape and discretionary room and between red tape and job satisfaction. Both relations became weaker when head nurses reported higher levels of autonomous motivation. Lastly, autonomous motivation also affected the strength of the indirect relationship of red tape with job satisfaction through discretionary room. This mediated relationship became weaker when head nurses experienced more autonomous motivation.

Theoretical Implications

This study makes multiple theoretical contributions. First of all, this study provides empirical evidence for a direct relationship between red tape and job satisfaction. More specifically, when head nurses perceive a lot of red tape in their job, they will experience lower levels of job satisfaction. This finding supports previous literature which already demonstrated a negative link between red tape and job satisfaction in other sectors and other contexts (e.g., Steijn and Van der Voet, 2019). By testing this relationship, we provide evidence that the same mechanisms also occur in a head nursing context. Hereby, we reveal that this relationship is also present in leadership positions, as previous research focused on examining this relationship among employees.

Secondly, as we collected our data amongst workers with managerial responsibilities, we were able to test whether red tape affects leaders' managerial discretion. In this respect, our results suggest that red tape lowers head nurses' discretionary room, which in turn lowers their job satisfaction. By focusing on this

innovative mediator, we respond to calls for research to provide additional knowledge about the underlying mechanisms that explain how red tape affects employees' attitudes and behaviors (e.g., Quratulain and Khan, 2015; George et al., 2021), and this in particular for employees that have a leadership position in the organization. This is an important contribution, as a better understanding of this relationship is crucial in order to stipulate well-founded recommendations regarding the red tape problem (George et al., 2021). Whereas discretionary room is an important advantage leaders can have compared to employees in non-supervisory positions, this advantage can be lowered when leaders experience red tape. This is all the more important in the face of leaders' increasing job demands and shortages of leaders in many organizations' leadership pipeline.

Lastly, this study reveals that autonomous motivation buffers the negative consequences of red tape. When head nurses are autonomously motivated, their discretionary room and their job satisfaction will be less negatively affected by the presence of red tape. Hereby, we provide empirical evidence supporting the JD-R model, which claims that personal resources can mitigate the negative consequences of hindering job demands (Bakker and Demerouti, 2018). Since autonomously motivated head nurses find their work interesting and spontaneously satisfying (Trépanier et al., 2013), their motivation helps them to cope with the presence of red tape. This finding contributes to research regarding the impact of personal resources when being confronted with red tape (Bakker and Demerouti, 2018). By identifying autonomous motivation as a key moderator, researchers are now one step closer to comprehending the complex relationship between red tape and job satisfaction. While previous literature focused on demonstrating the negative relation between red tape and job satisfaction (e.g., Steijn and Van der Voet, 2019), the present study found a way to buffer these negative consequences, and this specifically for leaders that are confronted with red tape in their job.

Practical Implications

Occupational well-being, including job satisfaction, is receiving more and more attention since it became clear that it is an important determinant of performance and human functioning in general (Grant et al., 2007; Aziri, 2011; Bakker and Demerouti, 2018). For healthcare workers specifically, their occupational well-being in the form of job satisfaction does not only affect the organizations' performance (e.g., Willem et al., 2007), it also risks affecting patients' lives via quality and safety of patient care (e.g., Kvist et al., 2014). Ensuring healthcare workers' job satisfaction should therefore be a top priority among practitioners. Therefore, it is important that we know which job characteristics affect healthcare workers' job satisfaction, and well-being in general. Consequently, by providing evidence that both red tape and discretionary room affect healthcare leaders' job satisfaction, this study is highly relevant for practitioners.

As our results suggest that red tape has a negative impact on head nurses, we give credence to initiatives that actively combat red tape, especially as we provide evidence that such measures can have far-reaching consequences (Blom et al., 2021; George et al., 2021). Consequently, policymakers and organizations need to thoroughly review the existing rules, regulations, and procedures in order to eliminate as much red tape as possible (Moynihan et al., 2012). This is of huge importance, not only to avoid dissatisfaction, but also because red tape hinders leaders' discretionary room. We thus echo previous calls to practitioners that it is important that organizations hand sufficient freedom and authority to workers with managerial responsibilities (Knies and Leisink, 2014), and extend this call by adding that lowering red tape, wherever possible, can be one of the ways to tackle this problem.

Although red tape should be eliminated wherever possible, organizations will always be confronted with red tape, especially public and social profit organizations, as it might not be a viable option to remove all red tape (Walker and Brewer, 2009). Additionally, policymakers and organizations might not be able to remove externally imposed rules, regulations, and procedures, as they are often constrained in their ability to adapt the underlying regulations of workplace rules (Walker and Brewer, 2009; Moynihan et al., 2012). Fortunately, our findings also indicate that autonomously motivated head nurses are better equipped to handle red tape. Although autonomous motivation is not capable of reversing the negative relationship between red tape and both discretionary room and job satisfaction, it does mitigate red tape's negative consequences. Consequently, as past research shows that employees' and leaders' level of autonomous motivation can be fostered by the organization (Fernet et al., 2021), workplace interventions with the purpose of increasing autonomous motivation would help individuals to deal with this hindering demand.

The level of autonomous motivation someone perceives depends on the satisfaction of the three basic psychological needs, namely, autonomy, competence, and relatedness (Ryan and Deci, 2000; Deci and Ryan, 2012; Amoura et al., 2013). People's need for autonomy refers to their desire to make their own choices, to initiate their own behavior, and to behave in line with their own interests (Vandercammen et al., 2014). The need for competence refers to the need to feel effective and efficient in what you do (Ryan, 1995; Stockman et al., 2020). Lastly, the need for relatedness does not only refer to people's necessity to feel connected to others, but also to feel accepted by them (Deci and Ryan, 2000; Vandercammen et al., 2014). Numerous prior studies have revealed that the satisfaction of these three basic psychological needs does indeed result in higher levels of autonomous motivation (Amoura et al., 2013; Vandercammen et al., 2014).

Previous literature has also investigated more specific ways on how organizations can foster the autonomous motivation of both their employees and leaders. First of all, past research shows that perceived organizational support leads to an increase in autonomous motivation (Gagné et al., 2010; Gillet et al., 2013; Chambel et al., 2015). Perceived organizational support refers to the degree to which people believe that their organization cares about their well-being and values their contributions (Eisenberger et al., 1986; Chambel et al., 2015). Consequently, investing in coaching activities, in formal and informal mentoring, and in creating a work environment conducive

to communication, recognition, and information sharing will help to increase the autonomous motivation in an organization (Newman et al., 2012; Fernet et al., 2021). Additionally, leaders and directors can also foster subordinates' autonomous motivation by showing autonomy-supportive behavior (e.g., Jungert et al., 2021). This can, for example, be done by providing positive feedback on performance, by providing a meaningful rationale for demands, by offering choices, by encouraging personal initiation, by acknowledging task difficulties, and by creating a work environment in which individuals have the freedom to determine how and when they perform their tasks (Deci and Ryan, 2000; Trépanier et al., 2013; Wang and Gagné, 2013; Vandercammen et al., 2014; Jungert et al., 2021).

Secondly, past research shows that it is important that employees and leaders internalize the organization's goals in order to become autonomously motivated (Chen et al., 2020). This internalization happens when the organization clearly communicates what is important to them via their statement of purpose and their mission statement, and makes sure that their employees and leaders understand how they can contribute to achieving these objectives (Boswell, 2006; Chen et al., 2020). When individuals internalize organizational goals, they will feel less controlled in their work and more self-regulated, which will result in higher levels of autonomous motivation (Ryan, 1995; Chen et al., 2020). Moreover, and in line, past research also shows that strategic impact is positively related to autonomous motivation (De Cooman et al., 2013). Strategic impact refers to the effect someone's personal work activities have on the accomplishment of general organizational objectives. In other words, by aligning individuals' jobs with the organization's general mission and objectives, organizations will improve the autonomous motivation of their employees and leaders.

Thirdly, past research also shows that transformational leadership and authentic leadership are both positively related to subordinates' autonomous motivation (Bono and Judge, 2003; Wang and Gagné, 2013; Fateh et al., 2020). Transformational leaders autonomously motivate their subordinates by clearly communicating expectations, by articulating a vision, by gaining followers' trust, and by spending time teaching and coaching their subordinates (Trépanier et al., 2013; Wang and Gagné, 2013). Authentic leaders, on the other hand, autonomously motivate their subordinates by supporting, encouraging, and validating their potential, by empowering them to find solutions on their own, by providing constructive and developmental feedback, and by letting them make their own decisions (Fateh et al., 2020). Consequently, encouraging such managerial practices amongst directors and leaders provides organizations with another promising avenue to promote subordinates' autonomous motivation (Trépanier et al., 2013; Fateh et al., 2020).

Lastly, past literature shows that job complexity is positively related to autonomous motivation, as working on challenging tasks can help people to satisfy their need for competence and gives them the opportunity to demonstrate what they are capable of (De Cooman et al., 2013; Vandercammen et al., 2014; Fateh et al., 2020). Additionally, also competence and skill development practices, such as job training, job rotation, and learning and growth opportunities, are a very efficient way to foster autonomous motivation, as these practices convey the message to people working in the organization that their contributions are highly valued and that their employability is taken care of (Lee and Bruvold, 2003; Mustafa and Ali, 2019).

To conclude, when organizations focus on some of the above-mentioned practices, their leaders' levels of autonomous motivation will increase. In turn, these higher levels of autonomous motivations will help them cope with the presence of red tape in their job, and consequently, their discretionary room and job satisfaction will be less negatively affected by the presence of red tape.

Research Limitations and Future Directions

Despite the valuable findings of this study, several limitations are worth mentioning. First of all, future research should implement longitudinal or experimental designs to test the actual causality of our relations, for example through diary studies or experience sampling designs assessing red tape, as our results are based on cross-sectional data. Secondly, future research should consider using multi-source data, as our results are based on single-source perceptual data, which is susceptible to CSB (George and Pandey, 2017). Although our one-factor model suggests that influential CSB is absent, that CSB is not a universal inflator of the effect sizes of red tape (George et al., 2021), and that interaction effects cannot be an artifact of CSB (George and Pandey, 2017), it might still be interesting for future research to use multi-source data when investigating the impact of red tape. Next, future research would also benefit from taking red tape's origin into account when investigating the buffering role of autonomous motivation, as past research revealed that red tape imposed by an organization itself is more detrimental than externally imposed red tape (George et al., 2021). Consequently, as the origin of red tape impacts its consequences, it would be interesting to investigate whether both internal and external red tape are buffered in a similar way. Lastly, future research could gain from investigating whether other personal resources, such as optimism and self-efficacy, are also capable to mitigate the negative consequences of red tape on leaders' well-being, as this study only investigated the buffering role of autonomous motivation.

CONCLUSION

Red tape is an increasing problem in many organizations around the world (e.g., Kaufmann et al., 2019). By unraveling the negative relationship between red tape and job satisfaction in a head nursing context, this study advances our understanding of the risks originating from the presence of red tape for leaders. More specifically, by revealing the mediating role of discretionary room in this relationship, this study provides additional knowledge regarding the underlying mechanisms that explain why workers with leadership positions are affected by red tape in a certain way. Given red tape's negative consequences, it should be eliminated wherever possible. However, it might

not be feasible for organizations to remove externally imposed regulations (Walker and Brewer, 2009; Moynihan et al., 2012). Consequently, leaders would benefit from the development of coping strategies to help them deal with the presence of red tape in their job (van Dorssen-Boog et al., 2021). Results of this study reveal that leaders' autonomous motivation mitigates the negative relation between red tape and discretionary room and between red tape and job satisfaction. As autonomous motivation turns out to be an important protection mechanism against the negative consequences of red tape, organizations should put extra effort into stimulating the autonomous motivation of their leaders. When organizations make sure that their leaders' job designs and work environments meet the need for autonomy, competence, and relatedness, leaders will become more autonomously motivated, which will buffer the negative impact of red tape.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

JM: conceptualization, formal analysis, and writing. RB: conceptualization, data collection, formal analysis, and writing. MA and AD: conceptualization, data collection, and writing. All authors contributed to the article and approved the submitted version.

FUNDING

This study was funded by Research Foundation Flanders (grant number 11H1220N). This did not influence the study design, collection, analysis and interpretation of data, writing of the report, and the decision to submit the article for publication.

REFERENCES

Amoura, C., Berjot, S., and Gillet, N. (2013). Desire for control: its effect on needs satisfaction and autonomous motivation. *Rev. Int. Psychol. Soc.* 26, 55–71.

Aziri, B. (2011). Job satisfaction: a literature review. *Manag. Res. Pract.* 3, 77–86.

Bail, K., Cook, R., Gardner, A., and Grealish, L. (2009). Writing ourselves into a web of obedience: a nursing policy analysis. *Int. J. Nurs. Stud.* 46, 1457–1466. doi: 10.1016/j.ijnurstu.2009.04.005

Bakker, A. B. (2015). A job demands-resources approach to public service motivation. *Public Administr. Rev.* 75, 723–732. doi: 10.1111/puar.12388

Bakker, A. B., and Demerouti, E. (2007). The job demands-resources model: state of the art. *J. Manag. Psychol.* 22, 309–328. doi: 10.1108/02683940710733115

Bakker, A. B., and Demerouti, E. (2017). Job demands-resources theory: taking stock and looking forward. *J. Occup. Health Psychol.* 22, 273–285. doi: 10.1037/ocp0000056

Bakker, A. B., and Demerouti, E. (2018). "Multiple levels in job demands-resources theory: implications for employee well-being and performance" in *Handbook of Wellbeing*. eds E. Diener, S. Oishi, and L. Tay (Salt Lake City: DEF Publishers).

Bernerth, J. B., and Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Pers. Psychol.* 69, 229–283. doi: 10.1111/peps.12103

Blom, R., Borst, R. T., and Voorn, B. (2021). Pathology or Inconvenience? A Meta-Analysis of the Impact of Red Tape on People and Organizations. *Rev. Public Pers. Administr.* 41, 623–650. doi: 10.1001/jama.289.18.2432

Bono, J. E., and Judge, T. A. (2003). Self-concordance at work: understanding the motivational effects of transformational leaders. *Acad. Manag. J.* 46, 554–571. doi: 10.2307/30040649

Borst, R. T. (2018). Comparing Work Engagement in People-Changing and People-Processing Service Providers: a Mediation Model With Red Tape, Autonomy, Dimensions of PSM, and Performance. *Public Pers. Manag.* 47, 287–313. doi: 10.1177/0091026018770225

Borst, R. T., Kruyen, P. M., and Lako, C. J. (2019). Exploring the job demands-resources model of work engagement in government: bringing in a psychological perspective. *Rev. Public Pers. Administr.* 39, 372–397. doi: 10.1177/0734371X17729870

Borst, R. T., Kruyen, P. M., Lako, C. J., and de Vries, M. S. (2020). The attitudinal, behavioral, and performance outcomes of work engagement: a comparative meta-analysis across the public, semipublic, and private sector. *Rev. Public Pers. Administr.* 40, 613–640. doi: 10.1177/0734371X19840399

Boswell, W. (2006). Aligning employees with the organization's strategic objectives: out of 'line of sight', out of mind. *Int. J. Hum. Resour. Manag.* 17, 1489–1511. doi: 10.1080/09585190600878071

Boyne, G., Jenkins, G., and Poole, M. (1999). Human resource management in the public and private sectors: an empirical comparison. *Public Administr.* 77, 407–420. doi: 10.1111/1467-9299.00160

Bozeman, B. (1993). A theory of government "red tape". *J. Public Administr. Res. Theor.* 3, 273–303. doi: 10.1093/oxfordjournals.jpart.a037171

Bozeman, B. (2000). *Bureaucracy and Red Tape*. Upper Saddle River: Prentice Hall.

Bozeman, B. (2012). Multidimensional red tape: a theory coda. *Int. Public Manag. J.* 15, 245–265. doi: 10.1080/10967494.2012.725283

Bozeman, B., and Feeney, M. (2014). *Rules and Red Tape: a Prism for Public Administration Theory and Research*. Armonk: Sharpe.

Brodkin, E. Z. (2012). Reflections on street-level bureaucracy: past, present, and future. *Public Administr. Rev.* 72, 940–949. doi: 10.1111/j.1540-6210.2012.02657.x

Brown, T. L. (2010). The evolution of public sector strategy. *Public Administr. Rev.* 70, s212–s214. doi: 10.1111/j.1540-6210.2010.02275.x

Brunetto, Y., Teo, S. T., Farr-Wharton, R., Shacklock, K., and Shriberg, A. (2017). Individual and organizational support: does it affect red tape, stress and work outcomes of police officers in the USA? *Pers. Rev.* 46, 750–766. doi: 10.1108/PR-12-2015-0319

Burton, J., and Van den Broek, D. (2009). Accountable and countable: information management systems and the bureaucratization of social work. *Br. J. Soc. Work* 39, 1326–1342. doi: 10.1093/bjsw/bcn027

Chambel, M. J., Castanheira, F., Oliveira-Cruz, F., and Lopes, S. (2015). Work context support and Portuguese soldiers' well-being: the mediating role of autonomous motivation. *Military Psychol.* 27, 297–310. doi: 10.1037/mil0000087

Chen, C. X., Lill, J. B., and Vance, T. W. (2020). Management Control System Design and Employees' Autonomous Motivation. *J. Manag. Account. Res.* 32, 71–91. doi: 10.2308/jmar-17-068

Cohen, J., Cohen, P., West, S. G., and Aiken, L. S. (2003). *Applied MultipleRegression/ Correlation Analysis for the Behavioral Sciences* 3rd Edn. Mahwah: Erlbaum.

Conway, J. M., and Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *J. Bus. Psychol.* 25, 325–334. doi: 10.1007/s10869-010-9181-6

Davison, B. (2003). Management span of control: how wide is too wide? *J. Bus. Strat.* 24, 22–29. doi: 10.1108/02756660310494854

De Broeck, W. (2011). Graag Meer Boter bij de Vis Voor Hoofdverpleegkundigen [Pay down on the Nail for Head Nurses]. My Talent: carrièregids Voor Talent uit de Zorgsector [My Talent: career Guide for Talent in the Healthcare Sector]. Brussels. 34–36.

De Cooman, R., Stynen, D., Van den Broeck, A., Sels, L., and De Witte, H. (2013). How job characteristics relate to need satisfaction and autonomous motivation: implications for work effort. *J. Appl. Soc. Psychol.* 43, 1342–1352. doi: 10.1111/jasp.12143

Deci, E. L., and Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: human needs and the self-determination of behavior. *Psychol. Inquiry* 11, 227–268. doi: 10.1207/S15327965PLI1104_01

Deci, E. L., and Ryan, R. M. (2012). "Motivation, personality, and development within embedded social contexts: an overview of self-determination theory" in *Oxford Handbook of Human Motivation*. ed. R. M. Ryan (Oxford: Oxford University Press). 85–107.

Dolbier, C. L., Webster, J. A., McCalister, K. T., Mallon, M. W., and Steinhardt, M. A. (2005). Reliability and validity of a single-item measure of job satisfaction. *Am. J. Health Promotion* 19, 194–198. doi: 10.4278/0890-1171-19.3.194

Dysvik, A., and Kuvaas, B. (2011). Intrinsic motivation as a moderator on the relationship between perceived job autonomy and work performance. *Eur. J. Work Organiz. Psychol.* 20, 367–387. doi: 10.1080/13594321003590630

Eisenberger, R., Huntington, R., Hutchison, S., and Sowa, D. (1986). Perceived organizational support. *J. Appl. Psychol.* 71, 500–507. doi: 10.1037/0021-9010.71.3.500

Fateh, A., Mustamil, N., and Aslam, M. Z. (2020). Linking Authentic Leadership and Employee Creative Behavior: the Mediating Role of Autonomous Motivation and Job Complexity. *Market. Manag. Innovat.* 3, 59–74. doi: 10.21272/mmi.2020.3-05

Fernet, C., Gillet, N., Austin, S., Trépanier, S. G., and Drouin-Rousseau, S. (2021). Predicting Nurses' Occupational Commitment and Turnover Intention: the Role of Autonomous Motivation and Supervisor and Coworker Behaviors. *J. Nurs. Manag.* 1–20. doi: 10.1111/jonm.13433

Finn, C. P. (2001). Autonomy: an important component for nurses' job satisfaction. *Int. J. Nurs. Stud.* 38, 349–357. doi: 10.1016/S0020-7489(00)00065-1

Fleiss, J. L. (1986). *The Design and Analysis of Clinical Experiments*. New York, NY: John Wiley and Sons.

Gagné, M., and Deci, E. L. (2005). Self-determination theory and work motivation. *J. Organiz. Behav.* 26, 331–362. doi: 10.1002/job.322

Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., and Malorni, A. (2010). The motivation at work scale: validation in two languages. *Educ. Psychol. Measure.* 70, 628–646. doi: 10.1177/0013164409355698

Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspeli, A. K., et al. (2015). The Multidimensional Work Motivation Scale: validation evidence in seven languages and nine countries. *Eur. J. Work Organiz. Psychol.* 24, 178–196. doi: 10.1080/1359432X.2013.877892

George, B., and Pandey, S. K. (2017). We know the Yin—But where is the Yang? Toward a balanced approach on common source bias in public administration scholarship. *Rev. Public Pers. Administr.* 37, 245–270. doi: 10.1177/0734371X17698189

George, B., Pandey, S. K., Steijn, B., Decramer, A., and Audenaert, M. (2021). Red Tape, Organizational Performance, and Employee Outcomes: meta-analysis, Meta-regression, and Research Agenda. *Public Administr. Rev.* 81, 638–651. doi: 10.1111/puar.13327

Gillet, N., Gagné, M., Sauvagère, S., and Fouquereau, E. (2013). The role of supervisor autonomy support, organizational support, and autonomous and controlled motivation in predicting employees' satisfaction and turnover intentions. *Eur. J. Work Organiz. Psychol.* 22, 450–460. doi: 10.1080/1359432X.2012.665228

Grant, A. M., Christianson, M. K., and Price, R. H. (2007). Happiness, health, or relationships? Managerial practices and employee well-being tradeoffs. *Acad. Manag. Perspect.* 21, 51–63. doi: 10.5465/AMP.2007.26421238

Hackman, J. R., and Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organiz. Behav. Hum. Perform.* 16, 250–279. doi: 10.1016/0030-5073(76)90016-7

Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2013). *Multivariate Data Analysis*. New Jersey: Pearson Prentice Hall.

Hambrick, D. C., and Finkelstein, S. (1987). Managerial discretion: a bridge between polar views of organizational outcomes. *Res. Organiz. Behav.* 9, 369–406.

Hansen, M. M., Durbin, J., Sinkowitz-Cochran, R., Vaughn, A., Langowski, M., and Gleason, S. (2003). Do no harm: provider perceptions of patient safety. *J. Nurs. Administr.* 33, 507–508. doi: 10.1097/00005110-200310000-00004

Hayes, A. F. (2013). *An Introduction to Mediation, Moderation, and Conditional Process Analysis: a Regression-Based Approach*. New York, NY: Guilford Press.

Hayes, A. F., and Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: does method really matter? *Psychol. Sci.* 24, 1918–1927. doi: 10.1177/0956797613480187

Jungert, T., Schattke, K., Proulx, F. A., Taylor, G., and Koestner, R. (2021). Whose autonomy support is more effective? Managers' or Co-Workers'? An experimental comparison of source and occupational context on intrinsic motivation. *Can. J. Administr. Sci.* 38, 209–223. doi: 10.1002/cjas.1598

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Acad. Manag. J.* 33, 692–724. doi: 10.2307/256287

Kaufmann, W., Taggart, G., and Bozeman, B. (2019). Administrative delay, red tape, and organizational performance. *Public Perform. Manag. Rev.* 42, 529–553. doi: 10.1080/15309576.2018.1474770

Knies, E., and Leisink, P. (2014). Leadership behavior in public organizations: a study of supervisory support by police and medical center middle managers. *Rev. Public Pers. Administr.* 34, 108–127. doi: 10.1177/0734371X13510851

Knies, E., and Leisink, P. (2018). "People management in the public sector" in *Not for the money: people Management in Mission Driven Organizations*, eds C. Brewster and J.-L. Cerdin (Palgrave: Macmillan). 15–46.

Knies, E., Leisink, P., and Kraus-Hoogeveen, S. (2018). Frontline managers' contribution to mission achievement: a study of how people management affects thoughtful care. *Hum. Serv. Organiz. Manag. Leadersh. Gover.* 42, 166–184. doi: 10.1080/23303131.2017.1422067

Kowalski, C., Ommen, O., Driller, E., Ernstmann, N., Wirtz, M. A., Köhler, T., et al. (2010). Burnout in nurses-the relationship between social capital in hospitals and emotional exhaustion. *J. Clin. Nurs.* 19, 1654–1663. doi: 10.1111/j.1365-2702.2009.02989.x

Kusurkar, R. A. (2019). Autonomous motivation in medical education. *Med. Teach.* 41, 1083–1084. doi: 10.1080/0142159X.2018.1545087

Kuvaas, B., and Dysvik, A. (2010). Does best practice HRM only work for intrinsically motivated employees? *Int. J. Hum. Resour. Manag.* 21, 2339–2357. doi: 10.1080/09585192.2010.516589

Kvist, T., Voutilainen, A., Mäntynen, R., and Vehviläinen-Julkunen, K. (2014). The relationship between patients' perceptions of care quality and three factors: nursing staff job satisfaction, organizational characteristics and patient age. *BMC Health Serv. Res.* 14:466. doi: 10.1186/1472-6963-14-466

LeBreton, J. M., and Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organiz. Res. Methods* 11, 815–852. doi: 10.1177/1094428106296642

Lee, C. H., and Bruvold, N. T. (2003). Creating value for employees: investment in employee development. *Int. J. Hum. Resour. Manag.* 14, 981–1000. doi: 10.1080/0958519032000106173

Lee, H., and Cummings, G. G. (2008). Factors influencing job satisfaction of front line nurse managers: a systematic review. *J. Nurs. Manag.* 16, 768–783. doi: 10.1111/j.1365-2834.2008.00879.x

Lega, F., and Sartirana, M. (2016). Making doctors manage…but how? Recent developments in the Italian NHS. *BMC Health Serv. Res.* 16:170. doi: 10.1186/s12913-016-1394-6

Li, C. H. (2016). Confirmatory factor analysis with ordinal data: comparing robust maximum likelihood and diagonally weighted least squares. *Behav. Res. Methods* 48, 936–949. doi: 10.3758/s13428-015-0619-7

Li, Y., Li, X., and Liu, Y. (2021). How Does high-performance work system prompt job crafting through autonomous motivation: the moderating role of initiative climate. *Int. J. of Environ. Res. Public Health* 18, 1–15. doi: 10.3390/ijerph18020384

Locke, E. A. (1976). "The nature and causes of job satisfaction" in *Handbook of Industrial and Organizational Psychology*, ed. M. D. Dunnette (Chicago: Rand McNally). 1297–1349.

Lu, H., Zhao, Y., and While, A. (2019). Job satisfaction among hospital nurses: a literature review. *Int. J. Nurs. Stud.* 94, 21–31. doi: 10.1016/j.ijnurstu.2019.01.011

MacKinnon, D. P., Lockwood, C. M., and Williams, J. (2004). Confidence limits for the indirect effect: distribution of the product and resampling methods. *Multivar. Behav. Res.* 39, 99–128. doi: 10.1207/s15327906mbr3901_4

Moynihan, D. P., Wright, B. E., and Pandey, S. K. (2012). Working within constraints: can transformational leaders alter the experience of red tape? *Int. Public Manag. J.* 15, 315–336. doi: 10.1080/10967494.2012.725318

Mustafa, G., and Ali, N. (2019). Rewards, autonomous motivation and turnover intention: results from a non-Western cultural context. *Cogent Bus. Manag.* 6:1676090. doi: 10.1080/23311975.2019.1676090

Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *J. Occup. Organiz. Psychol.* 75, 77–86. doi: 10.1348/096317902167658

Newman, A., Thanacoody, R., and Hui, W. (2012). The impact of employee perceptions of training on organizational commitment and turnover: a case of multinationals in the Chinese service sector. *Pers. Rev.* 41, 56–72. doi: 10.1080/09585192.2011.565667

Nolan, P., Haque, S., and Doran, M. (2007). A comparative cross-sectional questionnaire survey of the work of UK and US mental health nurses. *Int. J. Nurs. Stud.* 44, 377–385. doi: 10.1016/j.ijnurstu.2006.04.014

Piosik, A., Strojek-Filus, M., Sulik-Górecka, A., and Szewieczek, A. (2019). Gender and age as determinants of job satisfaction in the accounting profession: evidence from Poland. *Sustainability* 11:3090. doi: 10.3390/su11113090

Podsakoff, P. M., MacKenzie, S. B., and Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annu. Rev. Psychol.* 63, 539–569. doi: 10.1146/annurev-psych-120710-100452

Quratulain, S., and Khan, A. K. (2015). Red Tape, Resigned Satisfaction, Public Service Motivation, and Negative Employee Attitudes and Behaviors: testing a Model of Moderated Mediation. *Rev. Public Pers. Administr.* 35, 307–332. doi: 10.1177/0734371X13511646

Rainey, H. (2009). *Understanding and Managing Public Organizations* 4th Edn. San Francisco: Jossey-Bass.

Rainey, H. G., Pandey, S., and Bozeman, B. (1995). Research note: public and private managers' perceptions of red tape. *Public Administr. Rev.* 55, 567–574. doi: 10.2307/3110348

Rutz, S., Mathew, D., Robben, P., and de Bont, A. (2017). Enhancing responsiveness and consistency: comparing the collective use of discretion and discretionary room at inspectorates in England and the Netherlands. *Regulat. Govern.* 11, 81–94. doi: 10.1111/rego.12101

Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *J. Pers.* 63, 397–427. doi: 10.1111/j.1467-6494.1995.tb00501.x

Ryan, R. M., and Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am. Psychol.* 55, 68–78. doi: 10.1037/0003-066X.55.1.68

Ryan, R. M., and Deci, E. L. (2002). "Overview of Self-Determination Theory: an organismic dialectical perspective" in *Handbook of Self-Determination Research*. eds E. L. Deci and R. M. Ryan (Rochester: The University of Rochester Press). 3–33. doi: 10.1111/bjhp.12054

Savaya, R., Monnickendam, M., and Waysman, M. (2006). Extent and type of worker utilization of an integrated information system in a human services agency. *Evaluat. Progr Plann.* 29, 209–216. doi: 10.1016/j.evalprogplan.2006.03.001

Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. *Career Dev. Int.* 20, 446–463. doi: 10.1108/CDI-02-2015-0025

Scott, P. G., and Pandey, S. K. (2005). Red tape and public service motivation: findings from a national survey of managers in state health and human services agencies. *Rev. Public Pers. Administr.* 25, 155–180. doi: 10.1177/0734371X04271526

Shin, Y., Hur, W. M., Park, K., and Hwang, H. (2020). How Managers' Job Crafting Reduces Turnover Intention: the Mediating Roles of Role Ambiguity and Emotional Exhaustion. *Int. J. Envir. Res. Public Health* 17:3972. doi: 10.3390/ijerph17113972

Steijn, B. (2004). Human Resource Management and job satisfaction in the Dutch public sector. *Rev. Public Pers. Administr.* 24, 291–303. doi: 10.1177/0734371X04269187

Steijn, B., and Van der Voet, J. (2019). Relational job characteristics and job satisfaction of public sector employees: when prosocial motivation and red tape collide. *Public Administr.* 97, 64–80. doi: 10.1111/padm.12352

Stockman, S., Van Hoye, G., and van Hooft, E. A. (2020). How can hospitals engage their current employees in the recruitment of qualified nurses? A referral bonus and self-determination perspective. *J. Adv. Nurs.* 76, 2971–2981. doi: 10.1111/jan.14498

Stone, D. N., Deci, E. L., and Ryan, R. M. (2009). Beyond talk: creating autonomous motivation through self-determination theory. *J. Gener. Manag.* 34, 75–91. doi: 10.1177/030630700903400305

Thielgen, M. M., Krumm, S., Rauschenbach, C., and Hertel, G. (2015). Older but wiser: age moderates congruency effects between implicit and explicit motives on job satisfaction. *Motivat. Emot.* 39, 182–200. doi: 10.1007/s11031-014-9448-8

Trépanier, S. G., Fernet, C., and Austin, S. (2013). The moderating role of autonomous motivation in the job demands-strain relation: a two sample study. *Motivat. Emot.* 37, 93–105. doi: 10.1007/s11031-012-9290-9

Truss, C. (2008). Continuity and change: the role of the HR function in the modern public sector. *Public Administr.* 86, 1071–1088. doi: 10.1111/j.1467-9299.2008.00718.x

Tuckett, A., Winters-Chang, P., Bogossian, F., and Wood, M. (2015). Why nurses are leaving the profession…lack of support from managers': what nurses from an e-cohort study said. *Int. J. Nurs. Pract.* 21, 359–366. doi: 10.1111/ijn.12245

Tzeng, H. M., and Ketefian, S. (2002). The relationship between nurses' job satisfaction and inpatient satisfaction: an exploratory study in a Taiwan teaching hospital. *J. Nurs. Care Qual.* 16, 39–49. doi: 10.1097/00001786-200201000-00005

Van der Voet, J., and Van de Walle, S. (2018). How cutbacks and job satisfaction are related: the role of top-level public managers' autonomy. *Rev. Public Pers. Administr.* 38, 5–23. doi: 10.1177/0734371X15609409

van Dorssen-Boog, P., van Vuuren, T., de Jong, J. P., and Veld, M. (2021). Facilitating health care workers' self-determination: the impact of a self-leadership intervention on work engagement, health, and performance. *J. Occup. Organiz. Psychol.* 94, 259–281. doi: 10.1111/joop.12352

van Loon, N. M. (2017). From red tape to which performance results? Exploring the relationship between red tape and various dimensions of performance in healthcare work units. *Public Administr.* 95, 60–77. doi: 10.1111/padm.12294

van Loon, N. M., Leisink, P. L. M., Knies, E., and Brewer, G. A. (2016). Red tape: developing and validating a new job-centered measure. *Public Administr. Rev.* 76, 662–673. doi: 10.1111/puar.12569

van Oostveen, C. J., Mathijssen, E., and Vermeulen, H. (2015). Nurse staffing issues are just the tip of the iceberg: a qualitative study about nurses' perceptions of nurse staffing. *Int. J. of Nurs. Stud.* 52, 1300–1309. doi: 10.1016/j.ijnurstu.2015.04.002

Vandercammen, L., Hofmans, J., and Theuns, P. (2014). The mediating role of affect in the relationship between need satisfaction and autonomous motivation. *J. Occup. Organiz. Psychol.* 87, 62–79. doi: 10.1111/joop.12032

Vermeeren, B., Kuipers, B., and Steijn, B. (2011). Two faces of the satisfaction mirror: a study of work environment, job satisfaction, and customer satisfaction in Dutch municipalities. *Rev. Public Pers. Administr.* 31, 171–189. doi: 10.1177/0734371X11408569

Walker, R. M., and Brewer, G. A. (2009). Can management strategy minimize the impact of red tape on organizational performance? *Administr. Soc.* 41, 423–448. doi: 10.1177/0095399709338027

Wang, H., and Guan, B. (2018). The positive effect of authoritarian leadership on employee performance: the moderating role of power distance. *Front. Psychol.* 9:357. doi: 10.3389/fpsyg.2018.00357

Wang, Z., and Gagné, M. (2013). A Chinese-Canadian cross-cultural investigation of transformational leadership, autonomous motivation, and collectivistic value. *J. Leadersh. Organiz. Stud.* 20, 134–142. doi: 10.1177/1548051812465895

Wanous, J. P., Reichers, A. E., and Hudy, M. J. (1997). Overall job satisfaction: how good are single-item measures? *J. Appl. Psychol.* 82, 247–252. doi: 10.1037/0021-9010.82.2.247

Willem, A., Buelens, M., and De Jonghe, I. (2007). Impact of organizational structure on nurses' job satisfaction: a questionnaire survey. *Int. J. Nurs. Stud.* 44, 1011–1020. doi: 10.1016/j.ijnurstu.2006.03.013

Xanthopoulou, D., Bakker, A. B., Demerouti, E., and Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *Int. J. Stress Manag.* 14:121. doi: 10.3390/ijerph18020632

Zhang, J., Wang, S., Wang, W., Shan, G., Guo, S., and Li, Y. (2020). Nurses' job insecurity and emotional exhaustion: the mediating effect of presenteeism and the moderating effect of supervisor support. *Front. Psychol.* 11:2239. doi: 10.3389/fpsyg.2020.02239

Zou, M. (2015). Gender, work orientations and job satisfaction. *Work Employ. Soc.* 29, 3–22. doi: 10.1177/0950017014559267

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

frontiers in Psychology

ORIGINAL RESEARCH
published: 08 February 2022
doi: 10.3389/fpsyg.2022.792606

Analysis of the Emotional Exhaustion Derived From Techno-Stress in the Next Generation of Qualified Employees

*María Buenadicha-Mateos, María Isabel Sánchez-Hernández and Óscar Rodrigo González-López**

University of Extremadura, Badajoz, Spain

This study analyses the emotional exhaustion of students inhigher education, derived from the extremely technology-relatedstrain associated to the current COVID-19 pandemic in a conservation of resources' approach. Technostress, as source of emotional exhaustion, was investigated in a sample of 333 students in a medium size public university in Spain. Data was collected in May 2020, during the COVID lockdown. After literature review, a structural model was developed, linking technostress with emotional exhaustion. Results confirm the expected cause-effect relationships. In addition, the study reveals two mediator variables that must be considered when managing students' suffering, perceived stress and intrapersonal conflicts. This study contributes to the academic literature in the field of managing and mitigating suffering. They do so by providing both new knowledge and empirical evidence on the effects of technostress in the new generations that will soon join the working life.

Keywords: suffering, technostress, perceived stress, interpersonal conflicts, emotional exhaustion, higher education

OPEN ACCESS

Edited by:
Antonio Ariza-Montes, Universidad Loyola Andalucía, Spain

Reviewed by:
Luis Manuel Cerdá Suárez, Universidad Internacional De La Rioja, Spain
Clandia Gomes, Santa Maria Federal University, Brazil
Jordana Marques Kneipp, Federal University of Santa Maria, Brazil

***Correspondence:**
Óscar Rodrigo González-López
orodrigo@unex.es

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *10 October 2021*
Accepted: *17 January 2022*
Published: *08 February 2022*

Citation:
Buenadicha-Mateos M, Sánchez-Hernández MI and González-López ÓR (2022) Analysis of the Emotional Exhaustion Derived From Techno-Stress in the Next Generation of Qualified Employees. Front. Psychol. 13:792606. doi: 10.3389/fpsyg.2022.792606

INTRODUCTION

There are numerous positive aspects that can be highlighted in the use of information and communications technology (ICT) in both the personal and the occupational sphere. Nonetheless, they can also generate new psychosocial risks which cause suffering. That is something that should not be ignored, and in fact, it must be adequately studied. It is especially interesting to address specific studies on the impact that the use of ICT in university students has, especially considering that these students will be the new cohorts of qualified employees in the near future. In addition, they count with a more integrated use of ICT in their daily lives and needing to use them to carry out their educational activities. Furthermore, as Arnett (2000) has argued, university students experience critical transitions in their youth, which are mainly characterized by change, confusion and exploration. This way, both their actions, and decisions made during this period of time can have lasting ramifications, making their consequences more relevant than for other groups.

It has been pointed out that the overexposure of ICT in young people is an understudied phenomenon (Lutz et al., 2014). That may have been partly due to the belief that, as they are digital natives, they are able to assume the risks associated with technology more easily than other subjects(Prensky, 2001). It seems that university students are being assumed to be highly tech-savvy, and therefore techno-stress free (Wang et al., 2020).

But, when talking about university students, it must be considered that although it is important to take into account the experience they have with ICT, the possible influence of the intensity of use must also be assessed. For instance, even before the COVID-19 pandemic, it was quantified that two thirds of students would rather leaving their smartphones on during night-time (Vorderer et al., 2016). It may be thought that the high frequency of ICT used in students belongs to their personal communication sphere. Nevertheless, it should also be considered that the use of ICT in their academic life it is increasing, as a result of universities aiming to achieve academic success in students. In fact, universities around the world have continuously increased investment in the use of technology to evolve mainstream education, and technology-enhanced learning is becoming increasingly important in higher education (Dunn and Kennedy, 2019). As a consequence, university students in this environment of intensified use of ICT, can develop a worrying emotional exhaustion that, unfortunately, contributes to the deterioration of their well-being (Cotten, 2008), quality of life (Bradley, 2017), and their mental health (Mofatteh, 2021).

If emotional exhaustion itself already requires specific studies, the quarantine imposed by governments to prevent the spread of COVID-19 has led to an intensification of the use of ICT in the population, which may have aggravated the situation. Due to the compulsory closure of educational institutions, students were forced to use these ICT tools intensively in order to continue studying at a distance (online teaching and learning processes), suddenly and without planning or specific preparation. For instance, in the month of March 2020, the government of Spain during the COVID-19 pandemic eliminated face-to-face classes in universities, forcing all teachers to continue their classes remotely.

The impact of the pandemic on mental health and education is expected to be significant (Sahu, 2020). It is relevant to consider that more than half of the students (54.9%) have indicated that distance learning was their greatest concern during this pandemic time (Al-Tammemi et al., 2020). The mental health of university students must be controlled during epidemics (Cao et al., 2020) since, during these periods, certain social components (such as the elderly, children, healthcare workers, infected patients, patients with pre-existing psychiatric conditions, and students) are at increased risk of experiencing a significant degree of both psychological pressure and stress, compared to other people (Ho et al., 2020).

In this context, we must pay attention to the fact that some of the negative effects of quarantines are techno-stress and emotional fatigue. On the one hand, there's techno-stress, since the irregular situation of the pandemic could have caused an increase in negative predictors of technophobia even in people who previously adopted technology (Daruwala, 2020), such as university students. On the other hand, emotional fatigue is one of the negatives psychological effects from quarantines (Maunder et al., 2003).

This study tries to contribute to the knowledge of the emotional fatigue of university students, as well as assessing its connection with techno-stress: although ICT has provided students the tools to successfully go on with both their social and academic lives, it may also be a source of techno-stress and suffering, having negative effects on students' well-being.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Theoretical Underpinning of the Study

The Conservation of Resources theory (COR), proposed as a theory of stress and motivation (Westman et al., 2005), is the integrative framework assumed in this study. According to COR, human beings are motivated to accomplish and safeguard resources, and acquire new ones (Hobfoll, 1989, 2001). Moreover, this theory also postulates that stress appears when facing potential or actual loss, or the lack of earned resources. COR theory is considered a major theory in different fields such as leadership (Fatima et al., 2018); burnout (Arnold et al., 2015); and more specifically, student burnout (Alarcon et al., 2011); exploring the transition from study to work (Robins et al., 2018) within positive psychology (Hobfoll, 2011; Carmona-Halty et al., 2019).

The COVID pandemic has created a hostile environment in higher educational contexts where resources have been threatened. Losses of tangibles resources such as physical space, and intangible resources such as self-esteem or self-efficacy (Halbesleben et al., 2014). The last ones have been proven to be more salient to students than potential gains. As technological demands increase to follow the courses in pandemic times, and traditional resources have been lost, students can become exhausted. Based on COR theory, we argue that students put up with technostress in COVID times as they feel resource deficiencies and losses in their new normality, flowing into emotional exhaustion. Their previous intra personal conflicts and perceived stress will mediate the relationship, as discussed bellows.

Emotional Exhaustion as a Specific Dimension of Burnout

Burnout has been gaining importance in recent years. Despite being firstly focused on professional services with human relations (such as teachers, doctors, etc.), it is now no longer restricted to these professions, and has a wide scope of application that includes burnout jobs in students (Maunder et al., 2003; Navarro-Abal et al., 2018; Worly et al., 2019; West et al., 2020). In fact, the concern about student burnout is not new. At this respect, Law (2007) pointed out that student burnout levels were extreme compared to those in traditional high-burnout occupations.

Emotional exhaustion can be used as an indicator of students' emotional well-being (Devine and Hunter, 2016) and to evaluate their quality of life (Li et al., 2018). It is also a very important dimension of burnout. Emotional exhaustion can be described as a chronic state of emotional and physical fatigue (Maslach et al., 2001). It is related to feelings of exhaustion from emotional sources (Parker and Salmela-Aro, 2011). It assumes an erosion of satisfaction with life (Hakanen and Schaufeli, 2012), and can

basically be understood like feeling exhausted and therefore not interested in one's occupation (Daumiller et al., 2021). Moreover, it can even make people feel physically fatigued (Wright and Cropanzano, 1998). In general, the toxic consequences of emotional exhaustion include mental and physical health problems, deterioration of social and family relationships, and, at the professional level, dysfunctional outcomes in the individual's relationship with their supervisor (Soderlund, 2017).

From all the above, it can be deduced that emotional exhaustion is a very relevant variable to which we must pay attention, given the forced and non-progressive intensification of the use of ICT by students due to the prevention measures of contagion of COVID-19.

Techno-Stress at the University Level

The pioneer in awakening interest in the term "techno-stress" is Brod, in the 80s. He defines it basically as an adaptive disease that has its origin in the lack of ability to deal with new technologies in a healthy way (Brod, 1984). We must consider that techno-stress is not limited to high-tech or business work contexts (Wang et al., 2020). Techno-stress studies are important when considering an aging workforce with longer careers, in which growth technology can increase vulnerability to stress and affect the health and well-being of professionals (Chaves et al., 2016). However, it would be a serious mistake to leave aside other population groups, in part guided because they are presumed to dominate prior technology. This is the case of university students.

The pandemic scenario has generated stress problems for students, driven among other reasons by the intense introduction of distance learning and uncertainty in universities (Agnew et al., 2019). Some years ago issues such as information overload, and techno-stress, were highlighted as important challenges of the information age (Lutz et al., 2014). Still, in the current context, their importance has only made it grow, partly due to the fact that the level of ICT use is a significant predictor of techno-stress levels (Coppari et al., 2017). As an example of its importance, in Lindén et al. (2018)'s work it is shown that techno-stress is one of the two stressors that most frequently appear (along with task overload). Nonetheless, at the moment, there has been a dearth of research on this topic in the field of education, particularly in higher education (Wang et al., 2020). Although some studies are contributing to understand techno-stress in university teachers (Penado Abilleira et al., 2021), new works are also needed at the student level (Penado Abilleira et al., 2020; Upadhyaya, 2021).

Techno-Stress Linkages to Emotional Exhaustion

It should be considered that, despite the great benefits that the intensification in the use of technology in learning in higher education can offer, it can also cause techno-stress (Wang et al., 2020). In many cases, it has been assumed that university students, belonging to a generation which is very familiar with ICT, are not so predisposed to suffer these risks. It is necessary to address the study of techno-stress in these students since, in addition to their personal sphere, they have a greater exposure to ICT than students at other school levels. This is due to the widespread adoption of technology-enhanced learning in higher education (Dunn and Kennedy, 2019).

According to Llorens et al. (2011), techno-stress is a multidimensional phenomenon with four dimensions: anxiety, fatigue, skepticism and ineffectiveness, which correspond to three different aspects: cognitive (ineffectiveness), attitudinal (skepticism) and affective (anxiety and fatigue). It is interesting to approach techno-stress through its dimensions, which will allow a more complete and coherent understanding.

Techno-stress is a source of problems that can affect different spheres of the sufferer. The classifications are varied. They can be problems of the individual, group and organizational sphere (Salanova et al., 1999); physical, social and emotional (de Souza and Cappellozza, 2018); problems in professional and private life (La Torre et al., 2019); individual, group and professional (González-López et al., 2021), among others. Nonetheless, as it can be seen, the effects on the subject itself are shown in every group. In fact, if we consider the negative effects of techno-stress as individual, group or professional, it is the individual negative effects of techno-stress that is the most important, although González-López et al. (2021) have demonstrated that these three levels are related in a statistically significant way. Within its individual effects, techno-stress is often associated with the appearance of psychological and behavioral disorders (La Torre et al., 2019). Still, in this case, it is especially relevant that techno-stress can cause burnout (Salanova et al., 2002; Chaves et al., 2016; Wang et al., 2020).

Recent studies corroborate that two specific techno-stressors (techno-overload and techno-invasion) stimulate emotional exhaustion in a contextualized study in childcare (Bauwens et al., 2021). In a specific context of students, the study of Wang et al. (2020) shows that the dimensions of techno-stress have a positive relationship with burnout. Thus, it is interesting to investigate whether the stress generated by technology could be generating emotional exhaustion in students. In fact, there are authors who speak specifically of digital burnout, within the context of COVID-19, related to hyper-connection to smartphones, laptops and tablets that leaves us susceptible to exhaustion (Sharma et al., 2020).

All of the above, plus some results such as those from the study by Silva et al. (2016) where positive correlations are shown between all the dimensions of techno-stress and emotional exhaustion (Chaves et al., 2016) outside of this pandemic context, serve as the basis for exploring this case in university students in the context of a pandemic. This allows us to posit the first hypothesis of the study:

> H1: Techno-stress is direct and significantly related to the emotional exhaustion of university students.

The Mediation Role of Perceived Stress and Intrapersonal Conflicts

It is worth exploring the relationships of stress produced by technology, perceived stress and intrapersonal conflicts such as digital attachment. Along these lines, it is known that the risk of addiction to smartphones has a positive relationship

with perceived stress (Samaha and Hawi, 2016). There is also a strong relationship between perceived stress, mental health and problems with life academic with burnout syndrome (Dimitriu et al., 2020; Zaed et al., 2020).

Perceived stress is a measure that collects the perception of particular stress, independently of external environmental stressors. Considering that the level of perceived stress is inversely correlated with the quality of life and well-being of persons (Ribeiro et al., 2018), there is no doubt that nowadays stress is a problem with serious physical and psychological consequences. The fact that, when students are asked what are the most frequent negative feelings they experience in their lives, these are fatigue, stress and boredom (Moeller et al., 2020), makes it even more tragic. That fatigue and stress are undoubtedly particularly worrisome at a vital stage where the foundations of their professional future are being laid.

There are studies where a comparison of perceived stress before and during the pandemic is made, and it is shown that stress has increased (Elmer et al., 2020; Özdin and Bayrak Özdin, 2020; Son et al., 2020). In addition, students are aware of this fact. For example, in the study of Son et al. (2020), the majority of students (71%) indicated an increase in perceived stress during the COVID-19 pandemic compared to the pre-pandemic period. Obviously, the pandemic has generated tensions in students for multiple causes, and the abrupt introduction of distance learning and uncertainty in universities are of great relevance (Agnew et al., 2019). For all of the above, the following hypothesis is posited.

> H2: The relationship between techno-stress and emotional exhaustion is mediated by perceived stress.

.

While some of the key factors for student learning in times of pandemic have been good Internet connectivity and the ability to easily relate and communicate with teachers (Katz et al., 2021), the dependence of communication on the online environment may have caused some problems for the students. Users can easily become dependent on (or even addicted to) ICT, providing streams of hedonic gratification and short-term stimulation (Eyal, 2014). There could also be an over-identification with the technology that would tend to dissolve the boundaries of person-machine interaction and create dependence on technology (Sayers et al., 2021).

There is a growing acceptance of the relationship between obsessive, compulsive and excessive use of digital media and the well-being of users (Cham et al., 2019). This justifies the current need for determine the reasons for people's excessive commitment and the subsequent impact on indicators of well-being and functional deficiencies (Tandon et al., 2021).

It is convenient to approach this problem from a gradual perspective, and bear in mind that there are different intensities and levels that must be considered. Thus, in the literature, we find terms such as dependency, problematic attachment, excessive commitment or addiction, among others. Some authors have even pointed out that the term "internet addiction" has become obsolete (Carbonell et al., 2012). Dependence does not necessarily indicate obsessional behavior, or typical addiction symptoms (Turel et al., 2011). For example, Altuwairiqi et al. (2019) pointed out that an obsessive and excessive use leads to negative impacts on one's life, such as what they call a problematic attachment.

The truth is that users who spend greater amounts of time on the internet are more likely to present a connected behavior controlled by negative reinforces, a high degree of excitement when they are online, loss of control, changes in health habits, and interference at the social, family, academic or work level (Muñoz-Rivas et al., 2010). Moreover, the omnipresence of technology during the lockdown could have caused an increase in the behaviors of addiction to the internet or digital devices, and this can be identified as a consequence of techno-stress (Molino et al., 2020).

Regarding burnout, there are studies that indicate that a higher level of burnout in students is significantly related to a higher level of problematic internet use (Tomaszek and Muchacka-Cymerman, 2020), and they show a positive and significant relationship between the mobile use and psychological disorders and academic burnout (Noruzi Kuhdasht et al., 2018). Based on all the above, it is possible to posit the following hypothesis.

> H3: The relationship between techno-stress and emotional exhaustion is mediated by the level of intrapersonal conflicts of students.

.

Theoretical Model

The theoretical framework previously developed allow us to define the theoretical model shown in **Figure 1**, where TE is techno-stress, PE is perceived stress, IC is interpersonal conflicts and EE is emotional exhaustion. Hypotheses are H1, H2 (divided in H2a and H2b), and H3 (divided in H3a and H3b).

METHODOLOGICAL PROCEDURE

Method

Bearing in mind the exploratory nature of this study, Structural Equation Modelling (SEM) and Partial Least Squares (PLS) have been selected following Hair et al. (2021). PLS-SEM also allow us a causal-predictive approach that emphasizes the prediction of emotional exhaustion by the other variables in the model, specifically techno-stress. SmartPLS v.3.3.2 by Ringle et al. (2015) was used for performing the multivariate required analyses of the measurement model and the structural model, both designed to provide the causal required explanations. Some recent records applying SEM on the field do exist (Penado Abilleira et al., 2020, 2021), and also SEM-PLS (Shi et al., 2020; González-López et al., 2021).

Instrument

A survey instrument was developed to measure students' techno-stress and related variables in the model. The questionnaire was designed using dimensions and items from previously published academic studies on the topic. Techno-stress has

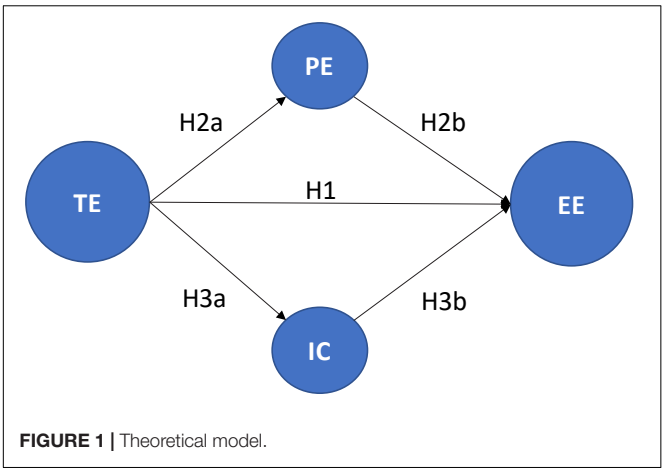

FIGURE 1 | Theoretical model.

been considered as a second order construct with 16 items distributed in four dimensions (anxiety, fatigue, skepticism, and ineffectiveness), which is recommended for workers but also for pre-occupational samples (Llorens et al., 2011). Perceived stress has been approached by six items trying to catch the perceptions of students, regardless the context, as indicated by Kamarck et al. (1983). Intrapersonal conflicts are measured through three items coming from the Internet Related Experiences Questionnaire (IREQ) by Beranuy et al. (2009) evaluating the level of dependence and evasion of internet users. Finally, seven items were used for approaching the emotional exhaustion of students. The items come from the Maslach burnout inventory (Maslach and Jackson, 1986), with a specific adaptation to the context of the study, changing workers by students, and to work for to study. **Table 1** presents the data collection instrument in full in order to allow the study to be replicated.

Sample and Procedure

Techno-stress and its relationship with the other variables of the theoretical model has been investigated in a sample of 333 students in a medium size public university in Spain. Data was collected in May 2020, during COVID-19 lockdown as is explained as follows.

To carry out this work, a self-administered questionnaire designed *ad hoc* has been used: Google Forms from Google Drive. All the measures were derived from previously validated scales, as explained before, and were administered in Spanish after a translation procedure. The virtual campus was used to send the students the address of the questionnaire, as well as an Access QR code. They could see it in the activities part of the subject's platform, but they also received a message in their email.

The questionnaires were completed by the students during May 2020, in a context of lockdown, and follow-up of the distance subject imposed for the whole country since March 16, 2020 (so when taking the questionnaire, the students had already been 2 months of forced digital intensification and they were close to finishing the contents and being evaluated in the different subjects).

In the message that the students received, the objectives of the study were explained. The aspects related to the fact that participation was totally voluntary, that the information would be totally confidential, and that the information would be totally anonymous were developed. They were informed that the data would not allow their personal identification, thus complying with the ethical standards, recommendations and regulation of personal data established for this type of work. In addition, students had to explicitly give their consent to participate in the study, in order to use this information for the sole and exclusive purpose of research on emotional exhaustion. To this end, a mandatory question was included at the beginning of the questionnaire which, if not answered affirmatively, it blocked the questionnaire.

The collaborating students were motivated with the idea that their contribution would allow detecting factors that were affecting their well-being, and would allow them to help develop actions aimed at mitigating suffering in students. With this approach, they were involved in a higher order of improvement

TABLE 1 | Instrument.

Techno-stress (TE)	
Anxiety	I feel tense and anxious when working with technology. I doubt myself when using technology afraid of making mistakes. It scares me to think that I can destroy a lot of information due to the incorrect use of technology. Working with technology makes me feel uncomfortable, irritable and impatient.
Fatigue	I find it hard to relax after a day of using technology. When I finish working with technology, I feel exhausted. I'm so tired of working with technology that I can't do anything else. It is difficult to concentrate after working with technologies.
Skepticism	I am less and less interested in technology. I feel less involved with the use of technology. I am more cynical about the contribution of technologies. I doubt the meaning of working with technologies.
Ineffectiveness	I feel that I am inefficient when using technology. I find it difficult to work with technology. People say that I am inefficient when I use technology. I'm not sure I'm completing tasks well when using technology.
Perceived stress (PS)	I have felt unable to control the important things in your life. I have felt nervous or stressed. I have been confident about my ability to handle my personal problems (reverse). I have felt that things are going well for me (reverse). I felt like I had everything under control (reverse). I have felt that the difficulties accumulate so much that I cannot overcome them.
Intrapersonal conflics (IC)	I plan my next Internet connection very frequently. I get irritated when someone bothers me while I'm online. I find it easier or more comfortable to interact with people online than in person.
Emotional exahustion (EE)	I feel emotionally exhausted because of my studies. I feel tired at the end of the day. When I get up in the morning and face another day, I feel fatigued. I feel that studying all day takes a lot of effort and makes me tired. I feel burned out by my studies. I feel frustrated about my studies. I feel finished in my studies, at the limit of my possibilities.

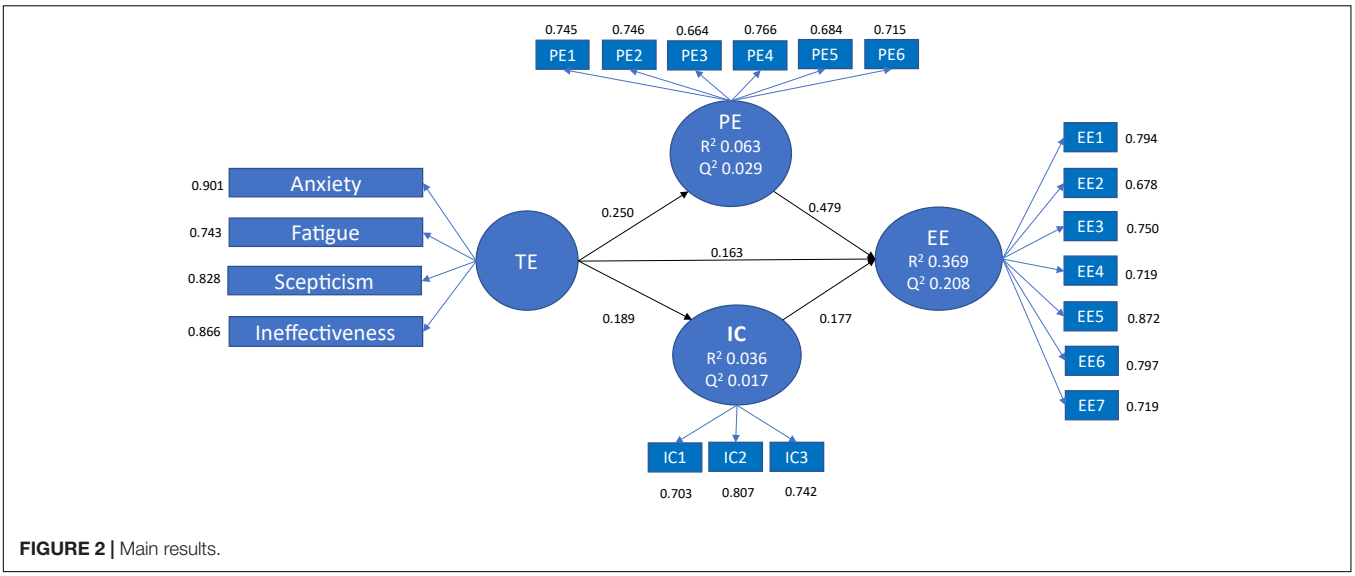

FIGURE 2 | Main results.

TABLE 2 | Hypotheses testing.

Hypothesis	Path coefficient (original)	Path coefficient (sample)	St. Error	Confidence interval [2.5–97.5]%	*t*-statistics	Significant ($p < 0.05$)
Total effects						
H1: TE → EE	0.163	0.163	0.051	0.065–0.262	3.179	0.001
H2a: TE → PE	0.250	0.256	0.055	0.144–0.360	4.538	0.000
H2b: PE → EE	0.497	0.481	0.045	0.390–0.565	10.733	0.000
H3a: TE → IC	0.189	0.195	0.057	0.080–0.304	3.327	0.001
H3b: IC → EE	0.177	0.180	0.049	0.083–0.276	3.595	0.000
Mediation effects						
H2: TE → PE → EE	0.120	0.123	0.029	0.067–0.182	4.127	0.000
H3: TE → IC → EE	0.033	0.034	0.013	0.012–0.062	2.639	0.008

of the university community. During data collection, the students had the advice of a researcher through an email address.

RESULTS AND FINDINGS

The main results are shown in **Figure 2** (mainly related to the measurement model), and **Table 2** (for hypotheses testing validating the structural model after bootstrapping procedure with 5,000 resamples).

Related to the measurement model, reliability was assessed by examining individual loads of the items with their respective constructs (≥0.66 was accepted). The Cronbach's alpha coefficient was used as an index of reliability of the latent variables, ranging from 0.88 for emotional exhaustion, to the slightly low value of 0.62 for interpersonal conflicts. Composite reliability was also calculated showing acceptable values of 0,903 for techno-stress, 0.907 for emotional exhaustion, 0.866 for perceived stress, and 0.795 for intrapersonal conflicts. The convergent validity of all constructs in the model was evaluated through the average variance extracted (AVE) and was accepted in all cases (>0.5) (Hair et al., 2021). The discriminant validity of the latent variables was verified using the Fornell-Larcker criterion and the HTMT ratio (<0.90) (Henseler, 2017).

Moving to assess the structural model, the explained variance (R^2) of the endogenous latent variables and the regression coefficients were showed in **Figure 2**. The *p*-values of the regression coefficients (test t) are shown in **Table 2**, and are used as indicators of the explanatory power of the model, confirming also the mediator role of both perceived stress and intrapersonal conflicts in the relationship between techno-stress and the emotional exhaustion of students.

The overall fit of the model was evaluated using the standardized root mean square residual indicator (SRMR) (Hu and Bentler, 1998). In this study, the SRMR was 0.069, which means that the model fits the empirical data (Henseler et al., 2016). Other fit measure in SEM literature is NFI, the normed fit index by Bentler and Bonett (1980). The closer the NFI to 1, the better fit. The model tested here has obtained a good value of 0.796.

Finally, the predictive relevance of the model was analyzed through the Stone-Geisser test (Q^2) after a blindfolding procedure. In the model tested, all endogenous constructs fulfill $Q^2 > 0$, with values of 0.208, 0,029, and 0.017

for emotional exhaustion, perceived stress, and intrapersonal conflicts, respectively.

The findings confirm the multidimensional nature of technostress among university students. The four dimensions - anxiety, fatigue, skepticism and ineffectiveness – have been confirmed, corroborating techno-stress as second order construct that impacts directly to the emotional exhaustions of students and both, perceived stress and interpersonal conflicts. It has been also demonstrated that these two last constructs have a mediation effect between techno-stress and emotional exhaustion.

CONCLUSION

This study contributes to the academic literature in the field of managing and mitigating suffering in the new generations that will soon join the working life. They do so by providing both new knowledge and empirical evidence on the effects of technostress in university students. In this work, the theoretical development of a causal model relating techno-stress and the empirical exhaustion of students in COVID pandemic times, is empirically tested and validated. Results let us confirm the dangerous consequences of ICTs if they are not well managed. In addition, it might be thought that perceived stress and individual conflicts could both be mediators of the effect between techno-stress and students' emotional exhaustion.

It has been demonstrated in this study that university students are not tech-savvy because they are not techno-stress free. The COR theory suggests that students, as individuals, continuously strive to seek, acquire, and maintain resources. This theoretical framework justifies that students react to the substitution of traditional lectures to on line teaching methods, in which there is the threat of a loss of resources. Technostress and emotional exhaustion will be the reactions until they gain some resources to cope up with the resource losses. Ensuring that students acquire ICT skills and found the required support from their universities (as new resources) may be the solution.

IMPLICATIONS

Improving the quality of life of students should be one of the main concerns of universities, due to the fact they will be the next generation entering the labor market. It is a matter of preventing their potential future suffering at work. In recent years, the use of ICT in university studies has been intensified and, although the internet and social networks can be excellent tools to maintain a social relationship with classmates, high school friends and family, they can also have negative effects on students' mental health (Mofatteh, 2021). The issue here is that students have been very vulnerable during the COVID-19 pandemic, and researchers have in fact proven that mental health problems have increased in that period (Aslan et al., 2020).

New studies about techno-stress and related variables such as emotional exhaustion, are essential for its detection, management, prevention, and mental illnesses (Makhubela, 2020). In a context such as the pandemic, the study of perceived stress and intrapersonal conflicts also seems to be especially relevant. In fact, the perception of the impact of COVID-19 on the well-being of students turned out to be a significant predictor of perceived stress (Aslan et al., 2020). Moreover, the strongest relationship between global techno-stress occurs with individual negative consequences (González-López et al., 2021), where intrapersonal conflicts such as digital attachment are framed. Given that fact, new studies must be done to explore whether these individual problems could influence other psychological aspects of students' life, and condition their access to the labor market with guaranties of personal and professional success.

LIMITATIONS

Regarding the generalization of results, this study has some limitations that must be acknowledged, as other previous studies in the field have done (Penado Abilleira et al., 2020, 2021): (1) the cross-sectional data instead of longitudinal data, (2) the use of self-evaluation questionnaire instead of objective data, and (3) the absence of control variables to validate the instrument in any context. However, we hope that the validated model in the Spanish context will serve to other researchers to replicate the study and shed light on the relationship between techno-stress and emotional exhaustion in university students in pandemic times. In addition, the research team have new planned studies for the near future that will allow to contribute to the field with new insights.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

MB-M performed the data collection, searched and reviewed the study, wrote the manuscript and supervised the research process. MS-H analyzed the data, wrote and critically reviewed the manuscript. ÓG-L performed the data collection, and critically reviewed the manuscript. All authors contributed to data interpretation and approved the final version of the manuscript for submission.

FUNDING

Regional Government (Junta de Extremadura).

ACKNOWLEDGMENTS

The authors would like to extend our sincere thanks to the students participating in this study. The authors are also grateful to the Regional Government (Junta de Extremadura) for supporting the research groups under the SEJ021 and SEJ005 codes (Research Founds GR21078 and GR21031), at the University of Extremadura through European Funds (FEDER a way of making Europe), and the reviewers who contributed their valuable time and effort to improve the article's quality with much appreciated suggestions and comments.

REFERENCES

Agnew, M., Poole, H., and Khan, A. (2019). Fall break fallout: exploring student perceptions of the impact of an autumn break on stress. *Stud. Success* 10:45. doi: 10.5204/ssj.v10i3.1412

Alarcon, G. M., Edwards, J. M., and Menke, L. E. (2011). Student burnout and engagement: a test of the conservation of resources theory. *J. Psychol.* 145, 211–227. doi: 10.1080/00223980.2011.555432

Al-Tammemi, A. B., Akour, A., and Alfalah, L. (2020). Is it just about physical health? An online cross-sectional study exploring the psychological distress among University Students in Jordan in the Midst of COVID-19 Pandemic. *Front. Psychol.* 11:562213. doi: 10.3389/fpsyg.2020.562213

Altuwairiqi, M., Jiang, N., and Ali, R. (2019). Problematic attachment to social media: five behavioural archetypes. *Int. J. Environ. Res. Public Health* 16:2136. doi: 10.3390/ijerph16122136

Arnett, J. J. (2000). Emerging adulthood: a theory of development from the late teens through the twenties. *Am. Psychol.* 55:469. doi: 10.1037//0003-066X.55.5.469

Arnold, K. A., Connelly, C. E., Walsh, M. M., and Martin Ginis, K. A. (2015). Leadership styles, emotion regulation, and burnout. *J. Occup. Health Psychol.* 20, 481–490. doi: 10.1037/a0039045

Aslan, I., Ochnik, D., and Çınar, O. (2020). Exploring perceived stress among students in Turkey during the COVID-19 pandemic. *Int. J. Environ. Res. Public Health* 17:8961. doi: 10.3390/ijerph17238961

Bauwens, R., Denissen, M., Van Beurden, J., and Coun, M. J. H. (2021). Can leaders prevent technology from backfiring? Empowering leadership as a double-edged sword for technostress in care. *Front. Psychol.* 12:702648. doi: 10.3389/fpsyg.2021.702648

Bentler, P. M., and Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychol. Bull.* 88:588. doi: 10.1037/0033-2909.88.3.588

Beranuy, M., Chamarro Lusar, A., Graner Jordania, C., and Carbonell Sánchez, X. (2009). Validación de dos escalas breves para evaluar la adicción a internet y el abuso de móvil. *Psicothema* 21, 480–485.

Bradley, G. (2017). *The Good ICT Society: From Theory to Actions*. London: Routledge. doi: 10.4324/9781315231679

Brod, C. (1984). *Technostress: The Human Cost of the Computer Revolution*. Reading, MA: Addison-Wesley. doi: 10.1177/089443938600400428

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., et al. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* 287:112934. doi: 10.1016/j.psychres.2020.112934

Carbonell, X., Chamarro, A., Griffiths, M., Oberst, U., Cladellas, R., and Talarn, A. (2012). Problematic Internet and cell phone use in Spanish teenagers and young students. *Anal. Psicol.* 28, 789–796. doi: 10.6018/analesps.28.3.156061

Carmona-Halty, M., Schaufeli, W. B., and Salanova, M. (2019). Good relationships, good performance: the mediating role of psychological capital–a three-wave study among students. *Front. Psychol.* 10:306. doi: 10.3389/fpsyg.2019.00306

Cham, S., Algashami, A., Aldhayan, M., McAlaney, J., Phalp, K., Almourad, M. B., et al. (2019). *Digital Addiction: Negative Life Experiences and Potential for Technology-Assisted Solutions, New Knowledge in Information Systems and Technologies*. Cham: Springer, 921–931. doi: 10.1007/978-3-030-16184-2_87

Chaves, C., Duarte, J., Nelas, P., Coutinho, E., Cruz, C., and Dionisio, R. (2016). Occupational health: technostress and burnout among nurses. *Int. J. Dev. Educ. Psychol.* 1, 297–304. doi: 10.17060/ijodaep.2019.n2.v1.1699

Coppari, N., Bagnoli, L., Codas, G., Montanía, M., Pradeda, Ú. M., and Humada, H. L. (2017). Uso de tecnologías de la comunicación e información y tecnoestrés en estudiantes paraguayos: su relación con la edad. *Cuadernos de Neuropsicología* 11:72.

Cotten, S. R. (2008). Students' technology use and the impacts on well-being. *New Dir. Stud. Serv.* 124, 55–70. doi: 10.1002/ss.295

Daruwala, N. A. (2020). Generation lockdown: exploring possible predictors of technology phobia during the Coronavirus self-isolation period. *Aloma* 38, 15–19. doi: 10.51698/aloma.2020.38.1.15-19

Daumiller, M., Rinas, R., Hein, J., Janke, S., Dickhäuser, O., and Dresel, M. (2021). Shifting from face-to-face to online teaching during COVID-19: the role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Comput. Hum. Behav.* 118:106677. doi: 10.31234/osf.io/yuwh8

de Souza, R. L., and Cappellozza, A. (2018). "The effects of leadership styles and internet addiction on technostress," in *Proceedings of the 2018 Association for Information Systems AIS Electronic Library (AISeL)*, Santarém.

Devine, K., and Hunter, K. (2016). Doctoral students' emotional exhaustion and intentions to leave academia. *Int. J. Dr. Stud.* 11, 35–61. doi: 10.28945/3396

Dimitriu, M. C. T., Pantea-Stoian, A., Smaranda, A. C., Nica, A. A., Carap, A. C., Constantin, V. D., et al. (2020). Burnout syndrome in Romanian medical residents in time of the COVID-19 pandemic. *Med. Hypotheses* 144:109972. doi: 10.1016/j.mehy.2020.109972

Dunn, T. J., and Kennedy, M. (2019). Technology enhanced learning in higher education; motivations, engagement and academic achievement. *Comput. Educ.* 137, 104–113. doi: 10.1016/j.compedu.2019.04.004

Elmer, T., Mepham, K., and Stadtfeld, C. (2020). Students under lockdown: comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLoS One* 15:e0236337. doi: 10.1371/journal.pone.0236337

Eyal, N. (2014). *Hooked: How to Build Habit-Forming Products*. London: Penguin.

Fatima, T., Majeed, M., and Shah, S. Z. A. (2018). Jeopardies of aversive leadership: a conservation of resources theory approach. *Front. Psychol.* 9:1935. doi: 10.3389/fpsyg.2018.01935

González-López, Ó. R., Buenadicha-Mateos, M., and Sánchez-Hernández, M. I. (2021). Overwhelmed by technostress? Sensitive archetypes and effects in times of forced digitalization. *Int. J. Environ. Res. Public Health* 18:4216. doi: 10.3390/ijerph18084216

Hair, J. F. Jr., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks, CA: Sage publications.

Hakanen, J. J., and Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *J. Affect. Disord.* 141, 415–424. doi: 10.1016/j.jad.2012.02.043

Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., and Westman, M. (2014). Getting to the "COR" understanding the role of resources in conservation of resources theory. *J. Manag.* 40, 1334–1364. doi: 10.1177/0149206314527130

Henseler, J. (2017). Bridging design and behavioral research with variance-based structural equation modeling. *J. Advert.* 46, 178–192. doi: 10.1080/00913367.2017.1281780

Henseler, J., Hubona, G., and Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Ind. Manag. Data Syst.* 116, 2–20. doi: 10.1108/IMDS-09-2015-0382

Ho, C. S., Chee, C. Y., and Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann. Acad. Med. Singapore* 49, 1–3. doi: 10.1080/01612840.2021.1978598

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *Am. Psychol.* 44, 513–524. doi: 10.1037//0003-066x.44.3.513

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Appl. Psychol.* 50, 337–421. doi: 10.1111/1464-0597.00062

Hobfoll, S. E. (2011). "Conservation of resources theory: its implication for stress, health, and resilience," in *The Oxford Handbook of Stress, Health, and Coping*, ed. S. Folkman (Oxford: Oxford University Press), 127–147. doi: 10.1093/oxfordhb/9780195375343.013.0007

Hu, L., and Bentler, P. M. (1998). Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. *Psychol. Methods* 3:424. doi: 10.1037/1082-989X.3.4.424

Kamarck, T., Mermelstein, R., and Cohen, S. (1983). A global measure of perceived stress. *J. Health Soc. Behav.* 24, 385–396. doi: 10.2307/2136404

Katz, V. S., Jordan, A. B., and Ognyanova, K. (2021). Digital inequality, faculty communication, and remote learning experiences during the COVID-19 pandemic: a survey of US undergraduates. *PLoS One* 16:e0246641. doi: 10.1371/journal.pone.0246641

La Torre, G., Esposito, A., Sciarra, I., and Chiappetta, M. (2019). Definition, symptoms and risk of techno-stress: a systematic review. *Int. Arch. Occup. Environ. Health* 92, 13–35. doi: 10.1007/s00420-018-1352-1

Law, D. W. (2007). Exhaustion in university students and the effect of coursework involvement. *J. Am. Coll. Health* 55, 239–245. doi: 10.3200/JACH.55.4.239-245

Li, J., Han, X., Wang, W., Sun, G., and Cheng, Z. (2018). How social support influences university students' academic achievement and emotional exhaustion: the mediating role of self-esteem. *Learn. Individ. Differ.* 61, 120–126. doi: 10.1016/j.lindif.2017.11.016

Lindén, M., Salo, I., and Jansson, A. (2018). Organizational stressors and burnout in public librarians. *J. Librariansh. Inf. Sci.* 50, 199–204. doi: 10.1177/0961000616666130

Llorens, S., Salanova, M., and Ventura, M. (2011). *Guías de Intervención: Tecnoestrés*. Madrid: Síntesis.

Lutz, C., Ranzini, G., and Meckel, M. (2014). "Stress 2.0: social media overload among Swiss teenagers," in *Communication and Information Technologies Annual (Studies in Media and Communications*, Vol. 8, (Bingley: Emerald Group Publishing Limited), 3–24. doi: 10.1108/S2050-20602014000008001

Makhubela, M. (2020). Assessing psychological stress in South African university students: measurement validity of the perceived stress scale (PSS-10) in diverse populations. *Curr. Psychol.* 2020, 1–8. doi: 10.1007/s12144-020-00784-3

Maslach, C., and Jackson, S. E. (1986). *MBI: Maslach Burnout Inventory; Manual Research Edition*. Palo Alto, CA: University of California.

Maslach, C. H., Schaufeli, W. B., and Leiter, M. P. (2001). Job burnout. *Annu. Rev. Psychol.* 52, 397–422. doi: 10.1146/annurev.psych.52.1.397

Maunder, R., Hunter, J., Vincent, L., Bennett, J., Peladeau, N., Leszcz, M., et al. (2003). The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *CMAJ* 168, 1245–1251.

Moeller, J., Brackett, M. A., Ivcevic, Z., and White, A. E. (2020). High school students' feelings: discoveries from a large national survey and an experience sampling study. *Learn. Instruct.* 66:101301. doi: 10.1016/j.learninstruc.2019.101301

Mofatteh, M. (2021). Risk factors associated with stress, anxiety, and depression among university undergraduate students. *AIMS Public Health* 8:36. doi: 10.3934/publichealth.2021004

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., et al. (2020). Wellbeing costs of technology use during Covid-19 remote working: an investigation using the Italian translation of the technostress creators scale. *Sustainability* 12:5911. doi: 10.3390/su12155911

Muñoz-Rivas, M. J., Fernandez, L., and Gamez-Guadix, M. (2010). Analysis of the indicators of pathological Internet use in Spanish university students. *Span. J. Psychol.* 13, 697–707. doi: 10.1017/S1138741600002365

Navarro-Abal, Y., Gómez-Salgado, J., López-López, M. J., and Climent-Rodríguez, J. A. (2018). Organisational justice, burnout, and engagement in university students: a comparison between stressful aspects of labour and university organisation. *Int. J. Environ. Res. Public Health* 15:2116. doi: 10.3390/ijerph15102116

Noruzi Kuhdasht, R., Ghayeninejad, Z., and Nastiezaie, N. (2018). The relationship between phone dependency with psychological disorders and academic burnout in students. *J. Res. Health* 8, 189–195. doi: 10.29252/jrh.8.2.189

Özdin, S., and Bayrak Özdin, Ş (2020). Levels and predictors of anxiety, depression and health anxiety during COVID-19 pandemic in Turkish society: the importance of gender. *Int. J. Soc. Psychiatry* 66, 504–511. doi: 10.1177/0020764020927051

Parker, P. D., and Salmela-Aro, K. (2011). Developmental processes in school burnout: a comparison of major developmental models. *Learn. Individ. Differ.* 21, 244–248. doi: 10.1016/j.lindif.2011.01.005

Penado Abilleira, M., Rodicio-García, M. L., Ríos-de Deus, M. P., and Mosquera-González, M. J. (2021). Technostress in Spanish university teachers during the COVID-19 pandemic. *Front. Psychol.* 12:496. doi: 10.3389/fpsyg.2021.617650

Penado Abilleira, M., Rodicio-García, M. L., Ríos-de-Deus, M. P., and Mosquera-González, M. J. (2020). Technostress in Spanish university students: validation of a measurement scale. *Front. Psychol.* 11:2602. doi: 10.3389/fpsyg.2020.582317

Prensky, M. (2001). Digital natives, digital immigrants. *Horizon* 9, 1–6. doi: 10.1108/10748120110424816

Ribeiro, Í. J. S., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., and Boery, E. N. (2018). Stress and quality of life among university students: a systematic literature review. *Health Prof. Educ.* 4, 70–77. doi: 10.1016/j.hpe.2017.03.002

Ringle, C. M., Wende, S., and Becker, J. (2015). *SmartPLS 3. Boenningstedt*. Oststeinbek: SmartPLS GmbH.

Robins, T. G., Roberts, R. M., and Sarris, A. (2018). The role of student burnout in predicting future burnout: exploring the transition from university to the workplace. *High. Educ. Res. Dev.* 37, 115–130. doi: 10.1080/07294360.2017.1344827

Sahu, P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): impact on education and mental health of students and academic staff. *Cureus* 12:e7541. doi: 10.7759/cureus.7541

Salanova, M., Cifre, E., and Martín, P. (1999). El proceso de 'Tecnoestrés'y estrategias para su prevención. *Prevención, Trabajo y Salud* 1, 18–28.

Salanova, M., Peiró, J. M., and Schaufeli, W. B. (2002). Self-efficacy specificity and burnout among information technology workers: an extension of the job demand-control model. *Eur. J. Work Organ. Psychol.* 11, 1–25. doi: 10.1080/13594320143000735

Samaha, M., and Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Comput. Hum. Behav.* 57, 321–325. doi: 10.1016/j.chb.2015.12.045

Sayers, D., Sousa-Silva, R., Höhn, S., et al. (2021). *The Dawn of the Human-Machine Era: A forecast of new and Emerging Language Technologies. Report for EU COST Action CA19102 'Language In The Human-Machine Era'*. doi: 10.17011/jyx/reports/20210518/1

Sharma, M. K., Anand, N., Ahuja, S., Thakur, P. C., Mondal, I., Singh, P., et al. (2020). Digital burnout: COVID-19 lockdown mediates excessive technology use stress. *World Soc. Psychiatry* 2:171. doi: 10.4103/WSP.WSP_21_20

Shi, C., Yu, L., Wang, N., Cheng, B., and Cao, X. (2020). Effects of social media overload on academic performance: a stressor–strain–outcome perspective. *Asian J. Commun.* 30, 179–197. doi: 10.1080/01292986.2020.1748073

Silva, M., Queirós, C., and Cameira, M. (2016). Saúde no trabalho: tecnostress e burnout em enfermeiros. *LoBue and ThrasherInt. J. Work. Cond.* 12, 54–70.

Soderlund, M. (2017). Employee display of burnout in the service encounter and its impact on customer satisfaction. *J. Retail. Consum. Serv.* 37, 168–176. doi: 10.1016/j.jretconser.2016.10.014

Son, C., Hegde, S., Smith, A., Wang, X., and Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: interview survey study. *J. Med. Int. Res.* 22:e21279. doi: 10.2196/21279

Tandon, A., Dhir, A., Almugren, I., AlNemer, G. N., and Mäntymäki, M. (2021). Fear of missing out (FoMO) among social media users: a systematic literature review, synthesis and framework for future research. *Int. Res.* 31, 782–821. doi: 10.1108/INTR-11-2019-0455

Tomaszek, K., and Muchacka-Cymerman, A. (2020). Examining the relationship between student school burnout and problematic internet use. *Educ. Sci. Theory Pract.* 20, 16–31. doi: 10.12738/jestp

Turel, O., Serenko, A., and Giles, P. (2011). Integrating technology addiction and use: an empirical investigation of online auction users. *MIS Q.* 35, 1043–1061. doi: 10.2307/41409972

Upadhyaya, P. (2021). Impact of technostress on academic productivity of university students. *Educ. Inf. Technol.* 26, 1647–1664. doi: 10.1007/s10639-020-10319-9

Vorderer, P., Krömer, N., and Schneider, F. M. (2016). Permanently online–permanently connected: explorations into university students' use of social

media and mobile smart devices. *Comput. Hum. Behav.* 63, 694–703. doi: 10.1016/j.chb.2016.05.085

Wang, X., Tan, S. C., and Li, L. (2020). Technostress in university students' technology-enhanced learning: an investigation from multidimensional person-environment misfit. *Comput. Hum. Behav.* 105:106208. doi: 10.1016/j.chb.2019.106208

West, C., Dyrbye, L., Sloan, J., Shanafelt, T., Schorling, J., and Plews-Ogan, M. (2020). Single-item burnout measure correlates well with emotional exhaustion domain of burnout but not depersonalization among medical students. *J. Gen. Intern. Med.* 35, 3383–3385. doi: 10.1007/s11606-009-1129-z

Westman, M., Hobfoll, S. E., Chen, S., Davidson, O. B., and Laski, S. (2005). "Organizational stress through the lens of Conservation of Resources (COR) theory," in *Research in Occupational Stress and Well-Being*, Vol. 4, eds P. L. Perrewe and D. C. Ganster (Amsterdam: JAI), 167–220. doi: 10.1016/S1479-3555(04)04005-3

Worly, B., Verbeck, N., Walker, C., and Clinchot, D. M. (2019). Burnout, perceived stress, and empathic concern: differences in female and male Millennial medical students. *Psychol. Health Med.* 24, 429–438. doi: 10.1080/13548506.2018.1529329

Wright, T. A., and Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *J. Appl. Psychol.* 83:486. doi: 10.1037/0021-9010.83.3.486

Zaed, I., Jaaiddane, Y., Chibbaro, S., and Tinterri, B. (2020). Burnout among neurosurgeons and residents in neurosurgery: a systematic review and meta-analysis of the literature. *World Neurosurg.* 143, e529–e534. doi: 10.1016/j.wneu.2020.08.005

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 24 February 2022
doi: 10.3389/fpsyg.2022.821899

Mindfulness Practice and Burnout: Evidence From Chinese Social Workers

*Bin Tu[1], Chienchung Huang[2], Sophie Sitar[3] and Meifen Yang[1]**

[1] School of Public Administration, Guangdong University of Foreign Studies, Guangzhou, China, [2] School of Social Work, Rutgers, The State University of New Jersey, New Brunswick, NJ, United States, [3] Rutgers Law School, Rutgers, The State University of New Jersey, Newark, NJ, United States

Over the span of nearly 10 years, the social work labor force grew from 0.2 million to approximately 1.2 million in China. Despite these increases, studies have shown social workers in China are also experiencing equally high burnout rates. For this analysis, we collected data from 537 social workers based in Guangzhou, China. We used the job demands and resources (JD-R) theory, to examine the relations between JD-R and burnout and whether mindfulness practice (MP) could reduce any such burnout. Our results suggest JD-R affects social workers' burnout through both health and motivation impairment. High job demands (JD) were linked to high burnout while high job resources (JR) were linked to a reduction in burnout. Formal (Beta = −0.08) and informal (Beta = −0.19) MP were associated with low burnout amongst social workers. The significant interaction between JD and MP also suggests that MP can reduce burnout for social workers with high JD. The findings call for using MP to be used to shield social workers from the effects of increasing JD and to prevent an increase of burnout amongst Chinese social workers.

Keywords: mindfulness practice, burnout, work, social worker, job demand

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
Jordi Assens-Serra, EADA Business School, Spain
Inna Paiva, University Institute of Lisbon, Portugal

****Correspondence:***
Meifen Yang
mfyang2019@163.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *25 November 2021*
Accepted: *04 February 2022*
Published: *24 February 2022*

Citation:
Tu B, Huang C, Sitar S and Yang M (2022) Mindfulness Practice and Burnout: Evidence From Chinese Social Workers. Front. Psychol. 13:821899. doi: 10.3389/fpsyg.2022.821899

INTRODUCTION

Since the 1980s, China's economy has been rapidly developing, and so has the need for social workers to address rising social welfare needs. Therefore, there have been enormous expansions to China's social work academic programs within the last 40 years. From 1989 to 2018, social work undergraduate, master's, and Ph.D. programs have risen from tens of annual graduating students to over 40,000 annual social work graduates (Tang and Li, 2021). In tandem to rising social work academic institutions, the national Chinese social work labor force also drastically increased from 0.2 million in 2010, to 1.2 million in 2018 (Li et al., 2012; Chan et al., 2020). These statistics highlight just how quickly the field of social work has expanded throughout China, in a relatively short period of time. The future of social work in China, however, has become threatened by high burnout and turnover rates amongst social workers across the country (Lin and Lan, 2014; Xu et al., 2016; Jiang et al., 2019; Su et al., 2020; Tang and Li, 2021).

Internationally, social workers, like other human service workers, experience significant burnout (Lizano, 2015; Sánchez-Moreno et al., 2015). This is problematic because cross-cultural research shows industries with elevated burnout rates generally also have equally high turnover rates (Abu-Bader, 2000; Mor Barak et al., 2001; Lloyd et al., 2002; Evans et al., 2006; Kim and Stoner, 2008;

Luo and Lei, 2021). For example, the turnover rates amongst social workers were around 23% in the United Kingdom (Hussein et al., 2016) and above 30% in the United States (National Child Welfare Workforce Institute, 2011; Boyas et al., 2015). Chinese social workers similarly experience these same elevated rates of burnout and thus subsequent high turnover (Lin and Lan, 2014; Du, 2015; Zhu, 2015; Jiang and Wang, 2016; Xu et al., 2016; Wang et al., 2019). Since the late 2000s, Guangzhou and Shenzhen social workers have been quitting their jobs in increasing numbers and turnover rates have been on the rise. For example, in 2014, 25% of Guangzhou social workers quit their jobs, (Zhu, 2015), and by 2015, approximately 18% of Shenzhen social workers had also left their positions (Du, 2015). In 2013, the Shenzhen social worker turnover rate was over 22% (Du, 2015). Additionally, using the Maslach Burnout Inventory (MBI) to measure burnout amongst social workers in China, various studies have found the average burnout was 53.9 out of 102 in Chengdu (Xie et al., 2021), and was 56.6 in Guangzhou (Wang et al., 2019). These two Chinese cities' burnout levels appear to fall in the middle of international range. Comparatively, Israel ranges from 47.1 (Hamama, 2012) to 46.7 (Tartakovsky and Walsh, 2016); the United States is approximately 53.7 (Himle et al., 1986); Norway is approximately 54.0 (Himle et al., 1986); Spain is approximately 58.1 (Gómez-García et al., 2020); and Russia is approximately 62.6 (Zaitseva and Krikunov, 2021).

Increased burnout and turnover rates will generally impose negative consequences on not only the field of social work, but also on its labor force and its client populations (Social Work Policy Institute, 2010; Child Welfare Information Gateway, 2016; Casey Family Programs, 2017). For example, social workers who experience burnout may be unable to maintain quality client services, which can create harm, especially to their more vulnerable clients (Hamama, 2012; Casey Family Programs, 2017; Xie et al., 2021). Additionally, high turnover rates may force agencies to become understaffed and thus social workers who remain in the labor force are working with increased job demands and workloads (Yürür and Sarikaya, 2012; Child Welfare Information Gateway, 2016). Moreover, when caseworkers leave their jobs, agencies incur high costs to replace the staff member. These costs can be as high as 200 percent of the exiting employee's annual salary and can include direct costs related to worker separation, hiring and training new staff, costs for administrative work to document the employee's termination, costs for emotional exhaustion, and cost of recurrence of targeted behavior problems from clients (CPS Human Resource Services, 2006; Casey Family Programs, 2017).

This level of work stress and pressure can then, again, lead to further burnout amongst workers, which exacerbates the turnover cycle further. It is critical scholars investigate the contributing factors of burnout and mitigate these effects to better reform the social work industry in China. Without any such research or change, Chinese social workers maybe become unable to sustain long-term quality services.

According to JD-R theory, JD and JR are two separate categories of working conditions that can affect social worker burnout and other job-related issues (Bakker and Demerouti, 2007, 2018). First, JD refer to the various work conditions (i.e., physical, social, or organizational) that require or impose a continuous physical or mental effort. Often, this continual effort imposes a physiological cost, such as exhaustion and fatigue onto the worker. Second, JR refer to the aspects of the job (i.e., psychological, social, or organizational) that assist social workers to achieve their work goals, alleviate the psychological penalties of increased job demands, and/or encourage individual growth and progress, regardless of increasing workloads. JD and JR affect burnout and psychological well-being through health-impairment and motivation-driven processes (Bakker and Demerouti, 2007, 2018). In the former, JD cause workers to experience a gradual energy depletion, leading to psychological distress and ultimately burnout. In the latter, without JR, social work employees are more likely to fail at fulfilling their work roles or responsibilities, which, can lead to frustration, withdrawal, and, thus, distress and burnout.

Job burnout is a psychological effect of negative work-stress. Symptoms often include emotional fatigue, depersonalization, and a diminished sense of individual accomplishment, and are particularly heightened in challenging work conditions (Maslach et al., 1996). Burnout has been known to affect almost all professionals throughout the human service industry (Aiken et al., 2002; Hakanen et al., 2006), including social workers (Travis et al., 2015). JD-R has also been found to contribute to burnout amongst social workers and other human service professionals (Tang et al., 2017; Su et al., 2020). Numerous studies of both seasoned and amateur Chinese social workers (Tang et al., 2017; Tang and Li, 2021), demonstrate positive relationships between JD, burnout, and turnover, as well as negative relationships between JR and burnout (Su et al., 2020; Luo and Lei, 2021).

> Hypothesis 1: JD are positively associated with burnout, while JR are negatively associated with burnout.

Mindfulness is a state of consciousness during which an individual actively engages in purposeful awareness and attention to the present moment, while maintaining non-judgmental reactions to their observations (Hanh, 1976; Kabat-Zinn, 1990, 2003; Baer et al., 2006). Studies on mindfulness and its association with a myriad of positive effects have proliferated in recent decades, including social and emotional competence, health, and well-being (Schonert-Reichl and Lawlor, 2010; Branstrom et al., 2011; Zoogman et al., 2014; Klingbeil et al., 2017; Song et al., 2021). Past research also suggests that mindfulness can also help regulate stress reactions (e.g., Roeser et al., 2013; Taylor and Millear, 2016). Findings from a study conducted by Hülsheger et al. (2012) found that mindfulness was negatively associated with emotional exhaustion and positively associated with job satisfaction in a sample of 219 working adults. Similarly, in a sample of 415 nurses, mindfulness buffered the relation between JD and psychological stress (Grover et al., 2017). Thus, mindfulness may act as a personal resource that reduces burnout and work stress in the JD-R model (Taylor and Millear, 2016; Grover et al., 2017; Guidetti et al., 2019). For example, mindfulness can be utilized to help an individual remain calm and objective when faced with thoughts or feelings that elicit emotional responses. Or it can help an individual's ability to stay

TABLE 1 | Descriptive statistics of key variables.

	Mean (S.D.)
1. Burnout (1–4)	2.5 (0.4)
2. Job demands (1–7)	4.7 (0.7)
3. Job resources (1–7)	5.2 (0.7)
4. Mindfulness practice (0–6)	2.8 (1.4)
Formal (0–6)	2.3 (1.8)
Informal (0–6)	3.3 (1.7)
5. Entertainment activities (0–6)	5.4 (1.3)
6. Female (%)	84.5
7. Age (18–60)	29.3 (6.3)
8. Education (%)	
Below college	45.8
College and above	54.2
9. Marital status (%)	
Never married	54.2
Married	45.8

N = 537. Numbers in brackets show ranges of the variables.

present and aware in the moment while ignoring or sidestepping potential distractions within the workspace. By attending to the present moment and achieving non-judgmental awareness of stressors brought on by various JD, employees can potentially utilize mindfulness to mitigate the negative effects of JD on stress and burnout (Greeno et al., 2018; Smith et al., 2019).

There is growing evidence that practicing mindfulness can reduce stress and improve mental well-being, both of which were associated with low burnout (Brown and Ryan, 2003; Taren et al., 2013; Hanley et al., 2015; Yang et al., 2018; Birtwell et al., 2019; Karr, 2019; Shankland et al., 2020; Song et al., 2021). Practicing mindfulness is about being fully aware of what is happening in the present moment, acknowledging one's thoughts, feelings, and body sensations with compassion and devoid of all judgment.

Mindfulness can be practiced formally or informally. Formal practice, such as meditation, is a set of techniques that are intended to encourage a heightened state of awareness and focused attention (Hanh, 1976; Kabat-Zinn, 2003; Mason et al., 2019). An informal practice involves using mindful awareness in daily activities, such as eating, walking, dishwashing, or exercising (Hanley et al., 2015; Birtwell et al., 2019; Shankland et al., 2020). Recent studies have shown that both formal and informal MP were associated with low stress and increased mental health (Hanley et al., 2015; Yang et al., 2018; Birtwell et al., 2019; Shankland et al., 2020). For example, Birtwell et al. (2019) collected data from 218 adults who were practicing mindfulness and found that both formal and informal practice had significant positive effects on mental well-being. Frequency of informal practice appeared to have a slightly higher correlation with well-being ($r = 0.33$, $p < 0.001$) than frequency of formal practice did ($r = 0.30$, $p < 0.001$).

> Hypothesis 2: Practicing mindfulness, both formally and informally, is negatively associated with burnout.

> Hypothesis 3: The effects of JD on burnout are lower for individuals with high MP.

In short, the JD-R theory has been widely tested and numerous studies have affirmed its reliability to examine burnout, job stress, work engagement, and health (Schaufeli et al., 2009; Schaufeli and Taris, 2014; Lonska et al., 2021; Robina-Ramírez et al., 2021; Tang and Vandenberghe, 2021; Tesi, 2021). However, few have focused on the well-being of Chinese social workers. Further, little information is available on whether practicing mindfulness would reduce burnout of social workers in China. Thus, in this study, we employed the JD-R theory to examine the effects JD-R had on burnout and how MP could mitigate burnout amongst a sample of Chinese social workers. The study's findings can advance the understanding of how JD-R theory affects social workers and provide evidence on how mindfulness practice may mitigate burnout amongst vulnerable social workers in China.

MATERIALS AND METHODS

Data and Sample

The data for the study was collected through an online anonymous survey. The survey was distributed to selected front-line social workers in Guangzhou, China, which has seen rapid development in social work (Guangzhou Social Work Association, 2021). Since 2017, the Guangzhou government established street level social work service stations to provide accessible social services to the Guangzhou community. Essentially, the government purchases or contracts out social work services to registered social work agencies to provide the services at the workstations. Each station was equipped with 20 social workers, 14 of whom are front-line social workers. Of the 180 Guangzhou social work service stations, we randomly selected 54 stations to study.

On September 15, 2021, we sent the front-line workers a survey link to participate in the study. After this initial invitation, we sent the social workers two reminders to participate in the survey 7 and 14 days later. Out of 756 front-line social workers (54×14), 537 social workers participated in the online survey by October 10, 2021. The response rate was 71%. All participants went through an informed consent process, were notified of their ability to end the survey at will, and notified their participation was voluntary, prior to starting the survey. A research review committee at one of the co-author's university in China approved this research method. A majority of the sample were female (84.5%) and never married (54.2%). The sample reported a mean age of 29-year-old. And more than half of the sample had at least a college degree, see **Table 1**.

Measures

Burnout was assessed by the Oldenburg Burnout Inventory (OBI; Demerouti and Bakker, 2008). The OBI's psychometric soundness, reliability, and validity have been verified through samples of working professionals of numerous occupations, languages, and countries (Demerouti et al., 2001, 2003; Halbesleben and Demerouti, 2005). The survey consists of 16 items which measured the two-dimensional concept of burnout: exhaustion (8 items) and disengagement from work (8 items). Exhaustion is defined as a consequence of intense physical,

affective, and cognitive strain. Disengagement refers to distancing oneself from one's work in general, work object, and work content (Demerouti and Bakker, 2008). One of the example questions asked to assess burnout was: "It happens more and more often that I talk about my work in a negative way."

The survey questions were written in English but were later translated to Chinese by two Chinese doctoral students in the United States. Additionally, an American professor whose native language is Chinese, verified these translations upon completion. **Supplementary Appendix 1** lists the original version and translation of the scale, for each question. For both subscales, four items are positively worded, and four items are negatively worded. Each item was measured in four categories (1 = strongly disagree to 4 = strongly agree). We reversed positively worded items so that high scores represented high burnout. We averaged mean score of all 16 items as the burnout score. The Cronbach's alpha of the scale was 0.85 in our study.

We used Lequeurre et al.'s (2013) Questionnaire sur les Ressources et Contraintes Professionnelles (QRCP) to measure JD-R. Considering Chinese social workers' workload, we focused on three aspects of JD: pace and amount of workload, emotional workload, and changes in the tasks. In addition, we focused on three aspects of JR: relationships with colleagues, relationships with supervisors, and access to work-performance information or feedback. Pace and amount of workload refers to the experience of having excess work tasks within a limited time frame to accomplish them, while emotional workload encompasses the emotional energy employees are forced to expel to accomplish certain JD. And changes in the tasks refers to the difficulties posed to employees by changes in job roles and function. Relationships with colleagues refers to the teamwork environment and examines the levels of aid, support, and dependability co-workers provide one another at work. Relationships with supervisors describes how employees perceive their relationship with someone whose job role is above theirs. And access to work-performance information refers to the employee's ability to receive feedback on his or her job performance.

Lequeurre et al. (2013) used 4 questions to measure each dimension. Example questions included "Do you have too much work to do?" and "Can you count on your colleagues when you encounter difficulties in your work?" (see **Supplementary Appendix 1** for all questions). Every item was rated using a 7-point Likert scale ranging from 1 (never) to 7 (always). The higher the score per item, the higher the level of job demands, or job resources was present. We determined the scores of JD and JR by averaging the item responses under each scale. The Cronbach's alpha was 0.83 for JD and 0.93 for JR.

Mindfulness practice was measured by asking respondents whether they participate in the following activities: meditation and mindful nature observation. We used meditation to gauge the extent of formal practice and utilized mindful nature observation to measure informal practice. Each activity was then rated on a 7-point Likert scale: 0 (never), 1 (once or less every 2 months), 2 (once per month), 3 (2 or 3 times per month), 4 (once per week), 5 (2 or 3 times per week), and 6 (once or more per day).

The analysis also considered certain demographics and socioeconomic characteristics from the participants, including gender (female = 1, male = 0), age, marital status (never married = 1, other = 0), and education (college degree or above = 1, below college education = 0). In addition, we included entertainment activities in the analysis to control for their effect on burnout. These entertainment activities included using social media, gaming, watching movies, etc., and were scored with the same rating system as MP.

Analytical Approach

To begin, we implemented descriptive and correlation analyses to detect respondents' characteristics and correlations among all variables. Second, we conducted an ordinary least squares (OLS) regression analysis to estimate the effects of JD and JR on burnout and whether the above associations were moderated by MP, while simultaneously controlling for socioeconomic characteristics of the respondents (Hayes, 2017). Specifically, we included all key variables as mentioned above in the first model. Next, we further examined the specific effects of formal or informal MP in the second and third models. In model 4, we tested the moderation effect by adding the interaction between JD and MP into the analysis. Alternatively, Structural Equation Modeling (SEM) can be used to test the moderation effects. We conducted a SEM analysis, and the results (available upon request) were no different from the regression approach. Ultimately, the regression approach was preferred as it allows us to take socioeconomic characteristics of the respondents and to conduct analyses on different MP specifications. All analyses used STATA software 16.0 to examine the data.

RESULTS

Table 1 demonstrates the variable's descriptive statistics. Respondents reported a mean burnout score of 2.5, with a standard deviation of 0.4. Respondents conferred relatively high JD (M = 4.7, SD = 0.7) and JR (M = 5.2, SD = 0.7). This result suggests that despite experiencing high JD, respondents also had numerous JR such as support from coworkers or supervisors. The average MP was 2.8, ranging from 0–6. Broadly, social workers practiced informal MP around a couple of times per months (M = 3.3) and practiced formal MP about one time per month (M = 2.3). In contrast, social workers engaged in entertainment activities at a couple of times per week (M = 5.4).

The correlation analyses from **Table 2**, were consistent with our hypotheses. JD and burnout were positively correlated, (r = 0.51, $p < 0.001$) while JR and burnout were negatively correlated (r = –0.30, $p < 0.001$). MP, both formal and informal, were negatively correlated with burnout (r = −0.23, −0.11, −0.28, respectively). JR and MP had a positive correlation, (r = 0.15, $p < 0.001$) while there was no correlation between JD and MP. Formal and informal MP were also highly correlated with each other (r = 0.44, $p < 0.001$). Additionally, being of young age and having never married was positively correlated with burnout. There was also no substantial correlation between gender, education, and entertainment activities with burnout.

TABLE 2 | Correlation analysis of key variables.

	1	2	3	4	5	6	7	8	9	10
1. Burnout	–									
2. Job demands	0.51***	–								
3. Job resources	−0.30***	0.04	–							
4. Mindfulness practice (MP)	−0.23***	−0.04	0.15***	–						
5. Formal MP	−0.11**	−0.01	0.08	0.86***	–					
6. Informal MP	−0.28***	−0.06	0.18***	0.83***	0.44***	–				
7. Entertainment activities	−0.02	−0.03	0.14**	0.07	−0.01	0.12**	–			
8. Female	−0.05	−0.03	−0.08	−0.06	−0.04	−0.06	−0.11*	–		
9. Age	−0.18***	−0.01	0.07	0.10*	0.02	0.16***	−0.09*	−0.01	–	
10. Collage and above education	0.07	0.08	−0.02	0.03	0.02	0.03	−0.00	−0.07	0.10*	–
11. Never married	0.18***	0.01	−0.01	−0.10*	−0.03	−0.14**	0.15***	−0.09*	−0.59***	−0.06

*N = 537. *p < 0.05, **p < 0.01, ***p < 0.001.*

TABLE 3 | Regression analysis of burnout.

	Model 1			Model 2			Model 3			Model 4		
	Beta	S. E.	P	Beta	S. E.	P	Beta	S. E.	P	Beta	S. E.	P
Mindfulness practice	−0.15	0.01	***	–	–		–	–		0.57	0.05	**
Formal mindfulness practice	–	–		−0.08	0.01	*	–	–		–	–	
Informal mindfulness practice	–	–		–	–		−0.19	0.01	***	–	–	
Job demands	0.51	0.02	***	0.52	0.02	***	0.51	0.02	***	0.73	0.03	***
Mindfulness practice * Job demands	–	–		–	–		–	–		−0.76	0.01	***
Job resources	−0.30	0.02	***	−0.31	0.02	***	−0.29	0.02	***	−0.29	0.02	***
Entertainment activities	0.02	0.01		0.01	0.01		0.04	0.02		0.03	0.01	
Female	−0.06	0.03		−0.05	0.03		−0.06	0.03		−0.05	0.02	
Age	−0.07	0.01		−0.08	0.01		−0.06	0.00		−0.07	0.01	
Education – Collage and above	0.04	0.02		0.04	0.02		0.04	0.02		0.04	0.02	
Never married	0.11	0.03	**	0.12	0.03	**	0.10	0.03	*	0.12	0.03	**
Adjusted R-square	0.41			0.40			0.43			0.43		

*N = 537. * p < 0.05, ** p < 0.01, *** p < 0.001.*

Table 3 demonstrates the standardized estimates of burnout. Four models were presented. The first modeled MP included both formal and informal MP, while the second model focused on formal MP, and the third model focused on informal MP. The interaction between JD and MP were added in Model 4. The adjusted R-square of Model 1 was 0.41. As expected, JD and JR have significant effects on burnout. A one standard deviation increase in JD was associated with an increase of 0.51 standard deviations in burnout. An increase of one standard deviation in JR was associated with a decrease of 0.30 standard deviations in burnout. These results confirm Hypothesis 1. MP showed significant effects on reducing burnout (Beta = −0.15, $p < 0.001$), and the effects hold well for formal and informal MP in Model 2 (Beta = −0.08, $p < 0.05$) and 3 (Beta = −0.19, $p < 0.001$). These findings support Hypothesis 2.

The interaction between JD and MP showed significantly negative effects on burnout (Beta = −0.76, $p < 0.001$) in Model 4. The interaction effect, as shown in **Figure 1**, indicated that social workers with higher MP scores were less effected by burnout. The findings support Hypothesis 3.

DISCUSSION

The findings from the regression analysis supported the dual process hypothesis that JD-R affects burnout amongst Chinese social workers. The health-impairment process was indicated by the positive relationship between JD and burnout, whereas the motivation process was shown by negative association between JR and burnout. This means social workers are less likely to encounter burnout if they have high JR. However, the results also show that JD appear to have a greater effect on burnout amongst Chinese social workers than JR do. These results are compatible with what previous research has found in their application of the JD-R model (Demerouti et al., 2001; Bakker et al., 2003; Hakanen et al., 2008).

The regression results on MP, including both formal and informal ones, showed that MP had effects on reducing burnout of social workers in China. Previous studies have found MP reduces stress and increases mental health, which indicates the consistency of our results (Hanley et al., 2015; Yang et al., 2018; Birtwell et al., 2019; Shankland et al., 2020). The estimate of MP, however, suggests that the effects are likely to be small to

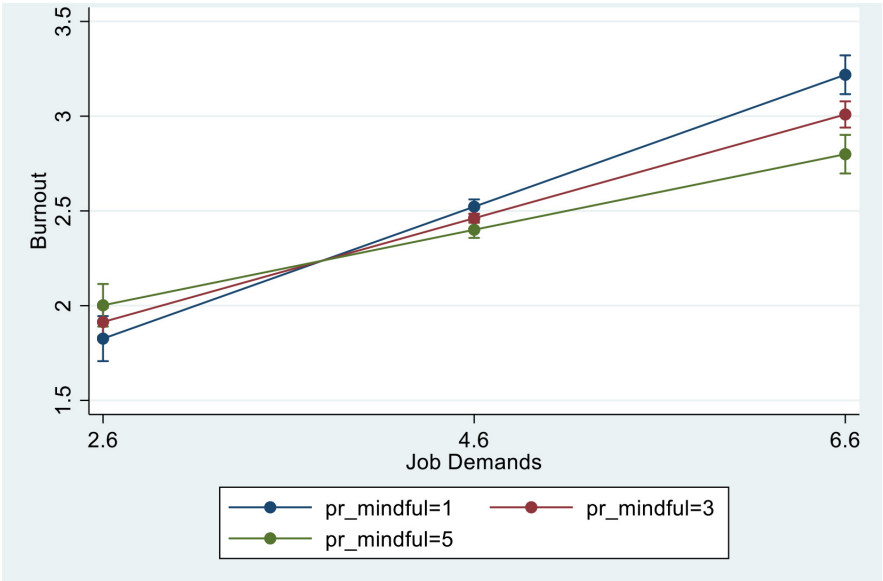

FIGURE 1 | Job demands and burnout by mindful activities. The graph was based on results from Model 4 of **Table 3**.

medium. The finding that the estimate of informal MP was larger than the one found in formal MP was similar to the one found in Birtwell et al. (2019). However, further research is needed to comprehend the difference. Social workers may be more likely to take on informal MP because it requires less structure, is easier to perform, and derives the quickest benefit from the practice. This is especially likely as a recent study found that informal MP was associated with the observing facet of mindfulness (Cebolla et al., 2017). This ability to pay attention to experience is a key mindfulness skill that may reduce the extent of stress and burnout in daily work. On the other hand, people who engage in formal MP may be more aware of their stress and burnout at work, which might influence their self-reports to show higher levels of stress and burnout. Further research on formal and informal MP on burnout is warranted.

The findings of this study also have practice implications on the duty of social work employers. Given the average sample expressed high JD, and the positive relationship between JD and burnout, it is critical social work employers remain aware and cautious of projecting high JD onto their employees. In an effort to reduce burnout amongst employees, social work employers might consider creating supportive services and continue to maintain supportive work environments for their social workers. Because this may be challenging for smaller agencies with more limited resources to do, federal, provincial, and local policies should be redirected to help generate the funding and resources smaller agencies require to prevent burnout.

In addition, literature has shown a strong connection between burnout and mental illness. Thus, reducing burnout can also reduce mental illness (Kessler et al., 2010). The significant and negative interactive effect of JD and MP on burnout suggests that MP is likely to be a service or intervention that can be beneficial to social workers' mental health who have high JD in China. This is particularly important for social workers in the sample who reported high JD, and also for the young and never married, who reported high burnout. Interestingly, social workers' use of entertainment activities did not influence burnout, despite wide use amongst the sampled social workers. Entertainment activities may reduce stress temporarily but do not have a long-term effect on reducing burnout.

The study's findings must also be evaluated with the context of several limitations. First, because the analysis was based on a cross-sectional dataset, the associative relationship between JD-R, MP, and burnout could only be approximated. Future studies could better approximate the causal relationships of these variables using a longitudinal design. Second, there may have been unobserved variables that were excluded from the study, and had effects on JD-R, MP, and burnout, such as job insecurity and suffering at work (Sánchez-Hernández et al., 2020; Stankevičiūtė et al., 2021). In addition, even though the sample focused on social workers generally, social workers can have a variety of rolls that could create undue influence on their response to JD-R, MP, and burnout. Individual participants may have varying personality traits (i.e., resilience) that also influence their experience with JD-R, MP, and burnout. Third, the data collected on JD-R, MP, and burnout were from the subjects' self-reports which may have created intended and unintended reporting errors within the data. For example, subjects may have social desirability bias, which is the tendency to underreport socially undesirable attitudes and behaviors and to overreport more desirable attributes. Therefore, respondents may have underreported their JD while overreported their JR. Thus, future research should consider using other methods such as data triangulation through colleague and employer reports. Finally, the study's results are based solely on social workers from one city, Guangzhou. Even though the sample size and response

rate support confident results, it is unknown how generalizable the findings are to all Chinese social workers and thus require further investigation.

CONCLUSION

This study utilized data from 537 social workers in Guangzhou, China, to better understand how the relationship between JD-R and MP affect burnout amongst Chinese social workers. Our findings were synonymous to past findings from cross-cultural research, which have indicated JD-R affects burnout. The results expand upon previous research and contribute to the JD-R theory by providing evidence on MP's role on reducing burnout within a sample of Chinese social workers. The findings emphasize the significance of decreasing JD and increasing JR and MP for Chinese social workers, to protect workers and possibly limit the growing turnover rate.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Research Review Committee, School of Public Administration, Guangdong University of Foreign Studies. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

BT, CH, SS, and MY: conceptualization, validation, and writing—original draft preparation. BT and CH: methodology and software, resources, and investigation and data curation. BT, MY, and CH: formal analysis. All authors contributed to the article and approved the submitted version.

FUNDING

This study was supported by the National Social Science Fund of China (No. 20BGL277).

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.821899/full#supplementary-material

REFERENCES

Abu-Bader, S. H. (2000). Work satisfaction, burnout, and turnover among social workers in Israel: a causal diagram. *Int. J. Soc. Welfare* 9, 191–200.

Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., and Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *J. Am. Med. Assoc.* 288, 1987–1993. doi: 10.1001/jama.288.16.1987

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., and Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment* 13, 27–45. doi: 10.1177/1073191105283504

Bakker, A. B., and Demerouti, E. (2007). The job demands-resources model: state of the art. *J. Manag. Psychol.* 22, 309–328. doi: 10.3390/ijerph17010069

Bakker, A. B., and Demerouti, E. (2018). "Multiple levels in job demands-resources theory: implications for employee well-being and performance," in *Handbook of Wellbeing*, eds E. Diener, S. Oishi, and L. Tay (Salt Lake City, UT: DEF Publishers).

Bakker, A. B., Demerouti, E., and Schaufeli, W. B. (2003). Dual processes at work in a call centre: an application of the job demands-resources model. *Eur. J. Work Organ. Psychol.* 12, 393–417.

Birtwell, K., Williams, K., van Marwijk, H., Armitage, C. J., and Sheffield, D. (2019). An exploration of formal and informal mindfulness practice and associations with wellbeing. *Mindfulness* 10, 89–99. doi: 10.1007/s12671-018-0951-y

Boyas, J. F., Wind, L. H., and Ruiz, E. (2015). Exploring patterns of employee psychosocial outcomes among child welfare workers. *Child. Youth Serv. Rev.* 52, 174–183. doi: 10.1016/j.childyouth.2014.11.002

Branstrom, R., Duncan, L. G., and Moskowitz, J. T. (2011). The association between dispositional mindfulness, psychological well-being, and perceived health in a Swedish population-based sample. *Br. J. Health Psychol.* 16, 300–316. doi: 10.1348/135910710X501683

Brown, K. W., and Ryan, R. M. (2003). The benefits of being present: the role of mindfulness in psychological well-being. *J. Pers. Soc. Psychol.* 84, 822–848. doi: 10.1037/0022-3514.84.4.822

Casey Family Programs (2017). *How Does Turnover Affect Outcomes and What can be Done to Address Retention?*. Seattle, WA: Casey Family Programs.

Cebolla, A., Campos, D., Galiana, L., Oliver, A., Tomas, J. M., Feliu-Soler, A., et al. (2017). Exploring relations among mindfulness facets and various meditation practices: do they work in different ways? *Conscious. Cogn.* 49, 172–180. doi: 10.1016/j.concog.2017.01.012

Chan, C. L. W., Leung, J. C. B., Min, J., and Xu, Y. X. (2020). "China: from ideological focused education to professional social work education," in *The Palgrave Handbook of Global Social Work Education*, eds R. Baikady, C. Sheng-Li, and H. Sakaguchi (Cham: Palgrave Macmillan). doi: 10.1007/978-3-030-39966-5_5

Child Welfare Information Gateway (2016). *Caseload and Workload Management. State Managers Series [Issue brief]*. Washington, DC: Child Welfare Information Gateway.

CPS Human Resource Services (2006). *The Turnover Toolkit: A Guide to Understanding and Reducing Employee Turnover*. Available online at: http://ncwwi.org/files/Retention/Calculating_the_cost_of_Employee_Turnover.pdf (accessed January 11, 2022).

Demerouti, E., and Bakker, A. B. (2008). "The oldenburg burnout inventory: a good alternative to measure burnout and engagement," in *Handbook of Stress and Burnout in Health Care*, ed. J. R. B. Halbesleben (Hauppauge, NY: Nova Science).

Demerouti, E., Bakker, A. B., Nachreiner, F., and Schaufeli, W. B. (2001). The job demands-resources model of burnout. *J. Appl. Psychol.* 86, 499–512. doi: 10.1037/0021-9010.86.3.499

Demerouti, E., Bakker, A. B., Vardakou, I., and Kantas, A. (2003). The convergent validity of two burnout instruments: a multitrait-multimethod analysis. *Eur. J. Psychol. Assess.* 19, 12–23. doi: 10.1027/1015-5759.19.1.12

Du, X. T. (2015). *Some Social Workers in Shenzhen Left to Dong Guan and Hui Zhou: The Turnover Rate Has Exceeded 22% Last Year. Nanfang Daily*. Available

online at: http://sz.southcn.com/content/2015-01/30/content_117407995.htm (accessed June 8, 2021).

Evans, S., Huxley, P., Gately, C., Webber, M., Mears, A., Pajak, S., et al. (2006). Mental health, burnout and job satisfaction among mental health social workers in England and Wales. *Br. J. Psychiatry* 188, 75–80. doi: 10.1192/bjp.188.1.75

Gómez-García, R., Alonso-Sangregorio, M., and Llamazares-Sánchez, M. L. (2020). Burnout in social workers and sociodemographic factors. *J. Soc. Work* 20, 463–482. doi: 10.1177/1468017319837886

Greeno, E. J., Ting, L., and Wade, K. (2018). Predicting empathy in helping professionals: comparison of social work and nursing students. *Soc. Work Educ.* 37, 173–189. doi: 10.1080/02615479.2017.1389879

Grover, S. L., Teo, S. T. T., Pick, D., and Roche, M. (2017). Mindfulness as a personal resource to reduce work stress in the job demands-resources model. *Stress Health* 33, 426–436. doi: 10.1002/smi.2726

Guangzhou Social Work Association (2021). *Guangzhou Social Work Development Report in 2020. Guangzhou Social Work Association*. Guangzhou: Guangzhou Social Work Association.

Guidetti, G., Viotti, S., Badagliacca, R., Colombo, L., and Converso, D. (2019). Can mindfulness mitigate the energy-depleting process and increase job resources to prevent burnout? A study on the mindfulness trait in the school context. *PLoS One* 14:e0214935. doi: 10.1371/journal.pone.0214935

Hakanen, J. J., Bakker, A. B., and Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *J. Sch. Psychol.* 43, 495–513. doi: 10.1016/j.jsp.2005.11.001

Hakanen, J. J., Schaufeli, W. B., and Ahola, K. (2008). The job demands-resources model: a three-year cross-lagged study of burnout, depression, commitment and work engagement. *Work Stress* 22, 224–241.

Halbesleben, J. R. B., and Demerouti, E. (2005). The construct validity of an alternative measure of burnout: investigating the English translation of the Oldenburg Burnout Inventory. *Work Stress* 19, 208–220. doi: 10.1080/02678370500340728

Hamama, L. (2012). Differences between children's social workers and adults' social workers on sense of burnout, work conditions, and organizational social support. *Br. J. Soc. Work* 42, 1333–1353. doi: 10.1093/bjsw/bcr135

Hanh, T. N. (1976). *The Miracle of Mindfulness: A Manual for Meditation*. Boston, MA: Beacon.

Hanley, A. W., Warner, A. R., Dehili, V. M., Canto, A. I., and Garland, E. L. (2015). Washing dishes to wash the dishes: brief instruction in an informal mindfulness practice. *Mindfulness* 6, 1095–1103. doi: 10.1007/s12671-014-0360-9

Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis – A Regression-Based Approach.* New York, NY: Guilford Publications.

Himle, D. P., Jayaratne, S., and Thyness, P. (1986). Predictors of job satisfaction, burnout and turnover among social workers in Norway and the USA: a cross-cultural study. *Int. Soc. Work* 29, 323–334.

Hülsheger, U. R., Alberts, H. J. E. M., Feinholdt, A., and Lang, J. W. B. (2012). Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *J. Appl. Psychol.* 98, 310–325. doi: 10.1037/a0031313

Hussein, S., Ismail, M., and Manthorpe, J. (2016). Changes in turnover and vacancy rates of care workers in England from 2008 to 2010: panel analysis of national workforce data. *Health Soc. Care Commun.* 24, 547–556. doi: 10.1111/hsc.12214

Jiang, H., and Wang, Y. (2016). The role of recognition: an experimental study on the inclination to quit of social workers. *Jiangsu Soc. Sci.* 31, 149–158.

Jiang, H., Wang, Y., Chui, E., and Xu, Y. (2019). Professional identity and turnover intentions of social workers in Beijing, China: the roles of job satisfaction and agency type. *Int. Soc. Work* 62, 146–160. doi: 10.1177/0020872817712564

Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of your Mind and Body to Face Stress, Pain, and Illness*. New York, NY: Delacorte.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clin. Psychol. Sci. Pract.* 10, 144–156. doi: 10.1093/clipsy.bpg016

Karr, S. (2019). Avoiding physician burnout through physical, emotional, and spiritual energy. *Curr. Opin. Cardiol.* 34, 94–97. doi: 10.1097/HCO.0000000000000574

Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M., et al. (2010). Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO World Mental Health (WMH) survey initiative. *Int. J. Methods Psychiatric Res.* 19, 4–22. doi: 10.1002/mpr.310

Kim, H., and Stoner, M. (2008). Burnout and turnover intention among social workers: effects of role stress, job autonomy and social support. *Admin. Soc. Work* 32, 5–25. doi: 10.1186/s12913-021-07435-8

Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., Haddock, A., et al. (2017). Mindfulness-based interventions with youth: a comprehensive meta-analysis of group-design studies. *J. Sch. Psychol.* 63, 77–103. doi: 10.1016/j.jsp.2017.03.006

Lequeurre, J., Gillet, N., Ragot, C., and Fouquereau, E. (2013). Validation of a French questionnaire to measure job demands and resources. *Revue Internationale de Psychologie Sociale* 26, 93–124.

Li, Y., Han, W.-J., and Huang, C.-C. (2012). Development of social work education in China: background, current status and prospect. *J. Soc. Work Educ.* 48, 635–653.

Lin, S., and Lan, X. (2014). Analysis and countermeasures of the brain drain of social workers in Guangzhou City. *J. Sch. Admin. Zhuhai* 5:63.

Lizano, E. L. (2015). Examining the impact of job burnout on the health and well-being of human service workers: a systematic review and synthesis. *Hum. Serv. Organ. Manag. Leadersh. Govern.* 39, 167–181. doi: 10.1080/23303131.2015.1014122

Lloyd, C., King, R., and Chenoweth, L. (2002). Social work, stress and burnout: a review. *J. Mental Health* 11, 255–265.

Lonska, J., Mietule, I., Litavniece, L., Arbidane, I., Vanadzins, I., Matisane, L., et al. (2021). Work–life balance of the employed population during the emergency situation of COVID-19 in Latvia. *Front. Psychol.* 12:682459. doi: 10.3389/fpsyg.2021.682459

Luo, M., and Lei, J. (2021). Using the JD-R model to predict the organizational outcomes of social workers in Guangzhou, China. *J. Soc. Soc. Work Res.* 12, 349–369. doi: 10.1086/714311

Maslach, C., Jackson, S. E., and Leiter, M. (1996). *Maslach Burnout Inventory: Manual*, 3rd Edn. Palo Alto, CA: Consulting Psychologists Press.

Mason, C., Murphy, M. M. R., and Jackson, Y. (2019). *Mindfulness Practices: Cultivating Heart Centered Communities Where Students Focus and Flourish*. Bloomington, IN: Solution Tree Press.

Mor Barak, M. E., Nissly, J. A., and Levin, A. (2001). Antecedents to retention and turnover among child welfare, social work, and other human service employees: what can we learn from past research? A review and metanalysis. *Soc. Serv. Rev.* 75, 625–661. doi: 10.1086/323166

National Child Welfare Workforce Institute (2011). *Child Welfare Workforce Demographics (2000–2010): Snapshot of the Frontline Child Welfare Caseworker*. Available online at: http://ncwwi.org/files/Workforce_Demographic_Trends_May2011.pdf (accessed January 10, 2022).

Robina-Ramírez, R., Medina-Merodio, J. A., Estriegana, R., Sánchez-Oro, M., and Castro-Serrano, J. (2021). Stress at work: can the spiritual dimension reduce it? An approach from the banking sector. *Front. Psychol.* 12:715884. doi: 10.3389/fpsyg.2021.715884

Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., et al. (2013). Mindfulness training and reductions in teacher stress and burnout: results from two randomized, waitlist-control field trials. *J. Educ. Psychol.* 105, 787–804. doi: 10.1037/a0032093

Sánchez-Hernández, M. I., Gismera-Tierno, E., Labrador-Fernández, J., and Fernández-Fernández, J. L. (2020). Encountering suffering at work in health religious organizations: a partial least squares path modeling case-study. *Front. Psychol.* 11:1424. doi: 10.3389/fpsyg.2020.01424

Sánchez-Moreno, E., Roldán, I. N. D. L. F., Gallardo-Peralta, L. P., and de Roda, A. B. L. (2015). Burnout, informal social support and psychological distress among social workers. *Br. J. Soc. Work* 45, 2368–2386.

Schaufeli, W. B., Bakker, A. B., and van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *J. Organ. Behav.* 30, 893–917. doi: 10.1002/job.595

Schaufeli, W. B., and Taris, T. W. (2014). "A critical review of the job demands-resources model: implications for improving work and health," in *Bridging Occupational, Organizational and Public Health: A Transdisciplinary Approach*, eds G. F. Bauer and O. Hammig (Dordrecht: Springer), 43–68.

Schonert-Reichl, K. A., and Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre- and early adolescents' well-being and social

and emotional competence. *Mindfulness* 1, 137–151. doi: 10.1007/s12671-010-0011-8

Shankland, R., Tessier, D., Gauchet, A., Baeyens, C., and Strub, L. (2020). Improving mental health and well-being through informal mindfulness practices: an intervention study. *Appl. Psychol. Health Well Being* 13, 63–83. doi: 10.1111/aphw.12216

Smith, B. W., Ford, C. G., and Steffen, L. E. (2019). The role of mindfulness in reactivity to daily stress in urban firefighters. *Mindfulness* 10, 1603–1614. doi: 10.1007/s12671-019-01102-0

Social Work Policy Institute (2010). *High Caseloads: How do they Impact Delivery of Health and Human Services?*. Washington, DC: NASW Foundation.

Song, Z., Pan, B., and Wang, Y. (2021). Can trait mindfulness improve job satisfaction? The relationship between trait mindfulness and job satisfaction of preschool teachers: the sequential mediating effect of basic psychological needs and positive emotions. *Front. Psychol.* 12:788035. doi: 10.3389/fpsyg.2021.788035

Stankevičiūtė, Ž, Sanchez-Hernandez, M. I., and Staniškienė, E. (2021). The negative effect of job insecurity in the virtuous cycle between trust in the organization, subjective well-being, and task performance in the current volatility, uncertainty, complexity, and ambiguity context. *Front. Psychol.* 12:796669. doi: 10.3389/fpsyg.2021.796669

Su, X., Liang, K., and Wong, V. (2020). The impact of psychosocial resources incorporated with collective psychological ownership on work burnout of social workers in China. *J. Soc. Serv. Res.* 47, 388–401. doi: 10.1080/01488376.2020.1817229

Tang, W.-G., and Vandenberghe, C. (2021). Role overload and work performance: the role of psychological strain and leader–member exchange. *Front. Psychol.* 12:691207. doi: 10.3389/fpsyg.2021.691207

Tang, X., and Li, X. (2021). Role stress, burnout, and workplace support among newly recruited social workers. *Res. Soc. Work Pract.* 31, 529–540. doi: 10.1177/1049731520984534

Tang, Y., Hooyman, N., and Chiu, W.-T. (2017). An exploratory study of early professional experiences and job burnout among BSW graduates in China. *Soc. Work Educ.* 36, 823–836. doi: 10.1080/02615479.2017.1341480

Taren, A. A., Creswell, J. D., and Gianaros, P. J. (2013). Dispositional mindfulness co-varies with smaller amygdala and caudate volumes in community adults. *PLoS One* 8:e64574. doi: 10.1371/journal.pone.0064574

Tartakovsky, E., and Walsh, S. D. (2016). Burnout among social workers working with immigrants from the Former Soviet Union and Ethiopia in Israel: testing the connections between personal value preferences, immigrant appraisal and burnout. *Int. J. Intercult. Relat.* 53, 39–53. doi: 10.1016/j.ijintrel.2016.04.002

Taylor, N. Z., and Millear, P. M. R. (2016). The contribution of mindfulness to predicting burnout in the workplace. *Pers. Individ. Differ.* 89, 123–128. doi: 10.1016/j.paid.2015.10.005

Tesi, A. (2021). A dual path model of work-related well-being in healthcare and social work settings: the interweaving between trait emotional intelligence, end-user job demands, coworkers related job resources, burnout, and work engagement. *Front. Psychol.* 12:660035. doi: 10.3389/fpsyg.2021.660035

Travis, D. J., Lizano, E. L., and Mor Barak, M. E. (2015). 'I'm so stressed!': a longitudinal model of stress, burnout and engagement among social workers in child welfare settings. *Br. J. Soc. Work* 46, 1076–1095. doi: 10.1093/bjsw/bct205

Wang, Y., Zhang, H., Lei, J., and Yu, Y. (2019). Burnout in Chinese social work: differential predictability of the components of the Maslach Burnout Inventory. *Int. J. Soc. Welfare* 28, 217–228. doi: 10.1111/ijsw.12339

Xie, X., Huang, C., Cheung, S., Zhou, Y., and Fang, J. (2021). Job demands and resources, burnout, and psychological distress of social workers in China: moderation effects of gender and age. *Front. Psychol.* 12:741563. doi: 10.3389/fpsyg.2021.741563

Xu, Q., Deng, M., Zhou, R., Zhuang, M., and Zheng, J. (2016). Investigation and reflection on the problem and turnover of social workers–evidence from Guangzhou. *Guangzhou Soc. Work Rev.* 1, 314–328.

Yang, J., Tang, S., and Zhou, W. (2018). Effect of mindfulness-based stress reduction therapy on stress and mental health of psychiatric nurses. *Psychiatr. Danub.* 30, 189–196.

Yürür, S., and Sarikaya, M. (2012). The effects of workload, role ambiguity, and social support on burnout among social workers in Turkey. *Admin. Soc. Work* 36, 457–478. doi: 10.1080/03643107.2011.613365

Zaitseva, I. A., and Krikunov, A. E. (2021). Social workers in Russia: an assessment of occupational burnout as part a social portrait. *Laplage em Revista (International)* 7, 657–664.

Zhu, H. Q. (2015). *The Average Monthly Income was Less than 4,000 RMB Among Social Workers in Guangzhou, and the Turnover Rate Reached 24.55%. New Express, November 11st, 2015*. Available online at: http://news.sina.com.cn/c/nd/2015-11-11/doc-ifxkniup6305916.shtml (accessed June 8, 2021).

Zoogman, S., Goldberg, S. B., Hoyt, W. T., and Miller, L. (2014). Mindfulness interventions with youth: a meta-analysis. *Mindfulness* 6, 290–302. doi: 10.1007/s12671-013-0260-4

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 24 February 2022
doi: 10.3389/fpsyg.2022.839497

Is Job Insecurity Harmful to All Types of Proactivity? The Moderating Role of Future Work Self Salience and Socioeconomic Status

Kaiyuan He[1], Jigan Wang[1,2] and Muyun Sun[3]**

[1] Business School, Hohai University, Nanjing, China, [2] Research Institute of Human Resources, Ministry of Water Resources, Hohai University, Nanjing, China, [3] School of Marxism, Nanjing University of Aeronautics and Astronautics, Nanjing, China

How and when do uncertain factors affect employees' different types of proactive behavior? Building on the strength model of self-control, the present study examines the different effects of job insecurity on individual-oriented and organizational-oriented proactive behaviors, and the moderating role of future work self salience (FWSS) and socioeconomic status (SES). Two-wave data collected from 227 employees in China were used to test our hypotheses. The results indicate that job insecurity is negatively associated with all the proactive behaviors. Moreover, the FWSS positively moderates the above relationship, and the moderating role on individual-oriented proactive behavior is stronger than organizational-oriented proactive behavior. The SES negatively moderates the relationship between job insecurity and the two types of proactive behaviors. In addition, the FWSS and SES have a three-way interactive effect on the relationship between job insecurity and individual task proactive behavior. The practical implications of these results are discussed.

Keywords: job insecurity, proactive behavior, future work self salience, socioeconomic status, self-control

OPEN ACCESS

Edited by:
Živile Stankeviciute, Kaunas University of Technology, Lithuania

Reviewed by:
Manish Gupta, Mahindra University, India
Ligita Šimanskienė, Klaipeda University, Lithuania

****Correspondence:***
Kaiyuan He
he_ky@hhu.edu.cn
Muyun Sun
muyun2027@163.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *20 December 2021*
Accepted: *25 January 2022*
Published: *24 February 2022*

Citation:
He K, Wang J and Sun M (2022) Is Job Insecurity Harmful to All Types of Proactivity? The Moderating Role of Future Work Self Salience and Socioeconomic Status. Front. Psychol. 13:839497. doi: 10.3389/fpsyg.2022.839497

INTRODUCTION

With a more intense hit of rapidly changing environment and unpredictable factors (i.e., COVID-19), employees are increasingly expected to exhibit proactivity for the sake of both individual and organizational competitiveness (Parker et al., 2019). In the workplace, proactive behavior has been used to describe an employee's self-initiated action that aims to change and improve the situation or oneself (Crant, 2000; Parker et al., 2006; Bindl and Parker, 2017). By definition, the purposes of such behavior involve the anticipation as well as thinking about the environment to "make things happen" (Parker et al., 2010). Recently, research has also widely demonstrated the beneficial effects of proactive behavior for a variety of positive outcomes, such as career success and organizational effectiveness (Griffin et al., 2007; Cangiano et al., 2018).

Although most scholars have considered proactive behavior as one of the indispensable factors for organizational and individual success in uncertain environments (Molina and O'Shea, 2020), the analysis of the relationship between uncertainty and proactive behavior has been more mixed and controversial (Cai et al., 2019). Some results indicated that stress and negative feelings triggered

by uncertainty (i.e., job insecurity) may reduce employees' proactivity due to the loss of resources and psychological needs (Van den Broeck et al., 2014; Jiang and Lavaysse, 2018; Yao et al., 2021). Instead, the competitive views stated that "negative social contextual factors might not always be detrimental" for proactivity (Cai et al., 2019) since the discrepancies from the current and reference values created by dissatisfaction with the *status quo* would motivate proactivity based on employees' expectations of maintaining conformity to the desired goals (Carver and Scheier, 1982; Strauss and Parker, 2018). Therefore, these inconsistent findings suggest the need to delve more deeply into how and when uncertain factors affect employees' proactive behavior.

In addition, little attention has been paid to the comparison of different types of proactive behavior in an uncertain context. Despite the high degree of similarity in antecedents, the fact is that the effects of negative context on different types of proactive behavior are also still unclear. For instance, it has been found that job insecurity can be detrimental to organizational-oriented proactive behavior (De Spiegelaere et al., 2014; Wang et al., 2019), but there is no direct evidence for its correlation with other studies (Niesen et al., 2017; Selenko et al., 2017; Jiang, 2018). Similarly, mixed results also exist in the relationship between job insecurity and proactive behaviors which aim at employees' personal goals and interests. Taken together, these findings cast the strong interests of scholars with regard to the differences and undiscovered boundary conditions in the relationship between uncertainty or threat and employee proactivity.

In response to this call, the present study seeks to draw upon the strength model of self-control to examine whether or not job insecurity is harmful to different types of proactive behaviors. With the aggravation of force majeure factors, job insecurity has inevitably become one of the most threatening stressors for employees. Moreover, job insecurity, as a great source of uncertainty, has been found to be harmful to a variety of outcomes, such as negative emotions and strain (Lee et al., 2018). According to the strength model of self-control, those outcomes can lead to a state of depletion of self-control resources that undermines the proactive behavior, since such resources are also a prerequisite for employee proactivity (Muraven and Slessareva, 2003; Parker et al., 2019). Nevertheless, the model further states that if an individual is sufficiently motivated and pays more attention to the goal, then he/she would be able to overcome the depletion effects of self-control (Vohs et al., 2012). Thus, we extend this argument to job insecurity literature and suggest that although both coping with job insecurity and acting in proactivity are resource-intensive, sufficient proactive motivation and attention may be beneficial to mitigate the negative effects of job insecurity on proactive behavior. In addition, these effects may have differential outcomes for different-oriented proactive behaviors due to the specific costs and functions.

Consistent with this perspective, we further examine the moderating role of future work self salience (FWSS) (motivational factor) and socioeconomic status (SES) (contextual factor) on the link between job insecurity and different-oriented proactive behavior. First, we argue that FWSS, as a critical motivational resource for career proactivity (Strauss et al., 2012), can inhibit the result of self-control failures in the proactive behavior caused by job insecurity. Because for employees with high FWSS, the discrepancies between the current state and hoped for future not only can promote employees' awareness of the importance and meanings of proactive behavior, but also may enable them to keep identity-congruent behaviors. Moreover, SES represents the actual or perceived amount of specific social resources. The employees with low SES, due to their lack of opportunities and resources, tend to protect available resources and act in line with the expectations of others. In contrast, individuals with high SES who experience a higher need for self-evaluation and personal control might pay more attention to the utilization of their own superior resources. It may enable the employees to exhibit different self-control strategies when confronted with the threat of job insecurity. Finally, we believe that FWSS and SES would play a three-way moderating role in the relationship between job insecurity and proactive behavior since both these two factors can affect the individual's self-regulation and self-control. **Figure 1** depicts our theoretical model.

Our investigation contributes to the literature in several ways. First, we reiterate the resource-intensive and complex nature of employee proactive behavior, and based on the strength model of self-control, we argue that there is a differential effect for uncertainty situations (e.g., job insecurity) on different types of proactive behaviors. Thus, our study advances the explanation of the mixed findings between job insecurity and proactive behavior. Second, we examine the moderating role of FWSS and SES in the effect of job insecurity on different types of proactive behaviors, respectively. We propose that FWSS and SES can facilitate the employees to overcome the effects of depletion of self-control resources, thus alleviating the failure of self-control in proactive behavior after experiencing job insecurity. Our study separately answers the question of how psychological and environmental factors mitigate the harmful effects of job insecurity on different types of proactive behaviors. Finally, our investigation also examines the three-way interactive effect of motivation and contextual factors. We advance the potential interaction effect of motivation and context on the detrimental effects of job insecurity on employee proactivity and argue that these two factors have a compensatory effect on the individuals' ability to overcome self-control failures. This provides another perspective and empirical evidence for the development of the strength model of self-control.

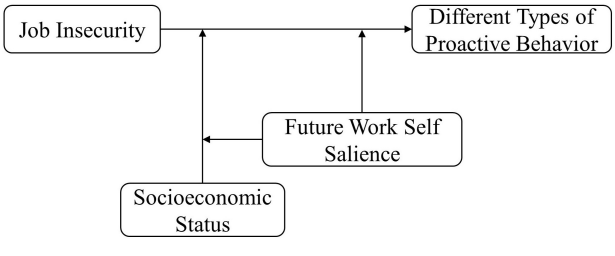

FIGURE 1 | Theoretical model.

THEORY BACKGROUND AND HYPOTHESES DEVELOPMENT

Proactive Behavior

Proactive behavior refers to organizational members' self-initiated change to bring about a different future (Grant and Ashford, 2008). Seen from the perspective of self-control theory, the nature of proactive behavior captures the process in which individuals reduce the discrepancies between the current and potential reference values through goal setting and goal pursuing (Bindl and Parker, 2010; Strauss and Parker, 2018). Theoretically, in order to successfully approach proactive goals, a self-monitoring process with circular feedback is required as follows: (1) perceiving the current state of self and situation; (2) comparing the current state with the desired reference value (e.g., the ideal state for personal career development and task achievement); and (3) if discrepancies exist, take action to reduce them (Carver et al., 2000). Hence, proactive behavior is deemed to be resource-intensive and requires a high expenditure of self-control efforts (Parker et al., 2019). More precisely, whether anticipating, planning, giving feedback, or actively coping with potential emotions and interpersonal risks, all require the individuals to invoke higher-order cognitive mental functions to control actions, integrate acts, and events across time deliberately and meaningfully (Strauss et al., 2017). It is sometimes the case that proactivity can even ultimately be depleting. Consequently, this leads scholars to contend that proactive behavior is not a specific behavior, but any process by which an individual changes himself or herself or the environment for the sake of reducing the discrepancies between the current and reference values.

Although proactive behavior is a complex phenomenon with a wealth of manifestations, numerous articles still theoretically and statistically treat proactive behavior as a unidimensional variable or directly analyze some specific proactive behavior without sufficient comparisons. In offering insight into the issue, scholars have integrated multiple types of proactive behaviors, and several taxonomies have been developed. For example, based on the behavioral target, Griffin et al. (2007) distinguished proactive behaviors into the task, team, and organization three dimensions. Furthermore, Strauss and Parker (2018) classified the above into present-oriented and future-oriented proactive behaviors based on the temporal orientation of the focused reference values in self-control when comparing the intervention conditions. In addition, scholars have recently begun to focus on proactive behaviors based on individual-oriented and organization-oriented classification perspectives. Concepts such as self-oriented job crafting (Niessen et al., 2016), and self-interested voice (Duan et al., 2021) have been proposed successively. It is necessary and required to compare proactive behaviors from this perspective. Because, by definition, proactive behaviors are not exclusively characterized as pro-organization. Moreover, based on the existing arguments, these two types of proactive behavior may bring different benefits and risks, especially in an uncertain context (Bolino and Grant, 2016). Specifically, individual-oriented proactive behaviors are more conducive to achieving employee achievements, career development, and task performance related to personal interests; while proactive behaviors that aim to improve organizational functioning would be beneficial to achieving long-term goals, but may be accompanied by higher interpersonal risk (Griffin et al., 2007). Accordingly, following Strauss and Parker's prior work, the present study mainly focuses on comparing how negative context affects three specific proactive behaviors, namely, proactive skill development, individual task proactivity, and organizational member proactivity, which focus on skill development, task performance, and organizational development, respectively.

Job Insecurity and Different Types of Proactive Behaviors

Job insecurity is defined as "the anticipation of this stressful event in such a way that the nature and continued existence of one's job are perceived to be at risk" (Sverke et al., 2002). As a known unfavorable subjective experience, it occurs when an employee anticipates and forecasts a loss event about future employment, rather than the necessarily actual job loss. With reference to the individual- and work-related outcomes, a growing body of evidence has linked such perceived instability of one's job to low level of work engagement (Park and Ono, 2017), poor psychological health (Vander Elst et al., 2014), and increasing anxiety (Cheung et al., 2019). Thus, for employees with high levels of job insecurity, threat and uncertainty are the fundamental components of their perception of the environment (Wang et al., 2015; Shoss, 2017).

We argue that in general, job insecurity undermines proactive behavior. As previously mentioned, proactive behavior requires a significant effort in self-control. However, the strength model of self-control states that self-control is an individual's finite psychological resource and all acts that need self-control effort (e.g., pursuing future-oriented aims) are drawn from a common yet finite pool of resources (Baumeister et al., 1998; Gino et al., 2011). Therefore, self-control efforts in the early stage may result in failure later. Notably, there is compelling evidence for the fact that negative emotions, uncertain contexts, and the threat of potential resource loss can deplete an individuals' self-control resources (Baumeister and Vohs, 2007, 2016). Unfortunately, job insecurity is the very factor that engenders negative emotions (e.g., anxiety) and threats basic psychological needs which generate a lack of control over their resources and environment. Based on this logic, coping with the above events requires a great deal of cognitive and emotional effort on the part of the individual, which may result in a failure of self-control in proactive behaviors that require the same resources. In addition, the context of job insecurity also causes a proactive behavior dilemma (Wang et al., 2015), which requires employees to judge and choose between the potential benefits and threats. In sum, the consumption of these resources is more likely to lead employees to the inability of proactivity feedback loops and ultimately to a failure of self-control in proactive behavior.

Nevertheless, the relationship between job insecurity and different-oriented proactive behaviors in empirical results is still mixed and lacks a comparative analysis. In the present study, we argue that job insecurity may be more destructive

to organization-oriented proactive behaviors than individual-oriented. On the one hand, individual-oriented proactive behaviors are more likely to be "job preservation strategies" to deal with job insecurity (Shoss, 2017; Wang et al., 2018). Since in an uncertain environment, proactivity aimed at career development, and task performance can not only facilitate employees to perceive a greater sense of competence and control over their environment but is also helpful to demonstrate their self-worth to the organization. On the other hand, individual-oriented proactive behavior may result in less psychological stress and interpersonal risk than organizational-oriented proactive behavior. For employees who experience a higher degree of job insecurity, they are more likely to engage in behaviors that reduce threat due to a higher propensity for risk avoidance. Some supportive evidence suggests that job insecurity may increase facades of conformity with the organization (Hewlin et al., 2016), positively correlate job crafting in the task, and cognitive dimensions under some conditions (Buonocore et al., 2020). Therefore, we propose the following hypothesis:

Hypothesis 1a: The degree to which an employee perceives job insecurity will have a negative relationship with different-oriented proactive behavior.

Hypothesis 1b: The degree to which an employee perceives job insecurity will have a stronger negative relationship with the organizational member proactivity than the proactive skill development and individual task proactivity.

Moderating Role of Future Work Self Salience: Motivation Factor

So far, although great progress has been made in identifying factors that can mitigate the detrimental effect of job insecurity, such as work environment and individual characteristics (Lee et al., 2018), little attention has been devoted to the buffer function of motivation. The strength model of self-control elucidates that self-control failure may be just the result of partly depleted resources during the early effort, rather than complete incapacity (Baumeister and Vohs, 2007). Motivations or perceptions of the importance of subsequent behaviors can inspire a person to expend remaining resources and overcome the conservation effect (Baumeister and Vohs, 2016). Several studies and meta-analyses have supported this notion (Boucher and Kofos, 2012; de Ridder et al., 2012; Vohs et al., 2012). Therefore, we indicated that motivation of proactivity can be particularly useful in lowering the inhibitions of individuals with higher job insecurity to proactive behavior.

Future work self salience refers to the degree to which the mental clarity and accessibility of one's possible self that reflects his or her hopes and aspirations for future work life (Strauss et al., 2012). More importantly, researchers have indicated that FWSS captures the state such that the possible self is continuously activated and frequently used in the self-concept system, or in the chronic accessibility (Higgins, 1996; Strauss et al., 2012). Thus, from the perspective of self-control, the FWSS is served as an important motivational resource, since it is conducive for individuals to convert a distant-imaged picture of future work life to more proximal and immediate self-set goals. Then, the identification of discrepancies between the current state and for the future will motivate and enable individuals to goal decomposition and goal pursuing. These findings revealed that FWSS is positively related to career adaptation, proactive career behaviors, and work engagement (Guan et al., 2014; Taber and Blankemeyer, 2015). In this context, we argue that FWSS is a significant moderator that can mitigate the negative effect of job insecurity on proactive behavior for several reasons.

First, previous findings suggested that FWSS has a positive effect on an individual's belief and commitment toward goal accomplishment by identifying the discrepancies between the current and projected goals and the anticipated outcomes (Strauss et al., 2012). More specifically, when the employees with more salient future work self, they not only experience a closer connection between their current behavior and the desired ideal state but also recognize the stronger importance of the current behavior. Therefore, such future-based cognition can help individuals effectively deal with the dilemma of proactive behavior in experiencing job insecurity, reducing the anxiety about whether they can ultimately reach the goal of job preservation. In other words, FWSS can serve as a "compass" that directs individuals to consistently focus and invest resources in behaviors that help them achieve their future career goals, such as accumulating experience and learning skills in their current job, while reducing their concerns about external threats. Evidence suggests when individuals perceive more importance of subsequent behavior, they will increase their willingness to consume the limited self-control resources even if it costs high (Graham et al., 2014).

Second, identity-based motivation theory assumes that individuals are motivated to act, interpret situations, and make sense of their own existent meanings in ways that are congruent with their activated identity (Oyserman, 2009). When individuals act in an identity-congruent way, even when encountering obstacles, their behaviors are more likely to be interpreted as important and meaningful rather than impossible or unnecessary (Oyserman and Destin, 2010). However, researchers based on this model suggest that not all future identities are capable of motivating an individual's behavior, unless one considers certain future identities to be important, vivid, and continuous with the current self (Ayduk and Kross, 2010; Van Gelder et al., 2015; Nurra and Oyserman, 2018). As aforementioned, the FWSS reflects an employee's positive and activated future career identity and expectations for constructing a relevant identity. Thus, when employees with high FWSS are confronted with job insecurity, employees might be more likely to view such stressors as meaningful barriers that must be crossed. Conversely, lower FWSS might lead employees to believe that future-focused proactive behaviors are irrelevant to their current behaviors, which further increases the perception of uncertainty and anxiety generated by the risk of potential unemployment and reduces the interpretation and perceived importance of the meaning of proactive behaviors.

Thus, in consistency with Hypothesis 1, this study assumes that the moderating role of FWSS on the relationship between job insecurity and individual-oriented proactive behavior may be stronger than the organizational-oriented proactive behavior. On

the one hand, individual-oriented proactive behaviors are more likely to be consistent with the goals, values, and meanings the employees set on their own, based on their future work in the long term. On the other hand, work-related skill development and efficient task accomplishment are more beneficial to others' recognition of employees' value and competence, thus achieving direct control over the environment and reducing the risk of resource loss. Thus, we propose the following hypothesis:

Hypothesis 2a: Future work self salience will have a positively moderating role on the relationship between job insecurity and proactive behaviors. Specifically, the negative relationship between job insecurity and proactive behaviors will be weaker (vs. stronger) at high (vs. low) FWSS.

Hypothesis 2b: The moderating role of FWSS on the relationship between job insecurity and proactive skill development, individual task proactivity will be stronger than organizational member proactivity.

Moderating Role of Socioeconomic Status: Contextual Factor

Our model further suggests that the SES will affect the pattern of proactivity in the context of job insecurity. The SES is typically conceptualized as an individual advantage within a society relative to others (Kraus et al., 2009). Recently, a growing literature has shown that SES, as a contextual factor, can shape individuals' perception of self and the external world, provide a framework for how people think, act, and interact with each other. Those individuals with high SES, better resources, and more opportunities for social participation are more motivated to engage in behaviors consistent with personal needs and interests in the expectation of personal control (Laurin et al., 2011; Flores et al., 2017). Individuals with low SES tend to highly pursue goals consistent with the expectations of others due to the vulnerability to external threats and the lack of resources that can buffer against the devastating effects of an uncertain environment (Schaerer et al., 2021). Therefore, in an environment full of frustrations and challenges, the SES may enable employees to exhibit different strategies for self-control (Laurin et al., 2011). At present, whether with high or low SES, people may be at the risk of losing their jobs due to multiple factors. Given this, we argue that SES is an important contextual factor that moderates the relationship between job insecurity and proactive behavior.

Although job insecurity may motivate employees to protect their jobs (Shoss, 2017), the important precondition is grounded in the rationale that protecting rather than leaving their existing jobs is a better choice. Unlike other stressors, once the risk of unemployment becomes a materialization, it may lead to more immediate and destructive results on the lives if necessary material resources lack. Therefore, for employees with high SES, protecting their current job may not be the optimal decision, since job insecurity may cause them to perceive a stronger denial of self-worth and a disruption of psychological needs and well-being due to the higher need for personal control. In addition, more job opportunities or higher employability will lead them to focus their self-control effort on searching for other best options from a deeper "pool of opportunities" that match their abilities and career development, in order to maintain their long-term advantage (Flores et al., 2017). In contrast, low SES that represents a strong situation might require an employee to meet the employers' expectations to keep up their job and avoid the loss of resources in the short-term due to lack of resources and higher economic vulnerability. In other words, individuals with low SES are more sensitive to threats, are more likely to apply their remaining self-control effort to avoid job loss and the following loss of resources by demonstrating self-worth and accumulating experience in an organization (Fischmann et al., 2018). Therefore, improving job skills and task performance may become a way of coping with this threatening environment. Several existing findings partially unpack the above argument. For example, Berntson et al. (2010) theorized and found that among individuals who have higher external employability experience, job insecurity will be more likely to reduce voice and loyalty and increase turnover intention. Fischmann et al. (2018) reported that in Romania, low-income blue-collar workers and low-status white-collar workers would improve their performance when faced with job insecurity. Hu et al. (2019) proposed that when Chinese college students are confronted with negative feedback about their goals, those with low SES are more unlikely to goal separation and reduce goal adherence. As such, we propose:

Hypothesis 3: SES will negatively moderate the relationship between job insecurity and proactive behaviors. Specifically, the negative relationship between job insecurity and proactive behaviors will be weaker (vs. stronger) at low (vs. high) of employee's SES.

Three-Way Interactive Effect

In organizations, employee behaviors are inevitably influenced by both psychological and contextual variables which are simultaneously important elements influencing the path of self-control efforts (Baumeister and Vohs, 2016). Nevertheless, few studies have verified the jointly moderated effect of these factors on employee self-control in uncertain environments. Therefore, it is necessary to further explore the three-way interactive role of FWSS and SES in the relationship between job insecurity and employees' different-oriented proactive behaviors in this study.

First, although we previously argue that high SES may decrease an employee's self-control efforts on proactive behavior while experiencing job insecurity, it is interesting to note that motivation may alter this result. On the one hand, employees with high FWSS and high SES, not only possess sufficient material and social resources but also have more commitment to their self-set goals that are related to the activated possible work identity. Thus, when experiencing job insecurity, these employees will devote more attention and self-control effort in adhering to goals and responding to threats (Hu et al., 2019). The possible reasons are that they are less likely to experience dilemmas of proactivity in uncertainty and that this strategy would facilitate access to acquisition of personal interests and the satisfaction of psychological needs, such as competence and achievement. On the other hand, a prior study suggests that individuals with low SES are more likely to be exposed to environmental

threats and social injustice; thus, their self-control strategies are more connected to beliefs regarding the relationship between the present behavior and future success (Laurin et al., 2011; Hu et al., 2020). Specifically, clear goals and the belief that they can achieve them through their own efforts (high FWSS) will compensate for their early failure and motivate them to apply their self-control resources in pursuit of the long-term goals. In sum, consistent with hypotheses 1 and 2, this study proposes that FWSS positively moderates the relationship between job insecurity and proactive skill development, individual task proactivity among employees of different SES.

Second, for employees with low FWSS and high SES, job insecurity may be interpreted as a barrier to maintaining personal interests and values in the short-term, due to the availability of preferable opportunities and the absence of clear future career goals. Especially when the threat and uncertainty created by job insecurity cannot be easily changed, they are more likely to focus on how to restore personal control in the short-term through the advantageous resources available to them rather than through the proactivity at work and career. Conversely, for employees with low FWSS and low SES, although higher economic and emotional vulnerability may stimulate the employees' desire to protect available resources or meet employer expectations, the lack of motivation makes it difficult for them to choose from the dilemma of proactive behavior. As a result, they are more likely to make efforts to improve occupational skills and improve task performance in order to protect their current jobs. Considering the arguments above, we hypothesize:

Hypothesis 4: The FWSS and SES will have a positive three-way interactive effect on the relationship between job insecurity and individual-oriented proactive behavior.

MATERIALS AND METHODS

Participants and Procedures

We conducted a two-wave survey study. The data was collected from 10 Chinese companies in Jiangsu and Hunan provinces. With the assistance of the human resources managers, we randomly distributed questionnaires to employees and asked them to complete them carefully. The participants were voluntary. In the beginning, all participants were informed about the academic research use of the survey data and ensured full confidentiality of their responses, so as to receive honest responses. In the first-wave survey, we sent questionnaires to 340 employees and received 279 usable responses (response rate of 82.0%). The participants were required to report demographic variables (age, gender, education level, and tenure), and their perceptions of job insecurity, FWSS, and SES. One month later, in the second-wave survey, 279 employees were further asked to provide information on their proactive behavior (involving proactive skill development, individual task proactivity, and organizational member proactivity) and information for matching. In the second-wave survey, 227 responses were finally matched and were valid (response rate of 66.8%). Among the final sample, 48.5% were male and 51.5% were female; the mean age was 30.110 years (SD = 5.573); the education level was mainly concentrated on undergraduate degrees, accounting for 74.9%: the average tenure (in years) was 4.357 years (SD = 4.357).

Measures

We created a Chinese version for all variables in our survey following the translation-back-translation procedures. Unless otherwise specified, the variables were measured on the same 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Job Insecurity

A three-item scale developed by Hellgren and Sverke (2003) was used. A sample item was "I am worried about having to leave my job before I would like to." Cronbach's alpha was 0.868.

Future Work Self Salience

We measured the FWSS using the simplified three-item scale (in Study 1b) used by Strauss et al. (2012). A sample item was: "The mental picture of this future is very clear." Before completing the questionnaire, the participants were asked to "mentally travel into the future and to imagine the future work self you hoped to become, and keep this mental image in mind." Cronbach's alpha was 0.860.

Socioeconomic Status

Following Adler et al. (2000), we measured participant perceptions of their SES using a single item. We showed the participants a picture of a 10-rung ladder and informed them that, "Think of this ladder as representing where people stand in our society. At the top of the ladder (number 10) are the people who are the most advantaged in terms of money, education, and employment. At the bottom (number 1) are the people who are the most disadvantaged." They were then asked to choose their current position from the numbers 1–10.

Proactive Behavior

Organizational member proactivity and individual task proactivity were both measured using the three-item scale developed by Griffin et al. (2007); proactive skill development was measured using the three-item scale developed by Claes and Ruiz-Quintanilla (1998). Participants were asked to respond to how frequently they were engaged in the following behavior over the last several weeks. The sample items are as follows: "made suggestions to improve the overall effectiveness of the organization," "initiated better ways of doing your core tasks," and "developed skills which may be needed in the future." The response scale ranged from "much less than usual" (1) to "much more than usual" (5). Cronbach's alpha for each of the three scales was 0.841, 0.825, and 0.822.

Control Variables

In line with a previous study, four demographic variables were controlled in the present study including gender, age, education, and tenure (Strauss et al., 2017; Xu et al., 2021). Gender (0 = men, 1 = women) and education (1 = junior college and below, 2 = undergraduate college, 3 = postgraduate and above)

were dummy-coded. Age and tenure were measured in the number of years.

RESULTS

Descriptive Statistics Analysis

The mean, SD, and correlation coefficients of the variables are present in **Table 1**. The results show that there is a significant negative correlation between job insecurity and organizational member proactivity, individual task proactivity, and proactive skill development. In addition, FWSS and SES positively relate to all the types of proactive behavior.

Confirmatory Factor Analysis

In order to analyze the distinctiveness of the study variables before the hypothesis test, we conducted a confirmatory factor analysis (CFA) on the five constructs of job insecurity, FWSS, organizational member proactivity, individual task proactivity, and proactive skill development using AMOS 20.0. Both **Tables 1**, **2** show the results of the CFA of our study variables. The model fit of the hypothesized five-factor model (χ^2/df = 1.405, *CFI* = 0.982, *TLI* = 0.977, *IFI* = 0.983, *GFI* = 0.939, *RMSEA* = 0.042) was acceptable. We then compared the hypothesized five-factor model with four alternative models. The Chi-square difference results show that the hypothesized five-factor model is significantly better than the four-factor model (displayed in **Table 2**). It is indicated that our measurement has well discriminant validity. In addition, based on the hypothesized model, we calculated the CR and AVE for each variable which is shown in **Table 1**, and the results also supported the discriminant validity and construct validity for each variable.

Since all variables were answered by employees, a common method bias test was still required. Harman's single-factor test indicated that in the unrotated principal component analysis of 5 five factors, the largest factor explained 39.117% of the variance, less than 50%. The unmeasured latent method factor technique was used to further test for common method bias. Especially, in the hypothesized seven-factor model, an uncorrelated method factor was added which connected all the items. The results show that the method effect model is not significantly better than the hypothesized model (the difference of all Fit index range from 0.01 to 0.02). Thus, it could be considered that our findings are unlikely to be seriously affected by the common method variance.

Hypothesis Test

We used multiple regression analysis to test our hypothesis. Hypothesis 1 predicted that job insecurity would have a differential negative effect on different types of proactive behaviors. We included control variables in Model 1, Model 4, and Model 7 (i.e., one dummy variable for gender, age, education, and tenure), and added the respective main effects (job insecurity). As shown in **Table 3**, in Models 1, 4, and 7, job insecurity was a negative significant for organizational member proactivity (OMP (β = –0.233, $p < 0.001$), individual task proactivity (ITP) (β = –0. 304, $p < 0.001$) and proactive skill development (PSD) (β = –0.303, $p < 0.001$). However, there is a non-difference between the negative relationships. Hypothesis 2 predicted that FWSS would attenuate the negative relationship between job insecurity and proactive behavior and the moderating effect would be stronger on ITP and PSD. According to the recommendations of Aiken and West (1991), we further added FWSS and the interaction term in Models 1, 4, and 7 respectively. Models 2, 5, and 8 in **Table 3** showed that the two-way interaction term of job insecurity and FWSS is positively significant. Statistically, the coefficient of OMP (β = 0.138, $p < 0.05$) is weaker than ITP (β = 0.242, $p < 0.001$) and closer to PSD (β = 0.146, $p < 0.01$). Hypothesis 3 predicted that SES would increase the negative relationship between job insecurity and proactive behavior. We added SES and the interaction term in Models 1, 4, and 7 respectively. In Models 3, 6, and l 9 of **Table 3**, the two-way interaction term of job insecurity and SES is negatively significant for OMP (β = –0.172, $p < 0.01$), ITP (β = –0.192, $p < 0.01$), and PSD (β = –0.168, $p < 0.01$).

Hypothesis 4 predicted that job insecurity, FWSS, and SES would have a three-way interactive effect on proactive behavior and the effect would be stronger on ITP and PSD than on OMP. We successively added all variables in Hypotheses 1–3, two-way interaction terms of FWSS and SES, three-way interaction terms of job insecurity, FWSS, and SES in Models 10, 11, and 12. Model 11 of **Table 4** showed that the two-way interaction term of FWSS and SES (β = 0.102, $p < 0.05$) and three-way interaction term (β = 0.133, $p < 0.01$) is positively significant. However, in Model 10 neither of these terms were significant; in Model 12, the three-way interaction term (β = 0.084, $p < 0.1$) was slightly positively significant. As is shown in **Figures 2**, **3**, we followed the procedures of Dawson and Richter (2006) and plotted the slope analysis for two-way and three-way interactions. Thus, Hypotheses 2–4 were supported, Hypothesis 1 was partially supported.

DISCUSSION

Drawing upon the strength model of self-control, our study investigated and compared the effects of job insecurity on different types (individual-oriented and organization-oriented) of proactive behaviors, and the moderating role of FWSS and SES for this relationship. As predicted, we found that job insecurity had a negative effect on all proactive behaviors. The FWSS attenuated the effect of job insecurity on all types of proactive behaviors (the strongest on ITP), while SES strengthened the relationship. In addition, FWSS and SES play a three-way interacted role in the relationship between job insecurity and proactive behaviors (specifically ITP and PSD).

Theoretical Implications

The present study makes several contributions to the literature. First, we enriched the theoretical perspective on the mechanism of how job insecurity influences proactive behavior and explored the potential differences in the antecedents of different-oriented proactive behaviors. On the one hand, most prior studies are based on the perspective of social exchange theory and on individual motivation to explore how an individual responds to

TABLE 1 | Correlations, means, SDs, AVEs, and CR among the variables.

Variables	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	CR
(1) Gender	0.515	0.501											
(2) Age	30.110	5.573	−0.144*										
(3) Education	1.943	0.499	−0.041	−0.047									
(4) Tenure (in years)	4.357	3.611	−0.090	0.603**	−0.079								
(5) JI	2.438	0.979	0.070	−0.070	−0.015	−0.117	(0.834)						0.872
(6) OMP	3.705	0.774	−0.142*	0.073	0.025	0.082	−0.247**	(0.801)					0.842
(7) ITP	4.009	0.655	−0.072	0.056	0.024	0.073	−0.311**	0.647**	(0.782)				0.825
(8) PSD	4.073	0.651	−0.058	−0.062	0.113	−0.013	−0.302**	0.579**	0.660**	(0.798)			0.837
(9) FWSS	3.794	0.741	0.009	0.022	0.064	0.005	−0.182**	0.312**	0.420**	0.436**	(0.821)		0.861
(10) SES	5.678	1.582	0.043	0.129	0.150*	0.235**	−0.264**	0.178**	0.185**	0.139*	0.197**	/	/

JI, job insecurity; OMP, organizational member proactivity; ITP, individual task proactivity; PSD, proactive skill development.
The square root of AVE is in parentheses on the diagonal.
***p < 0.01; *p < 0.05.*

TABLE 2 | Confirmatory factor analysis (CFA).

Model	χ^2	*df*	χ^2/df	*CFI*	*TLI*	*IFI*	*GFI*	*RMSEA*
Five-factor model (A, B, C, D, E)	112.374	80	1.405	0.982	0.977	0.983	0.939	0.042
Four-factor model (A + B, C, D, E)	451.121	84	5.370	0.800	0.750	0.802	0.766	0.139
Three-factor model (A + B + C, D, E)	681.404	87	7.832	0.676	0.609	0.680	0.686	0.174
Two-factor model (A + B + C + D, E)	716.936	89	8.055	0.658	0.597	0.661	0.684	0.177
Single-factor model (A + B + C + D + E)	827.321	90	9.192	0.599	0.532	0.602	0.667	0.190

A, JI; B, FWSS; C, OMP; D, ITP; E, PSD.

TABLE 3 | Hierarchical regression results of two-way interactive role on proactive behavior.

Variables	OMP			ITP			PSD		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Gender	−0.238	−0.230	−0.285	−0.092	−0.071	−0.139	−0.089	−0.085	−0.124
Age	0.004	0.002	0.009	0.002	0.000	0.009	−0.016	−0.019	−0.011
Education	0.040	0.011	0.004	0.041	0.004	0.010	0.207	0.164	0.191
Tenure (in years)	0.009	0.010	−0.003	0.008	0.009	−0.005	0.003	0.005	−0.006
JI	−0.233***	−0.180**	−0.210**	−0.304***	−0.231***	−0.284***	−0.303***	−0.229***	−0.294***
FWSS		0.281***			0.380***			0.393***	
SES			0.143*			0.131†			0.080
JI × FWSS		0.138*			0.242***			0.146**	
JI × SES			−0.172**			−0.192**			−0.168**
F	3.811**	6.756***	4.639***	4.965***	14.025***	5.823***	5.526***	12.451***	5.476***
R-squire	0.079	0.178	0.129	0.101	0.310	0.157	0.111	0.285	0.149
Δ*R-squire*		0.099	0.050		0.209	0.056		0.174	0.038

†*p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.*
All predictors were centered.

job insecurity and why he is engaged in proactivity (Lam et al., 2015; Xu et al., 2021). In the present study, we identified job insecurity as uncertainty and theoretically reiterate that both coping strategies for the negative outcomes of job insecurity and acting in proactivity are resource-intensive (Selenko et al., 2017; Strauss et al., 2017). This suggests that the strength model of self-control can provide a further theoretical basis for clarifying the mixed finding regarding the relationship between job insecurity and the proactive behavior of an employee. On the other hand, most of the existing studies do not distinguish the different types of proactive behaviors and compare their antecedent. Although our findings supported the idea that job insecurity has a direct negative effect on different types of proactive behaviors (Wang et al., 2019; Yao et al., 2021), we likewise found that this outcome varies across some boundary conditions which can alter an individuals' self-control effort. This provides partial empirical evidence for a classification study of proactive behavior.

TABLE 4 | Hierarchical regression results of three-way interactive role on proactive behavior.

Variables	OMP	ITP	PSD
	Model 10	Model 11	Model 12
Gender	−0.268	−0.116	−0.110
Age	0.006	0.008	−0.015
Education	−0.032	−0.025	0.150
Tenure (in years)	0.000	−0.004	0.000
JI	−0.174**	−0.198**	−0.229***
FWSS	0.241***	0.362***	0.377***
SES	0.125†	0.150*	0.050
JI × FWSS	0.150**	0.258***	0.149**
JI × SES	−0.130*	−0.126*	−0.102†
FWSS × SES	−0.022	0.102*	0.018
JI × FWSS × SES	0.063	0.133**	0.084†
F	5.429***	11.933***	8.847***
R-*squire*	0.217	0.379	0.312
ΔR-*squire*	0.138	0.278	0.201

†$p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
All predictors were centered.

Second, we respectively examined the moderating effects of FWSS and SES on job insecurity and different-oriented proactive behaviors. These findings shed light on the fact that in the case of self-control failure, whether employees maintain a high level of self-control in subsequent actions not only depends on motivation but is also influenced by contextual factors. On the one hand, we simultaneously considered individual- and organization-oriented proactive behaviors and found that in experiencing job insecurity, the motivation provided by FWSS was more likely to make ITP and PSD a way to deal with job insecurity. This response to the call of Shoss (2017) and Cai et al. (2019) to enrich the study of employees' job preservation strategies in experiencing job insecurity and provides a new perspective for future research on the antecedents of proactive behavior. On the other hand, we also found that individuals with low SES may apply more self-control effort to protecting existing resources and keep consistent with the expectations of others due to multifaceted vulnerability. These results support the propositions that SES can make employees attach different values to personal interests or expectations of others, and even change the direction of the use of self-control resources (Flores et al., 2017). This goes beyond Berntson et al. (2010) and indicates that a shortage of such objective resources can influence and limit individual strategies for coping with uncertainty and threats.

Third, we contribute to the strength model of self-control and SES literature. We found that FWSS and SES have a three-way interaction on the relationship between job insecurity and ITP and PSD. Previous studies have primarily examined the moderating role of motivation on self-control failure (Baumeister and Vohs, 2016). Our study extends the idea and argues that motivation can change the effect of objective conditions on self-control. Moreover, it is intriguing to argue that beliefs to the future can change the tactics of individuals with high SES in their facing of threats, and apply more self-control resources to acquire resources in the future, even when they are at risk of losing them. This provides new evidence for the mechanisms that shape the coping strategies of (dis)advantage for employees under adversity.

Practical Implications

Our study has several practical implications in terms of intervention strategies in the negative outcomes of job insecurity. Nowadays, job insecurity is becoming an inevitable threat. Although a certain degree of the negative environment may promote employees' proactive behavior, if there is a lack of intervention, job insecurity would have a great harmful impact on both the company and the employees. In our study, we found that employees' self-initiated goals based on a clear and positive work-related self can effectively interfere with the negative effect of job insecurity on proactive behavior, and the higher are the employees with SES, the stronger is the intervention effect.

Accordingly, first, organizations and managers should pay more attention to the construction of the employees' future work self. They should change the traditional way of performance management and build a performance appraisal system that combines employee evaluation and development that can guide the employees to clarify their future work goals and career growth in their daily work life. It is especially critical for newcomers who have a strong need for achievement. Moreover, improving the training system and career planning guidance is also necessary. Since it contributes employees to making the multiple future selves, it includes more elements of organizational member identity and set goals that are aligned with the organization. Hence, employees act in ways that benefit both their personal goals and organizational development even in negative situations.

Second, it is necessary to pay attention to employees with different SES. On the one hand, although people with low SES are more susceptible to threats, it is undeniable that they will also worry about the loss of scarce resources and focus on conservation of resources which results in behaviors consistent with the organizational expectations. Therefore, in addition to helping them build a clear future working self, organizations also should provide clear expectations and fair treatment in the process of performance management and training, so that they can apply self-control resources to realize organizational expectations and beliefs of future achievements. On the other hand, for people with high SES, the organization and managers should guide them to apply rich social resources to their current work and establish goals consistent with the long-term development of employees and the organization.

Limitations and Directions for Future Research

Although our study has some theoretical contributions to literature, several limitations also should be noted. First, since all our data are derived from employee self-reports, there is a risk of common method bias. Some means of *ex ante* control are adopted to reduce the effects of common method bias, for

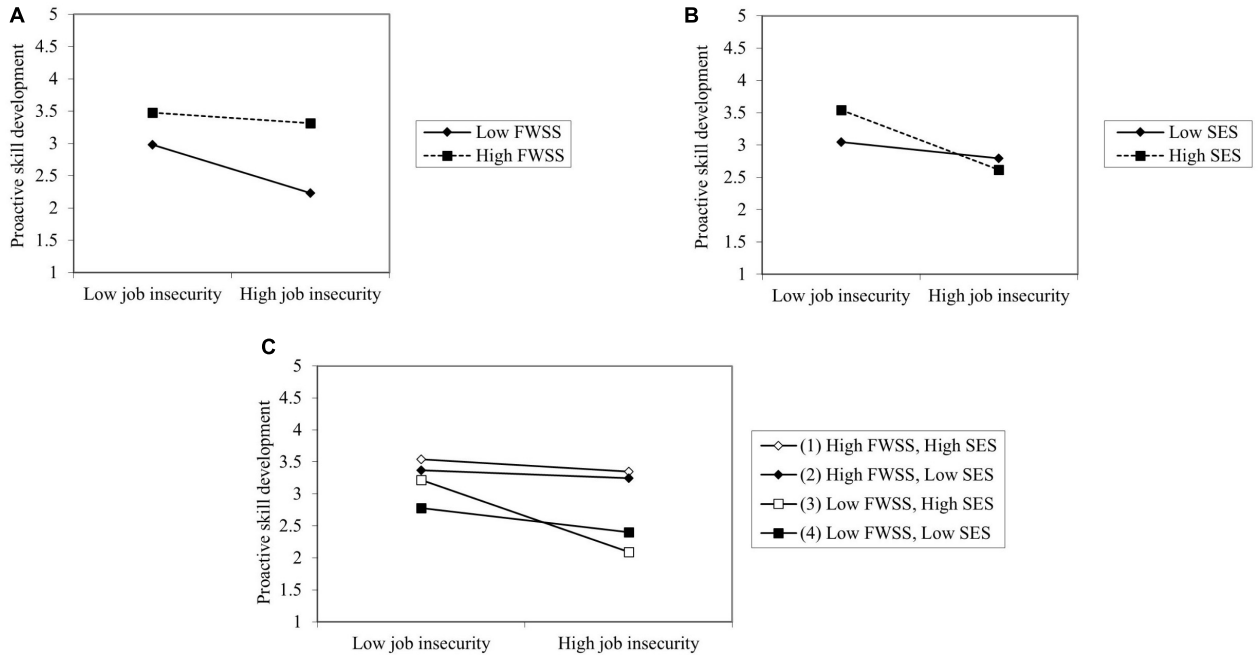

FIGURE 2 | The moderating role of FWSS and SES on the relationship between job insecurity and PSD. **(A,B)** Two-way interaction. **(C)** Three-way interaction.

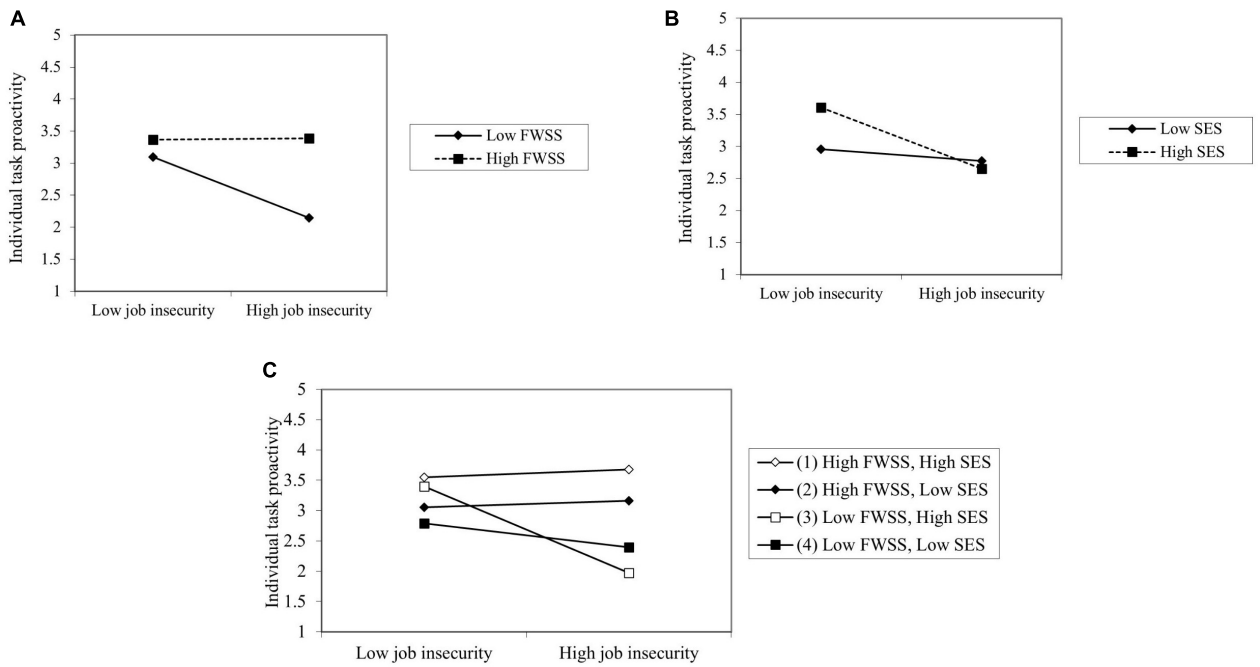

FIGURE 3 | The moderating role of FWSS and SES on the relationship between job insecurity and ITP. **(A,B)** Two-way interaction. **(C)** Three-way interaction.

instance, conducting a two-way survey and emphasizing to the participants that all their responses would be kept confidential and used for academic research purposes. Meanwhile, *post hoc* tests on data, such as Harman single factor test, unmeasured latent method factor technique, and the significant interaction effect also indicate that our results are less likely to be seriously influenced by common method bias. Nevertheless, we still cannot directly infer the causal relationship between the variables. Future research can further investigate the possible mechanisms of why employees act in proactivity in negative

contexts by means of event systems theory, field experiments, or qualitative research.

Second, we only investigated the moderating role of FWSS and SES, future research needs to further explore the potential mediating mechanisms between uncertainty and proactive behavior on the basis of this study. Although scholars have begun to explore the influencing mechanism of job insecurity from different perspectives, such as social identity theory, it can be seen from the results including our study that the positive effects of job insecurity may be "masked" by the strong negative effects. Therefore, future research can further explore the facilitating conditions of positive and inhibiting conditions of negative mechanisms of job insecurity. We encourage future research to further uncover the moderators of positive and negative job insecurity outcomes in different contexts.

CONCLUSION

With the impact of uncertainty intensification, proactive behavior is becoming one of the indispensable determinants for organizational and individual success in uncertainty. Building on the strength model of self-control, this study examines how and when uncertain factors affect employees' different types of proactive behaviors. On the one hand, seen from the perspective of self-control, we theoretically reiterate the resources-intensive nature of acting in proactivity and find that job insecurity has a negative effect on all types of proactive behaviors. On the other hand, given the multiple sources of job insecurity (Keim et al., 2014), completely eliminating job insecurity is infeasible for organizations and managers. Therefore, it is necessary to explore the factors that can mitigate the negative effect of job insecurity on proactive behavior. Although past studies have made considerable efforts in this area (Jiang, 2018), results of this study reveal that FWSS and SES, as motivational and situational factors that affect employee self-control respectively, can independently and interactively moderate the relationship between job insecurity and proactive behavior (particularly the individual-oriented proactive behaviors). These findings not only extend the strength model of self-control, but also provide a reference for managers to develop differentiated management strategies for different employees.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

AUTHOR CONTRIBUTIONS

KH: research design, conception, original draft, data analysis, and critical revising for important intellectual content. JW: critical revising of important intellectual content, funding acquisition, and project administration. MS: original draft, data analysis, and critical revising of important intellectual content. All authors: contributed to the article and approved the submitted version.

FUNDING

This work was funded by the Social Science Foundation of Jiangsu Province (18WTA013) and the Fundamental Research Funds for the Central Universities (2019B34514).

REFERENCES

Adler, N. E., Epel, E. S., Castellazzo, G., and Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: preliminary data in healthy, white women. *Health Psychol.* 19, 586–592. doi: 10.1037/0278-6133.19.6.586

Aiken, L. S., and West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park: Sage.

Ayduk, O., and Kross, E. (2010). From a distance: implications of spontaneous self-distancing for adaptive self-reflection. *J. Pers. Soc. Psychol.* 98, 809–829. doi: 10.1037/a0019205

Baumeister, R., and Vohs, K. (2007). Self-regulation, ego depletion, and motivation. *Soc. Pers. Psychol. Compass* 1, 115–128. doi: 10.1111/j.1751-9004.2007.00001.x

Baumeister, R. F., Bratslavsky, E., Muraven, M., and Tice, D. M. (1998). Ego depletion: is the active self a limited resource? *J. Pers. Soc. Psychol.* 74, 1252–1265. doi: 10.1037/0022-3514.74.5.1252

Baumeister, R. F., and Vohs, K. D. (2016). "Chapter Two - Strength Model of Self-Regulation as Limited Resource: Assessment, Controversies, Update," in *Advances in Experimental Social Psychology*, eds J. M. Olson and M. P. Zanna (Cambridge: Academic Press), 67–127.

Berntson, E., Näswall, K., and Sverke, M. (2010). The moderating role of employability in the association between job insecurity and exit, voice, loyalty and neglect. *Econ. Ind. Democr.* 31, 215–230. doi: 10.1177/0143831x09358374

Bindl, U. K., and Parker, S. K. (2010). "Proactive work behavior: Forward-thinking and changeoriented action in organizations," in *APA Handbook of Industrial and Organizational Psychology*, ed. S. Zedeck (Washington, DC: American Psychological Association).

Bindl, U. K., and Parker, S. K. (2017). "New perspectives and directions for understanding proactivity in organizations," in *Proactivity at Work*, eds S. K. Parker and U. K. Bindl (Oxford: Routledge), 559–584.

Bolino, M. C., and Grant, A. M. (2016). The bright side of being prosocial at work, and the dark side, too: a review and agenda for research on other-oriented motives, behavior, and impact in organizations. *Acad. Manag. Ann.* 10, 599–670. doi: 10.1080/19416520.2016.1153260

Boucher, H., and Kofos, M. (2012). The idea of money counteracts ego depletion effects. *J. Exp. Soc. Psychol.* 48, 804–810. doi: 10.1016/j.jesp.2012.02.003

Buonocore, F., De Gennaro, D., Russo, M., and Salvatore, D. (2020). Cognitive job crafting: a possible response to increasing job insecurity and declining professional prestige. *Hum. Resour. Manag. J.* 30, 244–259. doi: 10.1111/1748-8583.12270

Cai, Z., Parker, S. K., Chen, Z., and Lam, W. (2019). How does the social context fuel the proactive fire? A multilevel review and theoretical synthesis. *J. Organ. Behav.* 40, 209–230. doi: 10.1002/job.2347

Cangiano, F., Parker, S., and Yeo, G. (2018). Does daily proactivity affect well-being? The moderating role of punitive supervision. *J. Organ. Behav.* 40, 59–72. doi: 10.1002/job.2321

Carver, C. S., and Scheier, M. F. (1982). Control theory: a useful conceptual framework for personality-social, clinical, and health psychology. *Psychol. Bull.* 92, 111–135. doi: 10.1037/0033-2909.92.1.111

Carver, C. S., Sutton, S. K., and Scheier, M. F. (2000). Action, emotion, and personality: emerging conceptual integration. *Pers. Soc. Psychol. Bull.* 26, 741–751. doi: 10.1177/0146167200268008

Cheung, F. Y. L., Wu, A. M. S., and Chi, L. C. (2019). Effect of job insecurity, anxiety and personal resources on job satisfaction among casino employees in

macau: a moderated mediation analysis. *J. Hosp. Market. Manag.* 28, 379–396. doi: 10.1080/19368623.2019.1525332

Claes, R., and Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *J. Vocat. Behav.* 52, 357–378. doi: 10.1006/jvbe.1997.1626

Crant, J. (2000). Proactive behavior in organizations. *J. Manag.* 26, 435–462. doi: 10.1016/S0149-2063(00)00044-1

Dawson, J. F., and Richter, A. W. (2006). Probing three-way interactions in moderated multiple regression: development and application of a slope difference test. *J. Appl. Psychol.* 91, 917–926. doi: 10.1037/0021-9010.91.4.917

de Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., and Baumeister, R. F. (2012). Taking stock of self-control: a meta-analysis of how trait self-control relates to a wide range of behaviors. *Pers. Soc. Psychol. Rev.* 16, 76–99. doi: 10.1177/1088868311418749

De Spiegelaere, S., Van Gyes, G., De Witte, H., Niesen, W., and Van Hootegem, G. (2014). On the relation of job insecurity, job autonomy, innovative work behaviour and the mediating effect of work engagement. *Creat. Innov. Manag.* 23, 318–330. doi: 10.1111/caim.12079

Duan, J., Xu, Y., Wang, X., Wu, C. H., and Wang, Y. (2021). Voice for oneself: self-interested voice and its antecedents and consequences. *J. Occup. Organ. Psychol.* 94, 1–28. doi: 10.1111/joop.12334

Fischmann, G., De Witte, H., Sulea, C., and Iliescu, D. (2018). Qualitative job insecurity and in-role performance: a bidirectional longitudinal relationship? *Eur. J. Work Organ. Psychol.* 27, 603–615. doi: 10.1080/1359432x.2018.1504769

Flores, L. Y., Navarro, R. L., and Ali, S. R. (2017). The state of SCCT research in relation to social class: future directions. *J. Career Assess.* 25, 6–23. doi: 10.1177/1069072716658649

Gino, F., Schweitzer, M., and Mead, N. (2011). Unable to resist temptation: how self-control depletion promotes unethical behavior. *Organ. Behav. Hum. Decis. Process.* 115, 191–203. doi: 10.1016/j.obhdp.2011.03.001

Graham, J. D., Bray, S. R., and Ginis, K. A. M. (2014). "Pay the piper": it helps initially, but motivation takes a toll on self-control. *Psychol. Sport Exerc.* 15, 89–96. doi: 10.1016/j.psychsport.2013.09.007

Grant, A. M., and Ashford, S. J. (2008). The dynamics of proactivity at work. *Res. Organ. Beh.* 28, 3–34. doi: 10.1016/j.riob.2008.04.002

Griffin, M. A., Neal, A., and Parker, S. K. (2007). A new model of work role performance: positive behavior in uncertain and interdependent contexts. *Acad. Manage. J.* 50, 327–347. doi: 10.5465/AMJ.2007.24634438

Guan, Y., Guo, Y., Bond, M. H., Cai, Z., Zhou, X., Xu, J., et al. (2014). New job market entrants' future work self, career adaptability and job search outcomes: examining mediating and moderating models. *J. Vocat. Behav.* 85, 136–145. doi: 10.1016/j.jvb.2014.05.003

Hellgren, J., and Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modeling. *J. Organ. Behav.* 24, 215–236. doi: 10.1002/job.184

Hewlin, P. F., Kim, S. S., and Song, Y. H. (2016). Creating facades of conformity in the face of job insecurity: a study of consequences and conditions. *J. Occup. Organ. Psychol.* 89, 539–567. doi: 10.1111/joop.12140

Higgins, E. T. (1996). "Knowledge activation: Accessibility, applicability and salience," in *Social Psychology: Handbook of Basic Principles*, eds E. T. Higgins and A. W. Kruglanski (New York: Guilford Press). doi: 10.1109/EMBC44109.2020.9176396

Hu, S., Creed, P. A., and Hood, M. (2019). Does socioeconomic status shape young people's goal revision processes in the face of negative career feedback? *J. Vocat. Behav.* 110, 89–101. doi: 10.1016/j.jvb.2018.11.011

Hu, S., Shen, X., Creed, P. A., and Hood, M. (2020). The relationship between meritocratic beliefs and career outcomes: the moderating role of socioeconomic status. *J. Vocat. Behav.* 116:103370. doi: 10.1016/j.jvb.2019.103370

Jiang, L. (2018). Job insecurity and creativity: the buffering effect of self-affirmation and work-affirmation. *J. Appl. Soc. Psychol.* 48, 388–397. doi: 10.1111/jasp.12519

Jiang, L., and Lavaysse, L. M. (2018). Cognitive and affective job insecurity: a meta-analysis and a primary study. *J. Manag.* 44, 2307–2342. doi: 10.1177/0149206318773853

Keim, A. C., Landis, R. S., Pierce, C. A., and Earnest, D. R. (2014). Why do employees worry about their jobs? A meta-analytic review of predictors of job insecurity. *J Occup Health Psychol.* 19, 269–290. doi: 10.1037/a0036743

Kraus, M. W., Piff, P. K., and Keltner, D. (2009). Social class, sense of control, and social explanation. *J. Pers. Soc. Psychol.* 97, 992–1004. doi: 10.1037/a0016357

Lam, C. F., Liang, J., Ashford, S. J., and Lee, C. (2015). Job insecurity and organizational citizenship behavior: exploring curvilinear and moderated relationships. *J. Appl. Psychol.* 100, 499–510. doi: 10.1037/a0038659

Laurin, K., Fitzsimons, G., and Kay, A. (2011). Social disadvantage and the self-regulatory function of justice beliefs. *J. Pers. Soc. Psychol.* 100, 149–171. doi: 10.1037/a0021343

Lee, C., Huang, G. H., and Ashford, S. J. (2018). Job Insecurity and the Changing Workplace: recent Developments and the Future Trends in Job Insecurity Research. *Annu. Rev. Organ. Psych.* 5, 335–359. doi: 10.1146/annurev-orgpsych-032117-104651

Molina, A., and O'Shea, D. (2020). Mindful emotion regulation, savouring and proactive behaviour: the role of supervisor justice. *Appl. Psychol.Int. Rev.* 69, 148–175. doi: 10.1111/apps.12206

Muraven, M., and Slessareva, E. (2003). Mechanisms of self-control failure: motivation and limited resources. *Pers. Soc. Psychol. Bull.* 29, 894–906. doi: 10.1177/0146167203029007008

Niesen, W., Van Hootegem, A., Elst, T. V., Battistelli, A., and De Witte, H. (2017). Job Insecurity and Innovative Work Behaviour: a Psychological Contract Perspective. *Psychol. Belg.* 57, 174–189. doi: 10.5334/pb.381

Niessen, C., Weseler, D., and Kostova, P. (2016). When and why do individuals craft their jobs? The role of individual motivation and work characteristics for job crafting. *Hum. Relat.* 69, 1287–1313. doi: 10.1177/0018726715610642

Nurra, C., and Oyserman, D. (2018). From future self to current action: an identity-based motivation perspective. *Self Identity* 17, 343–364. doi: 10.1080/15298868.2017.1375003

Oyserman, D. (2009). Identity-based motivation: implications for action-readiness, procedural-readiness, and consumer behavior. *J. Consum. Behav.* 19, 250–260. doi: 10.1016/j.jcps.2009.05.008

Oyserman, D., and Destin, M. (2010). Identity-based motivation: implications for intervention. *Couns. Psychol.* 38, 1001–1043. doi: 10.1177/0011000010374775

Park, J. H., and Ono, M. (2017). Effects of workplace bullying on work engagement and health: the mediating role of job insecurity. *Int. J. Hum. Resour. Manag.* 28, 3202–3225. doi: 10.1080/09585192.2016.1155164

Parker, S. K., Bindl, U. K., and Strauss, K. (2010). Making things happen: a model of proactive motivation. *J. Manag.* 36, 827–856. doi: 10.1177/0149206310363732

Parker, S. K., Wang, Y., and Liao, J. (2019). When is proactivity wise? A review of factors that influence the individual outcomes of proactive behavior. *Annu. Rev. Organ. Psych.* 6, 221–248. doi: 10.1146/annurev-orgpsych-012218-015302

Parker, S. K., Williams, H. M., and Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *J. Appl. Psychol.* 91, 636–652. doi: 10.1037/0021-9010.91.3.636

Schaerer, M., Foulk, T., Du Plessis, C., Tu, M. H., and Krishnan, S. (2021). Just because you're powerless doesn't mean they aren't out to get you: low power, paranoia, and aggression. *Organ. Behav. Hum. Decis. Process.* 165, 1–20. doi: 10.1016/j.obhdp.2021.03.005

Selenko, E., Mäkikangas, A., and Stride, C. B. (2017). Does job insecurity threaten who you are? Introducing a social identity perspective to explain well-being and performance consequences of job insecurity. *J. Organ. Behav.* 38, 856–875. doi: 10.1002/job.2172

Shoss, M. K. (2017). Job insecurity: an integrative review and agenda for future research. *J. Manag.* 43, 1911–1939. doi: 10.1177/0149206317691574

Strauss, K., Griffin, M., and Parker, S. (2012). Future work selves: how salient hoped-for identities motivate proactive career behaviors. *J. Appl. Psychol.* 97, 580–598. doi: 10.1037/a0026423

Strauss, K., and Parker, S. K. (2018). Intervening to enhance proactivity in organizations: improving the present or changing the future. *J. Manag.* 44, 1250–1278. doi: 10.1177/0149206315602531

Strauss, K., Parker, S. K., and O'shea, D. (2017). When does proactivity have a cost? Motivation at work moderates the effects of proactive work behavior on employee job strain. *J. Vocat. Behav.* 100, 15–26. doi: 10.1016/j.jvb.2017.02.001

Sverke, M., Hellgren, J., and Naswall, K. (2002). No security: a meta-analysis and review of job insecurity and its consequences. *J. Occup. Health Psychol.* 7, 242–264. doi: 10.1037/1076-8998.7.3.242

Taber, B. J., and Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *J. Vocat. Behav.* 86, 20–27. doi: 10.1016/j.jvb.2014.10.005

Van den Broeck, A., Sulea, C., Vander Elst, T., Fischmann, G., Iliescu, D., and De Witte, H. (2014). The mediating role of psychological needs

in the relation between qualitative job insecurity and counterproductive work behavior. *Career Dev. Int.* 19, 526–547. doi: 10.1108/CDI-05-2013-0063

Van Gelder, J. L., Luciano, E. C., Weulen Kranenbarg, M., and Hershfield, H. E. (2015). Friends with my future self: longitudinal vividness intervention reduces delinquency. *Criminology* 53, 158–179. doi: 10.1111/1745-9125.12064

Vander Elst, T., Van Den Broeck, A., De Cuyper, N., and De Witte, H. (2014). On the reciprocal relationship between job insecurity and employee well-being: mediation by perceived control? *J. Occup. Organ. Psychol.* 87, 671–693. doi: 10.1111/joop.12068

Vohs, K. D., Baumeister, R. F., and Schmeichel, B. J. (2012). Motivation, personal beliefs, and limited resources all contribute to self-control. *J. Exp. Soc. Psychol.* 48, 943–947. doi: 10.1016/j.jesp.2012.03.002

Wang, D., Li, X., Zhou, M., Maguire, P., Zong, Z., and Hu, Y. (2019). Effects of abusive supervision on employees' innovative behavior: the role of job insecurity and locus of control. *Scand. J. Psychol.* 60, 152–159. doi: 10.1111/sjop.12510

Wang, H. J., Demerouti, E., Blanc, P. L., and Lu, C. Q. (2018). Crafting a job in 'tough times': when being proactive is positively related to work attachment. *J. Occup. Organ. Psychol.* 91, 569–590. doi: 10.1111/joop.12218

Wang, H. J., Lu, C. Q., and Siu, O. L. (2015). Job insecurity and job performance: the moderating role of organizational justice and the mediating role of work engagement. *J. Appl. Psychol.* 100, 1249–1258. doi: 10.1037/a0038330

Xu, S., Zhang, H., Dai, Y., Ma, J., and Lyu, L. (2021). Distributed leadership and new generation employees' proactive behavior: roles of idiosyncratic deals and meaningfulness of work. *Front. Psychol.* 12:755513. doi: 10.3389/fpsyg.2021.755513

Yao, X., Li, M., and Zhang, H. (2021). Suffering job insecurity: will the employees take the proactive behavior or not?. *Front. Psychol.* 12:731162. doi: 10.3389/fpsyg.2021.731162

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers in Psychology

ORIGINAL RESEARCH
published: 07 March 2022
doi: 10.3389/fpsyg.2022.819396

The Relationship Between Employees' Daily Customer Injustice and Customer-Directed Sabotage: Cross-Level Moderation Effects of Emotional Stability and Attentiveness

Young Ho Song[1] *and Jungkyu Park*[2]*

[1]Odette School of Business, University of Windsor, Windsor, ON, Canada, [2]Department of Psychology, Kyungpook National University, Daegu, South Korea

Customer injustice has received considerable attention in the field of organizational behavior because it generates a variety of negative outcomes. Among possible negative consequences, customer-directed sabotage is the most common reaction, which impacts individuals' well-being and the prosperity of organizations. To minimize such negative consequences, researchers have sought to identify boundary conditions that could potentially attenuate the occurrence of customer-directed sabotage. In this study, we explore potential attenuation effects of emotional stability and attentiveness on the customer injustice–sabotage linkage. The results showed emotional stability and attentiveness moderate the relationship between customer injustice and customer-directed sabotage. Specifically, the representatives with higher (vs. lower) emotional stability or higher (vs. lower) attentiveness are less likely to engage in customer-directed sabotage when they experience customer injustice. Moreover, there is a three-way interaction among daily customer injustice, emotional stability, and attentiveness that predicts daily customer-directed sabotage. Theoretical and practical contributions, limitations, and directions for future development are also discussed.

Keywords: daily customer injustice, daily customer-directed sabotage, emotional stability, attentiveness, cross-level moderation effects

OPEN ACCESS

Edited by:
Živile Stankeviciute, Kaunas University of Technology, Lithuania

Reviewed by:
Subhasish Chowdhury, University of Bath, United Kingdom
Rafael Robina-Ramírez, University of Extremadura, Spain

***Correspondence:**
Jungkyu Park
jkp@knu.ac.kr

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *21 November 2021*
Accepted: *08 February 2022*
Published: *07 March 2022*

Citation:
Song YH and Park J (2022) The Relationship Between Employees' Daily Customer Injustice and Customer-Directed Sabotage: Cross-Level Moderation Effects of Emotional Stability and Attentiveness. Front. Psychol. 13:819396. doi: 10.3389/fpsyg.2022.819396

INTRODUCTION

Customer injustice is defined as poor-quality, unfair treatment that employees experience during service interactions received from customers, and examples of customer injustice include verbal aggression (e.g., yelling), disrespect (e.g., interrupting mid-sentence), and ignorance (e.g., refused to listen; Skarlicki et al., 2008; Wang et al., 2011; Shao and Skarlicki, 2014). In the last decade, customer injustice has been a primary research interest among organizational justice scholars because it generates a variety of negative outcomes. Examples of such negative consequences include emotional exhaustion (Grandey et al., 2007), emotional labor (Rupp and Spencer, 2006), turnover intention (Holmvall and Sidhu, 2007), and customer-directed sabotage (Skarlicki et al., 2008, 2016; Wang et al., 2011; Song et al., 2021). Among these possible negative

consequences, customer-directed sabotage which is defined as employees' counterproductive work behaviors which intentionally harm customers' interests (Wang et al., 2011) has received considerable attention for two main reasons. First, the relationship is well supported by a strong theoretical foundation—namely, the target similarity effect. The main tenet of this theory is that the source of the injustice is likely to become a target of retaliatory behavior (Lavelle et al., 2007). Based on this theoretical background, the customer injustice literature has consistently asserted that customer-directed sabotage is the most common reaction among frontline employees mistreated by customers (e.g., Skarlicki et al., 2008, 2016; Wang et al., 2011). Second, the customer-directed sabotage literature has found that employees' sabotage behavior generates a series of negative accompanying consequences that impact individuals' well-being and the prosperity of organizations. That is, previous research has found that employee sabotage negatively affects frontline employees' individual performance and overall well-being (Skarlicki et al., 2008; Wang et al., 2013). Furthermore, it damages the organization's relationship with customers, harming customer loyalty and causing negative word of mouth, which may ultimately damage the organization's profitability and future growth (Anderson et al., 1997; Harris and Ogbonna, 2002). To find ways to minimize such negative consequences, organizational justice scholars have sought to identify boundary conditions that could potentially attenuate the occurrence of customer-directed sabotage. In the next section, we review a variety of boundary conditions which have been explored in customer injustice research, including moral identity, cultural value differences, supervisory fairness, and emotion−/resource-based moderators.

LITERATURE REVIEW

As described above, a growing body of research on the link between customer injustice and workplace sabotage has extensively tested the moderation effects of individual characteristics and situational factors. Skarlicki et al. (2008), for example, found that two components of moral identity—namely, symbolization and internalization—attenuate call center representatives' workplace sabotage even if the individuals have been unjustly treated by customers. That is, individuals who have high symbolization are more likely to explicitly manifest their moral concerns by responding brusquely (i.e., workplace sabotage) when they are mistreated by customers. On the other hand, people with low internalization have a tendency not to punish transgressors in the event of customer injustice. In light of such findings, the authors hypothesized that the positive association between customer injustice and customer-directed sabotage would be most evident among those employees who have both high symbolization and low internalization.

Furthermore, other line of research has shown that both emotion- and resource-based moderators could attenuate the relationship between customer injustice and customer-directed sabotage (Wang et al., 2011). From the emotion-based perspective, a high level of negative affectivity exacerbates the link between customer injustice and sabotage; however, employees who have high self-efficacy in emotional regulation are less likely to engage in workplace sabotage even when they perceive injustice from customers. From the resource-based perspective, the authors further suggested that three types of resource-based moderators—namely, job tenure, service rule commitment, and supervisory support—may influence the relationship between customer injustice and workplace sabotage. They argued that frontline employees who have more tenure, higher commitment, and better/more supervisory support were less likely to conduct sabotage in response to customer injustice because they can draw supplementary resources from those resource reservoirs.

Comparing North American and East Asian hotel industry employees, research found that cultural value differences in two geographical locations (i.e., Canada and China) affect frontline employees' behavioral pattern of customer-directed sabotage (Shao and Skarlicki, 2014). In particular, the employees with high (vs. low) individualism are more likely to engage in customer-directed sabotage when they are mistreated by customers. The authors explained the finding based on cross-cultural theory (Hofstede, 2001), claiming that cultural background affects individuals' identity formulation (e.g., individualistic identity), ultimately influencing frontline employees' choice of behavior in the event of customer mistreatment. That is, people who have lived within an individualistic culture are more likely to develop a self-focused attitude oriented toward high concern for self. Therefore, they are likely to demonstrate more active and direct reactions under stressful circumstances, which ultimately leads them to engage in more customer-directed sabotage.

A multifoci justice perspective proposes that more than one source of justice resource can simultaneously affect an individual's justice perception and behavior (Lavelle et al., 2007). Based on such a theoretical foundation, recent customer injustice research has found that a low level of supervisory fairness strengthens/enhances the positive association between customer injustice and customer-directed sabotage, arguing that such a strengthening effect can be worsened due to multiple sources of unfairness (i.e., customer injustice and low supervisory fairness) concurrently affecting employees' workplace behavior (Skarlicki et al., 2016).

Although previous research on customer injustice–sabotage linkage has explored a variety of moderation effects as described above, this study will test additional moderation effects worthy of further exploration for the following reasons. First, relatively little attention has been given to how personality traits and emotional state can affect customer-directed sabotage, especially *via* a compounding moderation effect of personality and emotion (for exceptions, see Skarlicki et al., 1999; Barclay et al., 2005). This gap in the research is notable because previous research has shown that individuals' emotional state and personality traits are closely related to each other and that such an association can provide a syntagmatic influence on people's subsequent workplace behaviors (Izard et al., 1993; George, 2000; Rubin et al., 2005). Therefore, the first goal of this study is to explore (a) whether a certain personality trait (i.e., emotional stability) and emotional state (i.e., attentiveness) individually attenuate the causal relationship and (b) a three-way interaction combining

the moderation effect of emotional stability and attentiveness to determine the existence of a stronger moderation effect.

Second, this study urges scholars to pay more attention to the role of positive emotion while exploring the relationship between customer injustice and customer-directed sabotage. When customer injustice studies have examined the impact of an individual's emotional state on his or her aggressive behavior, the emphasis has been on exploring how negative emotion and affectivity impact employees' subversive workplace behavior (e.g., Skarlicki et al., 1999; Fox et al., 2001; Penney and Spector, 2005; Wang et al., 2011; Walker et al., 2014). Such an exclusive focus on negative emotion and its impact on workplace aggression create a research gap concerning the role of positive emotion in generating favorable workplace outcomes and reducing aggressive behavior (Staw et al., 1994; Twenge et al., 2007). Therefore, the second goal of this study is to explicate how a positive emotion, specifically attentiveness, can moderate the positive association between customer injustice and customer-directed sabotage. Attentiveness was chosen as an emotion-based moderator in this research because previous research has shown a strong connection between attentiveness and workplace behavior. That is, individuals with a high level of attentiveness tend to be more concerned about their job and performance; they therefore tend to exhibit more prosocial behavior and less antisocial behavior (Lee and Allen, 2002; Rodell and Judge, 2009). Therefore, this research expects that individuals with high attentiveness will be less likely to commit customer-directed sabotage, as it would jeopardize their job and future performance.

From a methodological standpoint, this study uses daily measurements to effectively capture short-term interactions between customers and employees. Using daily measurement to explore the moderation effects is important for the following reasons. First, an individual's state of emotion, workplace experience, and behavioral patterns vary from moment to moment (Ohly et al., 2010). Therefore, it is essential to record momentary within-person changes over time, which can most effectively be accomplished through daily observation (Bolger et al., 2003). Second, research has shown that the human brain has limited capacity to remember. Therefore, a long-term survey design (e.g., at monthly intervals) cannot effectively capture the short-term dynamics of interpersonal interactions due to such limited memory capacity (Zapf et al., 1996). Based on such rationales, this study suggests a daily-interval, repeated measurement is best suited to explore customer–employee interactions in the workplace. From a managerial perspective, the findings in this study can be applied as a guideline for recruitment processes in the service industry to select the employees who are least likely to commit customer-directed sabotage due to effective regulation of their emotions in the workplace.

THEORY AND HYPOTHESIS DEVELOPMENT

In the present study, we utilize affective event theory (AET, Weiss and Cropanzano, 1996) as a theoretical framework to explain the linkage between customer injustice and customer-directed sabotage. Besides AET, multiple other theories have been presented to explicate the customer injustice–sabotage linkage, including the moral perspective of justice (Folger, 2001), the norm of reciprocity (Gouldner, 1960), and conservation of resources theory (Hobfoll, 1989, 2001). Among the available theoretical backgrounds, this study suggests the AET as the most appropriate explanatory mechanism because (a) AET's emotion-based explanatory mechanism provides a good reason for introducing emotional state as a moderator, and (b) it provides a theoretical basis for using a daily study design.

The main tenet of AET is that a typical event in the workplace may generate specific emotions in an employee (Weiss and Cropanzano, 1996), ultimately underlying such individual affect-driven attitudinal, emotional, or behavioral outcomes as job dissatisfaction (Wegge et al., 2006), increased emotional labor (Rupp et al., 2008), counterproductive work behavior (Matta et al., 2014), and employee incivility (Walker et al., 2014). AET studies have consistently found that individuals' emotional state can influence their affect-driven, reactive workplace behavior within a short timeframe. For example, research has shown that individuals' emotional state can fluctuate rapidly over time, and the unstable nature of emotion can influence individuals' attitudinal and behavioral outcomes in the workplace (Weiss and Cropanzano, 1996).

In addition, previous research has found that "organizational members' cognition and behavior at work are much more likely to be affected by the way they feel on a moment-to-moment basis than by stable belief systems or previously formed attitudes about those workplace events" (Ashton-James and Ashkanasy, 2008, p. 9). Thus, the short-term oriented, time-dependent nature of AET could effectively explicate the momentary emotional and behavioral changes of employees in the workplace. This constitutes our rationale for why AET is the ideal theoretical lens for our daily-interval study of the link between customer injustice and customer-directed sabotage.

Customer Injustice and Customer-Directed Sabotage

Organizational justice scholars have often used AET as a theory to explicate the relationship between workplace aggression and employees' corresponding negative outcomes (e.g., Rupp and Spencer, 2006; Matta et al., 2014; Walker et al., 2014). For example, a specific type of workplace event, such as perceiving unfairness, instigates frontline employees' negative emotion, which in turn generates subsequent emotional outcomes (e.g., emotional labor) when the employees must comply with the organization's displayed rules (Rupp and Spencer, 2006). As another example, customer incivility leads to employees' injustice perception and negative emotion, which in turn makes the employees desire to retaliate against the harm-doing transgressor, thereby triggering employee incivility toward the source of the original incivility (Walker et al., 2014).

In the present study, it is postulated that the relationship between frontline employees' daily experience of customer injustice and daily customer-directed sabotage can also

be explained by AET. Previous call center research has found that frontline employees experience, on average, 10 instances of customer mistreatment per day (Grandey et al., 2004). Such excessive amounts of unfair treatment could generate negative emotions (e.g., anger and frustration), ultimately affecting employees' behavioral outcomes. For example, research has shown that frontline employees' feelings of anger resulting from customer mistreatment are the main cause of retaliatory actions (Barclay et al., 2005). We therefore theorized that frontline employees' response to unfair treatment from customers will generate feelings of anger, which eventually produces the customer-directed sabotage.

Hypothesis 1: Daily customer injustice is positively associated with daily customer-directed sabotage.

The Moderating Effect of Emotional Stability

Emotional stability is defined as the individual personality trait of being stable, self-poised, and independent (Ehrhart et al., 2008). According to personality trait research, individuals with high emotional stability tend to effectively manage their life events due to high ability to control their emotions and moods (Newsome et al., 2000). Emotional stability is one of the Big Five personality traits, which include extraversion, agreeableness, conscientiousness, openness to experience, and emotional stability (Goldberg, 1999). In the present paper, we focus on emotional stability as a moderator because the positive aspects of emotional stability can attenuate the occurrence of customer-directed sabotage. Traditionally, personality trait research often focused on the impact of *neuroticism*, another way to describe a low level of emotional stability, and its impact on people's behavioral outcomes. Neuroticism often refers to the likelihood of experiencing negative affect in the workplace (McCrae, 1990). That is, people with high levels of neuroticism are more likely to experience fear, anger, anxiety, and hostility (McCrae and Costa, 1986; Gunthert et al., 1999). Research has consistently shown neuroticism to be the most common construct that aggravates individuals' aggressive behavior (Caprara et al., 1996; Bettencourt et al., 2006; Flaherty and Moss, 2007; Egan and Lewis, 2011).

Instead of focusing on neuroticism, however, this study focuses on the positive side—how frontline employees' high level of emotional stability can weaken the positive relationship between customer injustice and customer-directed sabotage. That is, when individuals with high emotional stability perceive unfairness, they are less likely to express inappropriate emotion and negative attitude toward the source of injustice than individuals who have low emotional stability (Milam et al., 2009). In other words, higher emotional stability enables individuals to effectively control their own emotions and thus be more likely to handle the provoking incident in an objective and cool-headed way. Therefore, call center representatives with high levels of emotional stability are less likely to conduct sabotage because their regulation of emotion prevents them from responding to an inflammatory event (i.e., customer injustice) in an inappropriate way.

Hypothesis 2: Emotional stability moderates the positive relationship between daily customer injustice and daily customer-directed sabotage; the relationship is less (vs. more) pronounced for employees who have high (vs. low) levels of emotional stability.

The Moderating Effect of Attentiveness

Attentiveness is defined as an individual's feeling of alertness, concentration, and determination in relation to jobs and duties (Rodell and Judge, 2009). Attentiveness, an example of a positive emotional state, is classified as one of the basic low-order forms of positive affectivity, along with joviality and self-assurance (Watson and Clark, 1994). Attentiveness is also well known for its strong relationship with job engagement (Watson and Tellegen, 1985). Organizational engagement research has found that individuals with high work engagement are more likely to conduct better customer service and less likely to display counterproductive work behavior when faced with workplace mistreatment (Harter et al., 2006; Fine et al., 2010). Furthermore, if a workplace has many employees with high levels of work engagement, employees may be infected by their colleagues' enthusiasm for their work and duties and consequently can conduct more organizational citizenship behavior and less counterproductive work behavior (Bakker, 2008).

Based on these findings, this study predicts that call center representatives who have high levels of attentiveness are less likely to conduct customer-directed sabotage even if they perceive unjust treatment from customers. Frontline employees with higher attentiveness will be more enthusiastically involved in their job-related tasks and goals, and such strong engagement in one's duties makes them less likely to exhibit counterproductive work behavior including sabotage. A main duty of service sector workers is to serve and interact with customers to maximize their performance and productivity. Therefore, we theorize that call center representatives who possess higher work engagement are less likely to commit workplace sabotage during interaction with customers because they care greatly about their work. As a result, they are less likely to direct harmful behavior toward customers who are the resource of their daily performance.

Hypothesis 3: Attentiveness moderates the positive relationship between daily customer injustice and daily customer-directed sabotage; this relationship is less (vs. more) pronounced for employees who have high (vs. low) levels of attentiveness.

Three-Way Interaction Between Emotional Stability and Attentiveness

Previous studies on the relationship between personality and emotion have posited a strong connection between individual emotional states and personality traits (Izard and Malatesta, 1987; Malatesta, 1990; Smith and Lazarus, 1990; Watson and

Clark, 1992; Izard et al., 1993). For example, extraversion has a strong correlation with positive affect, while low emotional stability has a strong correlation with negative affectivity (Costa and McCrae, 1992). There are two streams of research exploring the causal relationship between personality traits and emotional state. On the one hand, it has been argued that individuals' patterns of emotional response contribute to their formulation of emotion-based personality traits (Izard et al., 1993). From this perspective, *personality trait* is defined as a coherent patterning of emotions over a certain period of time, and an accumulation of such consistent behavioral patterns that ultimately displays the specific personality characteristics (Revelle and Scherer, 2009). By contrast, the other stream of personality trait research has found that individuals' personality characteristics influence their emotional status, which ultimately affects people's behavior. Specifically, individuals' unique personality traits, including intuitive knowledge about the self, can affect momentary emotional responses (Smith and Lazarus, 1990). In light of such strong causal ties between personality traits and momentary emotional state or vice versa, it is reasonable to expect two boundary conditions, emotional stability and attentiveness, can jointly moderate the linkage between customer injustice and customer-direct sabotage.

As described earlier, employees with high levels of emotional stability will have a strong ability to control their emotion and are thus able to suppress their desire to commit customer-directed sabotage although they have been mistreated by customers. Furthermore, the employees with higher attentiveness will be more likely to enthusiastically engage in their job-related tasks and performance. Therefore, they would prevent the occurrence of customer-directed sabotage because customers are the major resources of their performance.

In the present study, we theorize that there is a combined moderation effect between emotional stability and attentiveness by a three-way interaction formed in the relationship between customer injustice and customer-directed sabotage. Previous research has shown that individual differences in personality traits can directly influence the creation of emotional states (Smith and Lazarus, 1990). To support such a connection between personality trait and emotional state, Tellegen (1985) postulated that individuals with high levels of positive emotionality are more likely to have high levels of attentiveness. That is, high emotional stability enabled individuals to pay more attention to job-related issues, which implies that they become more attentive to their job and performance. Tellegen's argument suggests that frontline employees with high emotional stability are more likely to generate a more positive emotional state—namely, attentiveness. Based on such aspects of emotional stability and attentiveness, we expect that customer-directed sabotage will be least pronounced among employees who have both high emotional stability and high attentiveness. That is, higher emotional stability helps them to better control their negative emotions arising from customer injustice, thereby effectively suppressing their inclination to commit customer-directed sabotage. At the same time, frontline employees with higher emotional stability can generate a more attentive attitude toward their job and performance, and they are therefore less likely to engage in customer-directed sabotage because such behavior can impair their future performance.

> *Hypothesis 4*: The relationship between daily customer injustice and daily customer-directed sabotage is least pronounced for employees who simultaneously have high (vs. low) levels of both emotional stability and attentiveness.

METHODOLOGY

Data Collection Process

A questionnaire for this study was generated in English first and then translated into Korean using the translation–back translation technique (Brislin, 1990). Paper-and-pencil-based surveys were administrated at 10 insurance call centers located in South Korea. Participants were encouraged to finish all 10 daily surveys upon completion of their shift each day at 6 pm. On the first day of the surveys, participants were asked to answer some basic questions, including demographic information such as age, education, tenure, and annual income for use as control variables. From the second to the tenth day, the two daily-based variables—customer injustice and customer-directed sabotage—were measured at multiple time points using the same questionnaire. Then, 50 items of International Personality Item Pool–Five Factor Model (IPIP-FFM; Goldberg, 1999) were administered to participants to measure their personality traits. As a result, 2,140 level 1 samples were obtained out of total possible 2,331 level-1 samples (259 × 9 days), after omitting cases with missing values on any variables.

Participants and Demographics

Four hundred call center telemarketing representatives from 10 different insurance companies were invited to participate by taking a total of 10 surveys daily for 10 days; 309 participants returned the questionnaires, giving a response rate of 83%. Some of the daily surveys did not provide the identifiable information in each survey and 50 of the completed daily surveys could not be connected; therefore, the final sample for this study was 259 participants. The analysis of the 259 participants indicated that the average age was 39.00 years old (SD = 9.09), and 83% were female, with an average of 1.16 years of tenure (SD = 1.55) at their current organization.

Measures

All measures that were used in this study were validated and selected from previously published peer-reviewed journals. Some measures were slightly modified for the daily survey format by adding additional instructions or explanations, such as "please recall your experience during today's working hours."

Daily Customer Injustice

Skarlicki et al.'s (2008) validated 8-item scale was used to evaluate employees' daily perception of changes in customer injustice (to find complete items, please see the **Appendix**).

The measure was assessed by using a 5-point Likert-type response scale ranging from 1 *(never)* to 5 *(frequently)*. After finishing their work (at 6:00 p.m.), respondents were asked to check the frequency of their experience of customer injustice during their working hours. Sample questions from this measure include, "During work hours today, a customer spoke aggressively to you." These 8 items were averaged to create the index of customer interpersonal injustice ($\alpha = 0.85$).

Daily Customer-Directed Sabotage

Call center representatives' daily sabotage was assessed with Skarlicki et al.'s (2008) 5 validated items, which use a 5-point Likert-type response scale ranging from 1 *(never)* to 5 *(frequently, more than 7 times per day)*. Sample questions of this measure include, "During work hours today, I purposely disconnected the call" ($\alpha = 0.86$), and all items are listed in the **Appendix**.

Emotional Stability

The Big Five personality traits were measured with the IPIP FFM (Goldberg, 1999). A total of 50 questions were asked to measure the five dimensions of employee personality traits (i.e., extraversion, agreeableness, conscientiousness, emotional stability, openness to experience) using a 7-point Likert-type response scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree)*. Emotional stability, one of the dimensions of the Big Five personality traits, consisted of 10 questions, and sample questions for emotional stability include, "I have frequent mood swings" *(reversed code)* and "Take time for others" ($\alpha = 0.90$).

Attentiveness

Attentiveness was measured based on the PANAS-X scales (Watson and Clark, 1994). Participants were instructed to read the given words (i.e., alert, attentive, concentrating, determined) and indicate to what extent they felt that way over the past few weeks. The frequency of feeling on the given four words were measured by using a 7-point Likert-type response scale from 1 *(Never)* and 7 *(Always)*. The items were averaged to generate the index of attentiveness ($\alpha = 0.73$).

Control Variables

Participants' age, education level, tenure, and annual income were controlled for the following reasons. Age was controlled because it is correlated with workplace aggression (Glomb and Liao, 2003). According to Douglas and Martinko (2001), level of education is positively associated with individuals' counterproductive work behavior in the workplace. Tenure was also controlled because a previous study found that longevity of one's current affiliation is negatively associated with workplace sabotage behavior (Sims, 2002). Lastly, to clearly investigate the moderating effects of attentiveness and emotional stability on customer injustice–sabotage linkage, the remaining four dimensions of the Big Five personality traits (i.e., conscientiousness, extraversion, agreeableness, and openness to experience) and two other positive emotional state (i.e., self-assurance and joviality) dimensions from the PANAS-X were also controlled.

ANALYTICAL STRATEGY

The multi-level dataset for this study was analyzed in two steps: (1) preliminary analyses and (2) main analysis including lower-(daily) level main effect, cross-level two-way and three-way interactions using multilevel hierarchical regression analysis.

Preliminary Analyses

As a first step, the means, standard deviations, and inter-correlations (i.e., Cronbach alpha values) among study variables were examined to evaluate the suitability of the proposed variables. The Cronbach alpha values for all variables used in this study were found to be between 0.73 and 0.90, which satisfied the criteria for a reasonably acceptable reliability ($\alpha = 0.70$; Nunnally and Bernstein, 1994; **Table 1**).

In addition, variables used in this study will be grand-mean centered for the upper (between-person) level and group-mean centered for the lower (within-person) level (Ohly et al., 2010). Furthermore, to confirm the rationale for performing multilevel modeling, the intra-class correlation (ICC_1) was calculated. We found that the ICC_1 value was 0.72, which implied that about 72% of the variance of daily customer-directed sabotage was explained by individual difference. An ICC_1 value of 0.70 or higher can be considered as acceptable; therefore, it provided sufficient rationale to conduct multi-level analysis for this study (Klein et al., 2000).

Because previous research has found that there are relatively high correlations among the Big Five personality traits (Paunonen and Jackson, 2000), this study checked for multicollinearity among all variables used in this study using tolerance values and variance inflation factors (VIF). The primary analysis found that the VIF values of all variables used in this study are located between 1.1 and 2.7. Multicollinearity was ruled out since our values were all below the suggested cut-off VIF of approximately 5.3 (Hair et al., 1998).

As the last step of the preliminary analysis, confirmatory factor analysis (CFA) was conducted for each level (McDonald, 1993; Mathisen et al., 2006). That is, research showed that two separate CFAs are ideal (one for the within-person level and the other for the between-person level) to clearly assess the goodness of fit on two distinct levels. The confirmatory factor analysis (CFA) was conducted using Mplus 6.0 (Muthén and Muthén, 2012). The results showed that the two-factor measurement model provided a reasonably good fit for the data at both between-individual level and within-individual levels (within-person level: $\chi^2 = 233.78$, $p < 0.001$, CFI = 0.94, RMSEA = 0.08, SRMR = 0.06; between-person level: $\chi^2 = 359.64$, $p < 0.001$, CFI = 0.95, RMSEA = 0.08, SRMR = 0.06; **Table 2**).

Main Analysis

To conduct the multi-level hierarchical regression analysis, main-effect and cross-level moderating interactions were tested using SAS 9.4 software (Bauer and Curran, 2005). The multilevel data was analyzed through a three-step process. First, the within-person variance between daily customer interpersonal injustice and daily customer-directed sabotage was analyzed to determine

TABLE 1 | Means, Standard Deviations, Correlations, and Reliability Estimate for Study Variables

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age (T1)	39.00	9.09	–													
2. Education[a] (T1)	1.73	0.82	0.00	–												
3. Tenure (T1)	1.16	1.55	0.11**	−0.00	–											
4. Annual Income[b] (T1)	1.06	0.99	0.13**	0.14**	0.15**	–										
5. Conscientiousness (T10)	4.71	0.76	0.26**	0.06**	0.03	0.09**	(0.80)									
6. Extraversion (T10)	3.93	0.75	−0.18**	0.05*	−0.02	−0.01	−0.07**	(0.80)								
7. Agreeableness (T10)	4.70	0.68	0.03	0.03	−0.07	−0.05*	0.22**	0.29**	(0.74)							
8. Openness to change (T10)	4.30	0.67	−0.06**	0.14**	−0.02	0.04	0.19**	0.38**	0.17**	(0.78)						
9. Self-assurance (T10)	3.81	0.98	−0.13**	0.08**	0.06	0.07**	0.10**	0.27**	0.02	0.24**	(0.83)					
10. Joviality (T10)	4.16	0.96	−0.18**	0.14**	0.00	0.00	0.14**	0.25**	0.17**	0.28**	0.72**	(0.88)				
11. Emotional stability (T10)	4.10	0.98	0.13**	0.13**	−0.06	−0.04	0.26**	−0.01	−0.07**	0.03	0.23**	0.21**	(0.90)			
12. Attentiveness (T10)	3.96	0.88	0.01	0.09**	0.06	0.18**	0.19**	0.08**	0.15**	0.11**	0.59**	0.52**	−0.04*	(0.73)		
13. Daily CIJ[c] (T2-9)	2.07	0.80	−0.08**	0.03	−0.00	−0.02	−0.06**	−0.11**	−0.10**	−0.11**	0.06**	0.04*	−0.06**	0.14**	(0.85)	
14. Daily SABO[d] (T2-9)	1.18	0.46	−0.11**	−0.06**	0.10	0.06**	−0.19**	0.06**	−0.06**	−0.06**	0.07**	−0.03	−0.06**	−0.00	0.29**	(0.86)

[a]Education is coded as 0 (middle school or less), 1 (high school), 2 (some college or two-year college degree), and 3 (four-year bachelor's degree or more).

[b]Annual income is coded as 0 (less than CAD 20K), 1 (CAD 20-40 K), 2 (CAD 40-60 K), 3 (CAD 60-80 K), 4 (CAD 80-100 K), 5 (CAD 100-120 K), and 6 (more than CAD 120 K); T1 = survey day1; [c]CIJ means customer injustice; [d]SABO means customer-directed sabotage; T2-9 = survey from day2 to day9; T10 = survey day10; N for Level 1 (within-person level) is 2140; N for Level 2 (between-person level) is 259; To calculate the between-person correlations, we averaged within-person level constructs' (i.e., daily CIJ, daily and daily SABO) during eight daily surveys and then computed the between-person level correlations across individuals.

**p < 0.05; **p < 0.01 (2-tailed, Likewise).*

whether a within-person main effect exists between daily customer injustice and daily customer-directed sabotage. Second, it was tested whether between-person variables (i.e., emotional stability and attentiveness) individually have a cross-level moderation effect on the within-person daily main effect. Lastly, the existence of a three-way interaction among daily customer injustice, emotional stability, and attentiveness on the frontline employees' daily customer-directed sabotage was tested.

RESULTS

Hypothesis 1 stated that a positive relationship exists between daily customer injustice and daily customer-directed sabotage. Model 1 in **Table 3** shows that the effect of customer injustice on customer-directed sabotage was positive and significant ($\gamma_{10} = 0.12$, $p < 0.001$). Furthermore, the results show that the variance of the random slope was also statistically significant ($\tau_{11} = 0.04$, $p < 0.001$). This finding implies that employees who perceive injustice from customers are more likely to engage in sabotage behavior toward customers on that particular day. **Table 3** presents all values of within-person level parameter estimates, including fixed intercept and random slope values, to predict customer-directed sabotage.

Hypothesis 2 proposed that there would be a cross-level moderation effect of emotional stability, which moderates the within-person level main effect between daily customer injustice and daily customer-directed sabotage. The moderating effect of emotional stability was found to be negative and significant ($\gamma_{11} = -0.04$, $p < 0.05$), thus supporting Hypothesis 2. Similarly, our next hypothesis was that attentiveness moderates the relationship between daily customer injustice and daily customer-directed sabotage. This moderation effect was also found to be negative and significant ($\gamma_{21} = -0.05$, $p < 0.05$); therefore, Hypothesis 3 was also supported. These two hypotheses reveal that call center representatives with either high emotional stability or high attentiveness tend to commit less daily customer-directed sabotage under higher daily customer mistreatment conditions. **Figure 1** presents cross-level moderation effects of emotional stability and attentiveness.

Finally, Hypothesis 4 predicted that a three-way interaction among daily customer injustice, attentiveness, and emotional stability would predict frontline employees' daily customer-directed sabotage. Model 5 in **Table 3** shows that the three-way interaction effect was significant ($\gamma_{22} = -0.03$, $p < 0.05$), predicting daily employee sabotage. Simple slope analyses demonstrated that the call center representatives with high levels of attentiveness and emotional stability were least likely to conduct customer-directed sabotage ($B_1 = 0.04$, $p < 0.18$ n.s.) among four possible cases. **Figure 2** shows the three-way interaction among the aforementioned variables.

DISCUSSION

The recent burgeoning of research on customer injustice–sabotage linkage has looked extensively for boundary conditions to minimize

TABLE 2 | Fit Indices for alternative measurement models (Study 3).

Measurement models		χ^2	*df*	χ^2/df	CFI	TLI	SRMR	RMSEA
1-factor model[a]	Between-person	805.61	20	40.28	0.87	0.82	0.09	0.13
2-factor model[b]	Between-person	359.64	19	18.93	0.95	0.93	0.06	0.08
1-factor model[c]	Within-person	1,359.81	14	97.13	0.62	0.44	0.16	0.16
2-factor model[d]	Within-person	233.78	13	17.98	0.94	0.90	0.06	0.08

N = 259. CFI = comparative fit index, TLI = Tucker-Lewis index, SRMR = standardized root mean square residual, RMSEA = root mean square error of estimators.
[a]*Emotional stability and attentiveness loaded on a single factor.*
[b]*Emotional stability loaded on one factor, and attentiveness loaded on second factor.*
[c]*Daily customer interpersonal injustice and daily customer-directed sabotage loaded on a single factor.*
[d]*Daily customer interpersonal injustice loaded on one factor and daily customer-directed sabotage loaded on second factor.*

TABLE 3 | Joint effects of daily customer interpersonal injustice, emotional stability, and attentiveness on daily customer-directed sabotage.

Level and variables	Null model	Model 1 (H1)	Model 2 (H2)	Model3 (H3)	Model 4	Model 5 (H4)
Level 1						
Intercept (γ_{00})	2.05***	1.90***	1.98***	1.91***	1.98***	1.99***
Daily Customer Injustice (CIJ; γ_{10})		0.12***	0.11***	0.12***	0.12***	0.12***
Level 2						
Emotional Stability (γ_{01})			0.01		0.02	0.02
Attentiveness (γ_{02})				−0.01	−0.02	−0.02
Cross-level Interactions						
Daily CIJ × Emotional Stability (γ_{11})			−0.04*		−0.03	−0.01
Daily CIJ × Attentiveness (γ_{21})				−0.05*	−0.04*	−0.04*
Emotional Stability × Attentiveness (γ_{21})					−0.04*	−0.03
Daily CIJ × Emotional Stability × Attentiveness (γ_{22})						−0.03*
Variance components						
Within-subject (Level 1) variance (σ^2)	0.06***	0.05***	0.05***	0.05***	0.05***	0.05***
Intercept (Level 2) variance (τ_{00})	0.16***	0.10***	0.11***	0.11***	0.11***	0.10***
Slope (Level 2) variance (τ_{11})		0.04***	0.04***	0.04***	0.04***	0.04***
ICC	0.72					

*N_{time} for Level 1 (within-person level) is 2,140; N for Level 2 (between-person level) is 259. *p < 0.05; **p < 0.01; ***p < 0.001 (2-tailed).*

the ill-effect of customer injustice. Such boundary conditions include individual differences (e.g., moral identity, emotional intelligence, and self-efficacy), situational factors in the workplace (e.g., supervisory fairness and perceived organizational support), or geographical location in different cultures (Skarlicki et al., 2008, 2016; Wang et al., 2011; Lee and Ok, 2014; Shao and Skarlicki, 2014). In the present study, we additionally introduced two boundary conditions, emotional stability and attentiveness, to explore their potential attenuation effects on the customer injustice–sabotage linkage. we believe that the inclusion of such new boundary conditions provides meaningful theoretical, methodological, and managerial implications.

First, from the theoretical standpoint, this study broadens the spectrum of possible boundary conditions to lessen the ill-effect of customer injustice. Although there have been many studies that explored the boundary conditions as listed above, we know very little about whether people's emotions and personality traits can interact with each other, and how they can simultaneously affect the emergence and development of customer-directed sabotage among employees. Considering emotional state as one of the key predictors of people's workplace behavior and the strong causal connection between emotion and personality traits, this study adds value to the sabotage research by expanding the scope of boundary conditions that influence frontline employees' retaliatory behavior in the workplace. Furthermore, this study introduces AET as a theoretical framework that provides a good fit to the proposed moderation effects of emotion and personality traits. That is, AET focuses on how individuals' emotional changes impact their workplace behavior, which provides a strong theoretical connection with the suggested emotion- and personality-based moderators in the present study.

Second, this study emphasizes the role of positive emotional state and its positive attenuation effect on customer-directed sabotage. In previous workplace aggression research, negative aspects of emotion and personality traits have received more attention as potential moderators than positive ones. For example, negative affectivity has been identified as a moderator that increases individuals' workplace aggression (e.g., Penney and Spector, 2005; Wang et al., 2011; Walker et al., 2014). Similarly, neuroticism has always been one of the focal personality traits that predicts forms of workplace aggression, such as workplace incivility (Milam et al., 2009), counterproductive work behavior (Bowling et al., 2011), and employee service sabotage (Chi et al., 2013). In the present study, however, the focus is given to positive emotional states and personality traits—namely,

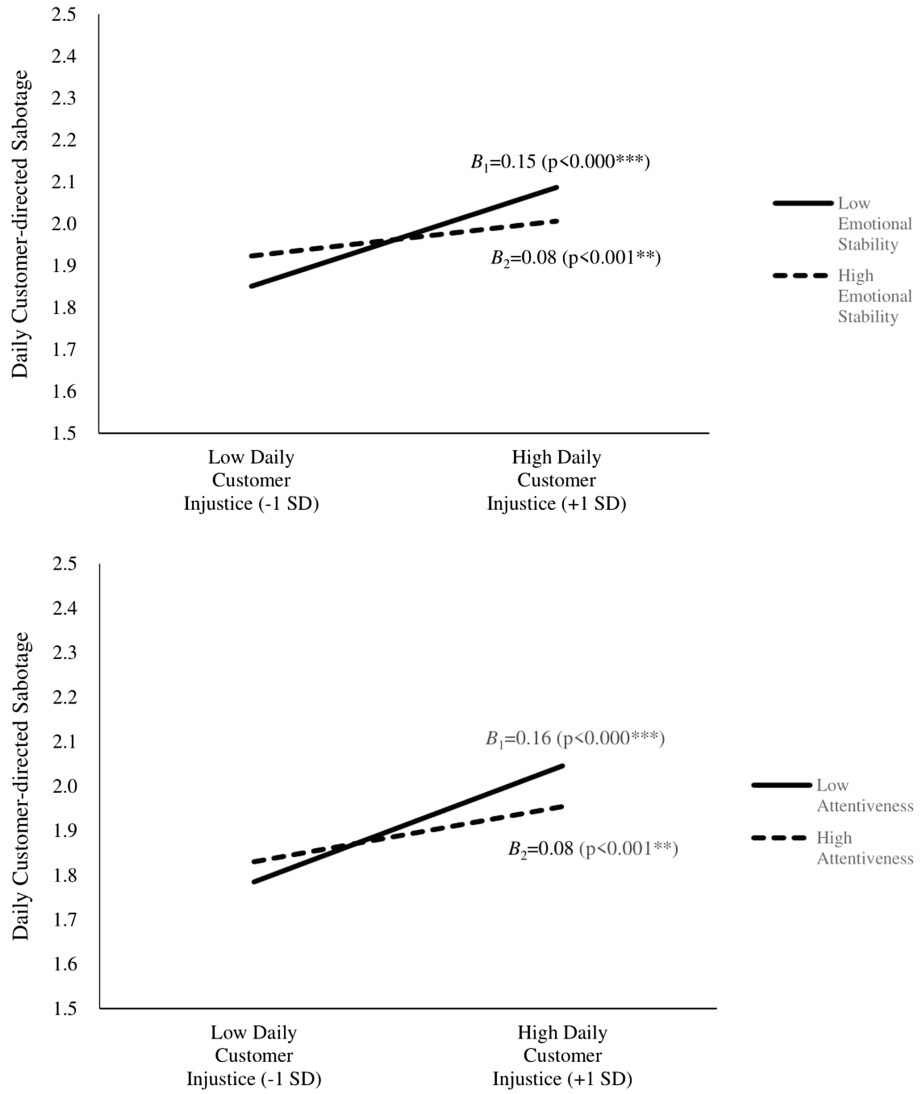

FIGURE 1 | Two-way interactions.

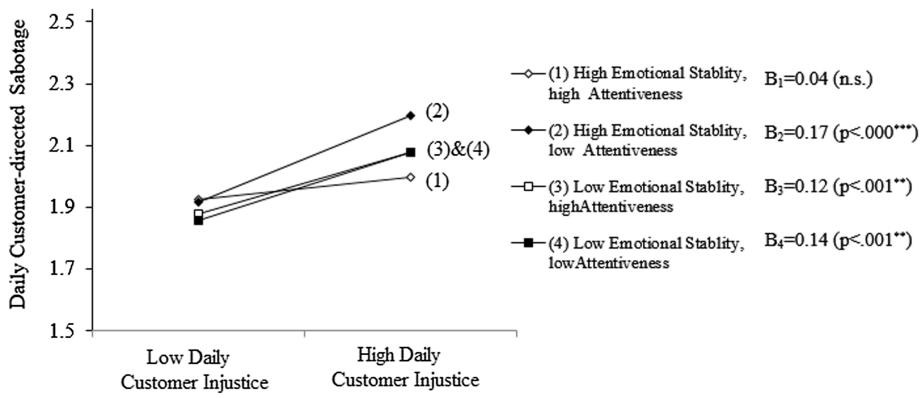

FIGURE 2 | Three-way interactions.

attentiveness and emotional stability—to highlight their attenuating effects on customer-directed sabotage. This study explicitly addressed the positive personality trait and emotional state that can help employees to better cope with customer injustice and minimize the occurrence of customer-directed sabotage, providing theoretical and empirical details necessary to understand the role of personality traits and emotional state in ameliorating the ill effects of customer injustice.

From a methodological perspective, most studies on the relationship between customer injustice and customer-directed sabotage have utilized cross-sectional data (for an exception, see Wang et al., 2011, 2013), but such a research design cannot effectively capture the short-term dynamic nature of frontline employees' emotional and behavioral changes and their relation to the customer injustice–sabotage linkage. This study increases the reliability of findings by introducing a daily study design to more precisely capture employees' daily-interval emotional and behavioral changes. The advantages of such a design include minimization of retrospective bias, which occurs when a less fine-grained survey design is applied (Reis and Gable, 2000; Ohly et al., 2010). That is, fluctuations in individuals' emotional and behavioral patterns throughout their daily routines cannot be accurately measured by either cross-sectional or longitudinal research designs due to limitations of human memory; therefore, neither design can precisely capture employees' within-subject variation. Implementing a daily-interval study to explore the customer injustice and customer-directed sabotage relationship thus represents a considerable advancement in the rigorousness of empirical findings.

Furthermore, this study has numerous control variables, including general demographic information (age, education level, tenure, and annual income), the remaining Big Five personality traits (conscientiousness, extraversion, agreeableness, and openness to change), and other positive emotional states (joviality and self-assurance) to make the findings more parsimonious and rigorous. Such numerous control variables may counterintuitively imply that there are many potential opportunities to develop new emotion- and personality-combined moderation effects by introducing the remaining Big Five personality traits and positive emotional state constructs as explanatory variables, indicating a potential future research direction.

From a managerial perspective, this study provides an insight into how to manage the recruitment and selection process to improve customer service quality and minimize potential customer-directed sabotage. In a service industry, it is conceivable that frontline employees are repeatedly exposed to multiple instances of customer mistreatment throughout their working hours. Therefore, there is always the potential for occurrence of customer-directed sabotage. We suggest that organizations in the service industry should assess job candidates' levels of attentiveness and emotional stability as part of the hiring process to predict the candidates' ability to refrain from engaging in customer-directed sabotage.

Limitations and Future Research Directions

Although this study makes significant contributions as discussed above, this study also has some limitations that must be outlined to benefit future research. First, the self-reported nature of the data raises the issue of common method variance (Podsakoff et al., 2003). However, individuals' personality traits can hardly be measured by a third party, so this study must rely on self-reporting despite the recognized disadvantages. Therefore, future research should find alternative measures to minimize such concerns. For example, employees' daily service sabotage could be observed by managers or coworkers, or observed *via* recorded conversations (with customers) during working hours.

Second, there may be an issue of generalizability, because the data was collected from South Korea, a country with a strongly collectivistic culture. Considering cultural differences moderate frontline employees' willingness to retaliate in response to unjust treatment from customers (Shao and Skarlicki, 2014), another dataset from a geographic location with a more individualistic cultural climate (e.g., Canada) is recommended to lessen the concern of generalizability.

Moreover, given that our study was conducted in a Korean call center where a majority of call center representatives are female, we encourage future research that empirically evaluates the gender difference in other settings to get more in-depth knowledge of how and why gender difference could affect customer-directed sabotage and its boundary conditions.

In terms of future research direction, this study should additionally explore the mediation effect, especially the suggested theoretical foundation of AET. Considering that the main tenet of AET contains an emotion-based mediation process in its structure (i.e., an event generates discrete emotions within individuals, which in turn influence their behavioral patterns), future studies should examine this process. That is, applying AET makes more sense if discrete emotions (e.g., anger or frustration) mediate the main effect between customer injustice and customer-directed sabotage. Future research, therefore, should aim to collect additional data to test the suggested mediation effect and make a strong connection to the given theory.

In addition, this study only tested two specific emotion- and personality-based moderators, emotional stability and attentiveness, and this limited scope should be expanded in future studies. Future research should aim to explore how the remaining four types of personality traits (e.g., agreeableness, conscientiousness, openness to change, or extraversion) and additional low-level discrete emotions (e.g., self-assurance or joviality) may moderate the relationship between customer injustice and customer-directed sabotage. For example, negative discrete emotions such as fear, guilt, and sadness are strongly related to the development of the personality trait of neuroticism (Watson and Clark, 1992). Some researchers, furthermore, postulated a sequential linkage among emotion, cognition, and action that explicates people's behavior and helps explain how individuals' personality traits develop and evolve (e.g., Izard et al., 1993). Therefore, future studies should examine the causal relationship between discrete emotions and personality traits to better understand why and how emotional state and personality traits moderate the customer injustice and sabotage linkage.

To further improve insights into the daily customer injustice–sabotage relationship, future studies should aim to examine how the previous day's (i.e., t − 1 day) customer injustice could influence employees' next-day (i.e., t + 1 day) customer-directed sabotage by incorporating the literature on the spill-over effect, considering that mood in a certain domain could possibly transfer to another domain (Edwards and Rothbard, 2000). In addition, previous research has shown that individuals display different levels of rumination tendencies even when they have experienced similar levels of customer injustice (Wang et al., 2013). Therefore, future research should include how such individuals' different levels of rumination might influence the relationship between customer injustice and customer-directed sabotage.

Although it is conceivable that customer injustice can mostly be directed to harm-doing customers based on target similarity effect, it will be also worthwhile to explore employees' possibility of committing another form of retaliatory action toward different targets, including competitors, co-workers, and subordinates in the workplace. Future studies should aim to explore such possibilities by understanding its nature (for a review, see Chowdhury and Gürtler, 2015) to apply a different theoretical perspective (e.g., displaced aggression).

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by McGill University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

This research was originally conducted as a part of YHS's doctoral dissertation at McGill University, Desautels Faculty of Management. YHS wrote the original manuscript including conception, design, and statistical analysis, and JP revised the manuscript and reviewed the statistical analysis for the submission. Both authors read and approved the submitted version of manuscript.

REFERENCES

Anderson, E. W., Fornell, C., and Rust, R. T. (1997). Customer satisfaction, productivity, and profitability: differences between goods and services. *Mark. Sci.* 16, 129–145. doi: 10.1287/mksc.16.2.129

Ashton-James, C. E., and Ashkanasy, N. M. (2008). Affective events theory: a strategic perspective. *Res. Emot. Organ.* 4, 1–34. doi: 10.1016/S1746-9791(08)04001-7

Bakker, A. B. (2008). "Building engagement in the workplace," in *The Peak Performing Organization*. eds. C. Cooper and R. Burke (London: Routledge), 50–72.

Barclay, L. J., Skarlicki, D. P., and Pugh, S. D. (2005). Exploring the role of emotions in injustice perceptions and retaliation. *J. Appl. Psychol.* 90, 629–643. doi: 10.1037/0021-9010.90.4.629

Bauer, D. J., and Curran, P. J. (2005). Probing interactions in fixed and multilevel regression: inferential and graphical techniques. *Multivar. Behav. Res.* 40, 373–400. doi: 10.1207/s15327906mbr4003_5

Bettencourt, B., Talley, A., Benjamin, A. J., and Valentine, J. (2006). Personality and aggressive behavior under provoking and neutral conditions: a meta-analytic review. *Psychol. Bull.* 132, 751–777. doi: 10.1037/0033-2909.132.5.751

Bolger, N., Davis, A., and Rafaeli, E. (2003). Diary methods: capturing life as it is lived. *Annu. Rev. Psychol.* 54, 579–616. doi: 10.1146/annurev.psych.54.101601.145030

Bowling, N. A., Burns, G. N., Stewart, S. M., and Gruys, M. L. (2011). Conscientiousness and agreeableness as moderators of the relationship between neuroticism and counterproductive work behaviors: a constructive replication. *Int. J. Sel. Assess.* 19, 320–330. doi: 10.1111/j.1468-2389.2011.00561.x

Brislin, R. W. (1990). "Applied cross-cultural psychology: an introduction," in *Applied Cross-Cultural Psychology*. ed. R. W. Brislin (Newbury Park, CA: Sage), 9–33. doi: 10.4135/9781483325392.n1

Caprara, G. V., Barbaranelli, C., and Zimbardo, P. G. (1996). Understanding the complexity of human aggression: affective, cognitive, and social dimensions of individual differences in propensity toward aggression. *Eur. J. Personal.* 10, 133–155. doi: 10.1002/(SICI)1099-0984(199606)10:2<133::AID-PER252>3.0.CO;2-E

Chi, N. W., Tsai, W. C., and Tseng, S. M. (2013). Customer negative events and employee service sabotage: the roles of employee hostility, personality and group affective tone. *Work Stress* 27, 298–319. doi: 10.1080/02678373.2013.819046

Chowdhury, S. M., and Gürtler, O. (2015). Sabotage in contests: a survey. *Public Choice* 164, 135–155. doi: 10.1007/s11127-015-0264-9

Costa, P.T. Jr, and McCrae, R.R. (1992). *NEO-PI-R Professional Manual*. Odessa, FL: Psychological Assessment Resources.

Douglas, S. C., and Martinko, M. J. (2001). Exploring the role of individual differences in the prediction of workplace aggression. *J. Appl. Psychol.* 86, 547–559. doi: 10.1037/0021-9010.86.4.547

Edwards, J. R., and Rothbard, N. P. (2000). Mechanisms linking work and family: specifying the relationships between work and family constructs. *Acad. Manag. Rev.* 25, 178–199. doi: 10.2307/259269

Egan, V., and Lewis, M. (2011). Neuroticism and agreeableness differentiate emotional and narcissistic expressions of aggression. *Personal. Individ. Differ.* 50, 845–850. doi: 10.1016/j.paid.2011.01.007

Ehrhart, K. H., Roesch, S. C., Ehrhart, M. G., and Kilian, B. (2008). A test of the factor structure equivalence of the 50-item IPIP five-factor model measure across gender and ethnic groups. *J. Pers. Assess.* 90, 507–516. doi: 10.1080/00223890802248869

Fine, S., Horowitz, I., Weigler, H., and Basis, L. (2010). Is good character good enough? The effects of situational variables on the relationship between integrity and counterproductive work behaviors. *Hum. Resour. Manag. Rev.* 20, 73–84. doi: 10.1016/j.hrmr.2009.03.010

Flaherty, S., and Moss, S. A. (2007). The impact of personality and team context on the relationship between workplace injustice and counterproductive work behavior. *J. Appl. Soc. Psychol.* 37, 2549–2575. doi: 10.1111/j.1559-1816.2007.00270.x

Folger, R. (2001). "Fairness as deonance," in *Research in Social Issues in Management. Vol. 1*. eds. S. W. Gilliland, D. D. Steiner and D. P. Skarlicki, (Mahwah, NJ: Erlbaum), 3–33.

Fox, S., Spector, P. E., and Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *J. Vocat. Behav.* 59, 291–309. doi: 10.1006/jvbe.2001.1803

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Hum. Relat.* 53, 1027–1055. doi: 10.1177/0018726700538001

Glomb, T. M., and Liao, H. (2003). Interpersonal aggression in work groups: social influence, reciprocal, and individual effects. *Acad. Manag. J.* 46, 486–496. doi: 10.5465/30040640

Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt and F. Ostendorf (Eds.), *Personality Psychology in Europe* (Vol. 7, pp. 7–28). Tilburg, The Netherlands: Tilburg University Press.

Gouldner, A. W. (1960). The norm of reciprocity: a preliminary statement. *Am. Sociol. Rev.* 25, 161–178. doi: 10.2307/2092623

Grandey, A. A., Dickter, D. N., and Sin, H. P. (2004). The customer is not always right: customer aggression and emotion regulation of service employees. *J. Organ. Behav.* 25, 397–418. doi: 10.1002/job.252

Grandey, A. A., Kern, J. H., and Frone, M. R. (2007). Verbal abuse from outsiders versus insiders: comparing frequency, impact on emotional exhaustion, and the role of emotional labor. *J. Occup. Health Psychol.* 12, 63–79. doi: 10.1037/1076-8998.12.1.63

Gunthert, K. C., Cohen, L. H., and Armeli, S. (1999). The role of neuroticism in daily stress and coping. *J. Pers. Soc. Psychol.* 77, 1087–1100. doi: 10.1037/0022-3514.77.5.1087

Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). Multivariate data analysis (5th Ed.) New York: Prentice Hall.

Harris, L. C., and Ogbonna, E. (2002). Exploring service sabotage: the antecedents, types and consequences of frontline, deviant, antiservice behaviors. *J. Serv. Res.* 4, 163–183. doi: 10.1177/1094670502004003001

Harter, J. K., Schmidt, F. L., Killham, E. A., and Asplund, J. W. (2006). *Q12® meta-analysis*. Omaha, NE: Gallup Organization.

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *Am. Psychol.* 44, 513–524. doi: 10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Appl. Psychol.* 50, 337–421. doi: 10.1111/1464-0597.00062

Hofstede, G. H. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. (2nd ed.). Thousand Oaks, CA: Sage.

Holmvall, C. M., and Sidhu, J. (2007). Predicting customer service employees' job satisfaction and turnover intentions: the roles of customer interactional injustice and interdependent self-construal. *Soc. Justice Res* 20, 479–496. doi: 10.1007/s11211-007-0049-5

Izard, C. E., Libero, D. Z., Putnam, P., and Haynes, O. M. (1993). Stability of emotion experiences and their relations to traits of personality. *J. Pers. Soc. Psychol.* 64, 847–860. doi: 10.1037/0022-3514.64.5.847

Izard, C. E., and Malatesta, C. Z. (1987). "Perspectives on emotional development. I: differential emotions theory of early emotional development," in *Handbook of Infant Development*. ed. J. D. Osofsky. 2nd ed (New York: Wiley-Interscience), 494–554.

Klein, K. J., Bliese, P., Kozlowski, S., Dansereau, F., Gavin, M., Griffin, M., et al. (2000). "Multilevel analysis techniques: commonalities, differences, and continuing questions," in *Multilevel Theory, Research, and Methods in Organizations*. eds. K. J. Kline and S. W. Kozlowski (San Francisco: Jossey-Bass), 512–553.

Lavelle, J. J., Rupp, D. E., and Brockner, J. (2007). Taking a multifoci approach to the study of justice, social exchange, and citizenship behavior: The target similarity model. *J. Manag.* 33, 841–866. doi: 10.1177/0149206307307635

Lee, K., and Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: the role of affect and cognitions. *J. Appl. Psychol.* 87, 131–142. doi: 10.1037/0021-9010.87.1.131

Lee, J. J., and Ok, C. M. (2014). Understanding hotel employees' service sabotage: emotional labor perspective based on conservation of resources theory. *Int. J. Hosp. Manag.* 36, 176–187. doi: 10.1016/j.ijhm.2013.08.014

Malatesta, C. Z. (1990). "The role of emotions in the development and organization of personality," in *Socioemotional development*. ed. R. Thompson (Nebraska Symposium on Motivation. Lincoln: University of Nebraska Press), 1–56.

Mathisen, G. E.Torsheim, T., and Einarsen, S. (2006). The team-level model of climate for innovation: A two-level confirmatory factor analysis. *J. Occup. Organ Psychol.* 79, 23–35.

Matta, F. K., Erol-Korkmaz, H. T., Johnson, R. E., and Bıçaksız, P. (2014). Significant work events and counterproductive work behavior: the role of fairness, emotions, and emotion regulation. *J. Organ. Behav.* 35, 920–944. doi: 10.1002/job.1934

McCrae, R. R. (1990). Controlling neuroticism in the measurement of stress. *Stress Med.* 6, 237–241. doi: 10.1002/smi.2460060309

McCrae, R. R., and Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *J. Pers.* 54, 385–404. doi: 10.1111/j.1467-6494.1986.tb00401.x

McDonald, R. P. (1993). A general model for two-level data with responses missing at random. *Psychometrika* 58, 575–585.

Milam, A. C., Spitzmueller, C., and Penney, L. M. (2009). Investigating individual differences among targets of workplace incivility. *J. Occup. Health Psychol.* 14, 58–69. doi: 10.1037/a0012683

Muthén, L. K., and Muthén, B. O. (2012). Mplus. The comprehensive modelling program for applied researchers: User's guide, 5.

Newsome, S., Day, A. L., and Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personal. Individ. Differ.* 29, 1005–1016. doi: 10.1016/S0191-8869(99)00250-0

Nunnally, J. C., and Bernstein, I. H. (1994). *Psychometric Theory*. (3rd ed.). New York: McGraw-Hill.

Ohly, S., Sonnentag, S., Niessen, C., and Zapf, D. (2010). Diary studies in organizational research: an introduction and some practical recommendations. *J. Pers. Psychol.* 9, 79–93. doi: 10.1027/1866-5888/a000009

Paunonen, S. V., and Jackson, D. N. (2000). What is beyond the big five? Plenty! *J. Pers.* 68, 821–835. doi: 10.1111/1467-6494.00117

Penney, L. M., and Spector, P. E. (2005). Job stress, incivility, and counterproductive work behavior (CWB): The moderating role of negative affectivity. *J. Organ. Behav.* 26, 777–796. doi: 10.1002/job.336

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88, 879–903. doi: 10.1037/0021-9010.88.5.879

Reis, H. T., and Gable, S. L. (2000). Event-sampling and other methods for studying everyday experience. In H. T., Reis, and C. M., Judd *Handbook of research methods in social and personality psychology*. 190–222. Cambridge University Press.

Revelle, W., and Scherer, K. R. (2009). "Personality and emotion," in *Oxford Companion to Emotion and the Affective Sciences*. eds. D. Sander and K. R. Scherer (New York: Oxford University Press), 304–306.

Rodell, J. B., and Judge, T. A. (2009). Can "good" stressors spark "bad" behaviors? The mediating role of emotions in links of challenge and hindrance stressors with citizenship and counterproductive behaviors. *J. Appl. Psychol.* 94, 1438–1451. doi: 10.1037/a0016752

Rubin, R. S., Munz, D. C., and Bommer, W. H. (2005). Leading from within: the effects of emotion recognition and personality on transformational leadership behavior. *Acad. Manag. J.* 48, 845–858. doi: 10.5465/amj.2005.18803926

Rupp, D. E., McCance, A. S., Spencer, S., and Sonntag, K. (2008). Customer (in)justice and emotional labor: the role of perspective taking, anger, and emotional regulation. *J. Manag.* 34, 903–924. doi: 10.1177/0149206307309261

Rupp, D. E., and Spencer, S. (2006). When customers lash out: the effects of customer interactional injustice on emotional labor and the mediating role of discrete emotions. *J. Appl. Psychol.* 91, 971–978. doi: 10.1037/0021-9010.91.4.971

Shao, R., and Skarlicki, D. P. (2014). Service employees' reactions to mistreatment by customers: a comparison between North America and East Asia. *Pers. Psychol.* 67, 23–59. doi: 10.1111/peps.12021

Sims, R. L. (2002). Ethical rule breaking by employees: a test of social bonding theory. *J. Bus. Ethics* 40, 101–109. doi: 10.1023/A:1020330801847

Skarlicki, D. P., Folger, R., and Tesluk, P. (1999). Personality as a moderator in the relationship between fairness and retaliation. *Acad. Manag. J.* 42, 100–108.

Skarlicki, D. P., van Jaarsveld, D. D., Shao, R., Song, Y. H., and Wang, M. (2016). Extending the multifoci perspective: the role of supervisor justice and moral identity in the relationship between customer justice and customer-directed sabotage. *J. Appl. Psychol.* 101, 108–121. doi: 10.1037/apl0000034

Skarlicki, D. P., van Jaarsveld, D. D., and Walker, D. D. (2008). Getting even for customer interpersonal injustice: the role of moral identity in the relationship between customer interpersonal injustice and employee sabotage. *J. Appl. Psychol.* 93, 1335–1347. doi: 10.1037/a0012704

Smith, C. A., and Lazarus, R. S. (1990). "Emotion and adaptation," in *Handbook of Personality: Theory and Research*. ed. L. A. Pervin (New York, NY: Guilford Press), 609–637.

Song, Y. H., Skarlicki, D. P., Shao, R., and Park, J. (2021). Reducing Customer-Directed Deviant Behavior: The Roles of Psychological Detachment and Supervisory Unfairness. *J. Manag. Res.* 47, 2008–2036. doi: 10.1177/0149206320925877

Staw, B. M., Sutton, R. I., and Pelled, L. H. (1994). Employee positive emotion and favorable outcomes at the workplace. *Organ. Sci.* 5, 51–71. doi: 10.1287/orsc.5.1.51

Tellegen, A. (1985). "Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report," in *Anxiety and the Anxiety Disorders*. eds. A. H. Tuma and J. D. Maser (Hillsdale, NJ: Erlbaum), 681–706.

Twenge, J. M., Zhang, L., Catanese, K. R., Dolan-Pascoe, B., Lyche, L. F., and Baumeister, R. F. (2007). Replenishing connectedness: reminders of social activity reduce aggression after social exclusion. *Br. J. Soc. Psychol.* 46, 205–224. doi: 10.1348/014466605X90793

Walker, D. D., van Jaarsveld, D. D., and Skarlicki, D. P. (2014). Exploring the effects of individual customer incivility encounters on employee incivility: the moderating roles of entity incivility and negative affectivity. *J. Appl. Psychol.* 99, 151–161. doi: 10.1037/a0034350

Wang, M., Liao, H., Zhan, Y., and Shi, J. (2011). Daily customer interpersonal injustice and employee sabotage against customers: examining emotion and resource perspectives. *Acad. Manag. J.* 54, 312–334. doi: 10.5465/amj.2011.60263093

Wang, M., Liu, S., Liao, H., Gong, Y., Kammeyer-Mueller, J., and Shi, J. (2013). Can't get it out of my mind: employee rumination after customer interpersonal injustice and negative mood in the next morning. *J. Appl. Psychol.* 98, 989–1004. doi: 10.1037/a0033656

Watson, D., and Clark, L. A. (1992). On traits and temperament: general and specific factors of emotional experience and their relation to the five-factor model. *J. Pers.* 60, 441–476. doi: 10.1111/j.1467-6494.1992.tb00980.x

Watson, D., and Clark, L. A. (1994). The PANAS-X: Manual for the positive and negative affect schedule-expanded form. University of Iowa.

Watson, D., and Tellegen, A. (1985). Toward a consensual structure of mood. *Psychol. Bull.* 98, 219–235. doi: 10.1037/0033-2909.98.2.219

Wegge, J., Dick, R. V., Fisher, G. K., West, M. A., and Dawson, J. F. (2006). A test of basic assumptions of affective events theory (AET) in call Centre work. *Br. J. Manag.* 17, 237–254. doi: 10.1111/j.1467-8551.2006.00489.x

Weiss, H. M., and Cropanzano, R. (1996). Affective events theory: a theoretical discussion of the structure, causes and consequences of affective experiences at work. *Res. Organ. Behav.* 18, 1–74.

Zapf, D., Knorz, C., and Kulla, M. (1996). On the relationship between mobbing factors, and job content, social work environment, and health outcomes. *Eur. J. Work Organ. Psy.* 5, 215–237. doi: 10.1080/13594329608414856

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

APPENDIX

Customer Injustice Items (Skarlicki et al., 2008)

1. Refused to listen to you
2. Interrupted you: Cut you off mid-sentence
3. Made demands that you could not deliver
4. Raised irrelevant discussion
5. Doubted your ability
6. Yelled at you
7. Used condescending language (e.g., "you are an idiot")
8. Spoke aggressively to you

Customer-directed Sabotage Items (Skarlicki et al., 2008)

1. Hung up on the customer.
2. Intentionally put the customer on hold for a long period of time.
3. Purposefully transferred the customer to the wrong department.
4. Purposefully disconnected the call.
5. Told the customer that you fixed something but did not fix it.

frontiers | Frontiers in Psychology

HYPOTHESIS AND THEORY
published: 08 April 2022
doi: 10.3389/fpsyg.2022.823416

Research on the Influence of Tolerance of Opportunistic Behaviors of Channel Boundaries on the Choice of Response Strategies

Jinsong Chen, Zhaoxia Liu and Ruoqian Hu*

Department of Marketing, College of Business Administration, Guizhou University of Finance and Economics, Guiyang, China

In the Chinese society, border agents in channel transactions will choose different opportunistic behavior response strategies to the tolerance of other members based on the relationship between the two parties. Based on 206 valid questionnaires collected, structural equation model and regression analysis were used to investigate the influence of opportunistic behavior tolerance on response strategy selection. The results show that the channel boundary personnel's tolerance to opportunistic behavior (based on work or personal) negatively influences their choice of a positive response strategy and positively influences their choice of a negative response strategy. Among the mediating effects of contract formulation, transaction terms have a positive effect on the choice of negative response strategies based on the work and individual opportunistic behavior tolerance and have no mediating effect on the choice of positive response strategies; the contingency clause has no mediating effect on the choice of positive response strategies based on individual opportunistic behavior tolerance.

Keywords: opportunistic behavior, opportunistic behavior tolerance, opportunistic behavior response strategy selection, contract formulation, psychological contract

OPEN ACCESS

Edited by:
Živile Stankeviciute, Kaunas University of Technology, Lithuania

Reviewed by:
Jeeta Sarkar, XIM University, India
Nada Trunk, International School for Social and Business Studies, Slovenia

****Correspondence:***
Zhaoxia Liu
sunrise_6329@163.com

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *27 November 2021*
Accepted: *11 March 2022*
Published: *08 April 2022*

Citation:
Chen J, Liu Z and Hu R (2022) Research on the Influence of Tolerance of Opportunistic Behaviors of Channel Boundaries on the Choice of Response Strategies. Front. Psychol. 13:823416. doi: 10.3389/fpsyg.2022.823416

INTRODUCTION

With an increase in channel modes, opportunistic behaviors between channels become more frequent. Opportunistic behavior is an act of "seek self-interest by trickery" that refers to a channel member at the expense of the other channel member's interests to maximize benefits, including fraud, breach of contract, dishonesty, and distortion of facts (Williamson, 1975). Channel transactions involve business contacts between both sides and include interpersonal communication. The tolerance of opportunistic behavior based on personal and work will affect the completeness of the transaction terms and the comprehensiveness of the contingency-handling terms of both parties, and they will adopt different response strategies to the opportunistic behavior of the other party.

The following issues are worth exploring: with an increase in the number of transactions, the accumulation of feelings of channel boundary personnel, and the establishment of a specific transaction basis, channel boundary personnel will take opportunistic behavior to maximize their interests. When the other party implements opportunistic behavior, what response strategy should they choose? How to make more perfect and detailed contract terms for different suppliers to reduce the risk of cooperation? Based on this, from the perspective of channel boundary personnel's tolerance of opportunistic behavior, this article studies which response strategies channel boundary

personnel choose based on different roles' tolerance of opportunistic behavior and explores the mediating effect of contract formulation. First, it is hoped that this study can reveal the relationship between opportunistic tolerance, contract formulation, and response strategy selection of channel boundary personnel and enrich the research on contract formulation and response strategy selection of opportunistic behavior. Second, it can expand the application of contract formulation in the governance of opportunistic behavior, to provide guidance for channel boundary personnel to choose opportunistic behavior response strategies and to improve the level of contract formulation for both organizations and managers, in order to maintain a healthy channel relationship.

LITERATURE REVIEW

Research on Tolerance of Opportunistic Behavior

Opportunistic behavior and opportunistic behavior tolerance are two different concepts involving different aspects of the parties. Opportunistic behavior is an essential hypothesis in transaction cost theory, which describes the motivation of a channel provider. One party use trick, deception, and concealment of information to seek its interests (Williamson, 1975). In contrast, opportunistic behavior tolerance refers to one party's willingness to tolerate or forgive the other party's opportunistic behavior, which measures one party's tolerance to the other party's implementation of opportunistic behavior (Qian and Zhang, 2018). In the channel transaction, channel members' channeling goods, breach of contract, rip-off behavior is typical, bringing specific negative influences to the channel relationship. However, as far as the actual channel management is concerned, the tolerance of some opportunistic behaviors also exists objectively (Wathne and Heide, 2000). The moderating orientation of the enterprise owner will affect the limited degree of its tolerance to the opportunistic behavior of the other party. Because the enterprises that prevent orientation have a lower tolerance to the risk of loss, the threshold of the tolerance to opportunistic behavior of the enterprise owner is lower than the enterprises that promote orientation (Qian and Zhang, 2018).

Furthermore, as proprietary assets increase, one party will compare transaction costs to actual losses and tend to tolerate and learn from weak forms of opportunistic behavior by its partner (Luo et al., 2015). In addition, when the power and dependence of channel members are not equal, the party with solid dependence and the party with small channel power will tolerate the opportunistic behavior of the other party (Chen et al., 2019). Based on Chen's (2017) research, this article argues that individual-based opportunistic behavior tolerance is an attitude toward the opportunistic behavior of channel cooperation organizations based on the personal relationship between border personnel. Work-based opportunistic behavior tolerance is an attitude toward the opportunistic behavior of channel cooperation organizations based on the responsibilities of border personnel in the organization.

Related Research on Opportunistic Behavior Response Strategies

Hirschman (1970) was the first to propose response strategies, including exit, voice, and loyalty, known as the EVL model, which is mainly applied in enterprise management. Based on this, Rusbult et al. (1982) added neglect, which means that he does not react to the other party's behavior, and will slowly alienate the other party and modify the model to the EVLN model to study the general reaction to the unsatisfactory situation in the exchange relationship. The EVLN model has been applied to various organizational environments, including employee attitudes toward colleagues, psychological contract, role conflict, and autonomy. The application of the response strategy in channel research started with Ping (1993), who mainly studied what response strategy channel members would adopt when the channel relationship was destroyed. Based on the EVLN model, Seggie et al. (2013) subdivided the EVLN model into six levels in the study of channel members' tolerance to opportunistic behavior, including passive acceptance, constructive discussion, complaint, alienation, threatening exit, and sign out. The six opportunistic response mechanisms can be divided into positive and negative ones. The positive ones include positive suggestions and passive acceptance, while the negative ones include expressing complaints, alienating relationships, threatening exit, and signing out. Scholars have explored the antecedents of opportunistic behavior response strategies and confirmed that enterprise regulation orientation (Qian and Zhang, 2018), psychological contract violation (Kingshott et al., 2020), channel power (Zhang et al., 2016), and human relationship (Zhang and Yin, 2019) would affect channel members' choice of neglect, appeal, exit, and loyalty. Based on the Seggie et al.'s classification of response strategies to opportunistic behaviors, this study explores the influence of tolerance of opportunistic behaviors on the choice of response strategies to opportunistic behaviors.

Research on Contract Formulation

With the continuous expansion of market scale and the increase in channel mode, contract plays an increasingly important role in transactions. Enterprises usually sign contracts to clarify transaction items and improve management efficiency (Wang et al., 2019). Based on transaction cost theory, many researchers have explored the role of contracts in managing interorganizational relations (Zhang et al., 2017; Yang et al., 2018). Song and Chen (2020) pointed out that suppliers and distributors often use contracts to protect their obligations, responsibilities, and roles in the transaction cooperation, reduce the risks and uncertainties in the transaction relationship, and reduce the possibility of opportunistic behavior. Some scholars also believe that the contract itself is highly binding, and signing the contract means distrust of the other party (Ghoshal and Moran, 1996), which may increase the generation of retaliation and resistance (Kashyap and Murtha, 2017), leading to the failure to establish a good relationship between channel members and promote the occurrence of opportunistic behaviors. The above views have been verified in empirical studies, but the research on contracts is too single. Luo (2002) divides contract clauses

into terms specificity and contingency adaptability. The precise terms of the transaction relate to the degree of detail that is generally foreseeable about the relevant matters; a comprehensive contingency clause refers to whether the contingency has been dealt with in detail. Zhou et al. (2013) studied the inhibiting effect of detailed transaction clauses and contingency-handling clauses on opportunistic behaviors. They verified the influence of the long-term orientation of enterprises and contract clauses on opportunistic behaviors. This study draws on Luo's division of contract formulation and explores its mediating role in the influence of channel boundary personnel's opportunistic behavior tolerance on response strategy choice.

Through the review of relevant literature, it is found that, first, in the case of cooperation between the two parties, channel boundary personnel will choose different response strategies to the opportunistic behavior of the other party based on their different roles, but the existing research on this aspect is insufficient. Second, the opportunistic behavior response strategy mainly focuses on passive acceptance, constructive discussion, and withdrawal, and the research on the choice of an opportunistic behavior response strategy is not enough. Third, the study of contract making in opportunistic behavior tolerance is insufficient, and it is only studied as a governance mechanism. However, it plays a more critical role in tolerating opportunistic behavior. Therefore, from the perspective of channel boundary personnel's tolerance of opportunistic behaviors, this article explores how channel boundary personnel choose response strategies of opportunistic behaviors based on different roles' tolerance of opportunistic behaviors and explores the mediating effect of contract formulation.

MATERIALS AND METHODS

Transaction Cost Theory

Coase (1937) first proposed the theory of transaction cost, which was applied in economics. He believed that the phenomenon of using price mechanisms in the transaction is universal, and the cost generated in this process is the transaction cost. Williamson (1975) further explored the theory of transaction costs and pointed out that the costs were generated from transactions, including asset specificity, transaction uncertainty, and transaction frequency. Asset specificity is the dedicated investment of a portion of an asset for a specific activity. The degree of asset specificity is positively proportional to the probability of opportunistic behaviors. The more invested assets, the more likely they are to encounter opportunistic behaviors of channel members of the opposite party. Transaction uncertainty refers to the environmental and risk uncertainty that may exist in the process of channel transaction, which will increase the probability of opportunistic behavior. Transaction frequency can effectively reduce transaction costs. With the increase in transaction frequency, both parties will have more and more input costs and higher exit barriers. From the perspective of profit maximization, both channel members will pay more attention to long-term profits and reduce the frequency of opportunism to the other party. The two hypotheses of transaction cost are bounded rationality and opportunism, respectively. First, both parties are bounded rational in the transaction process, so it is impossible to predict all future situations in place, and the contract signed by both parties cannot contain all situations. When unexpected situations occur, both parties will increase the transaction costs in the process of bargaining. The second is opportunistic behavior. Both parties will act opportunistic behavior to maximize their interests in the transaction process. To avoid the occurrence of opportunistic behavior, both sides of the transaction need to establish a contract to restrain each other's behavior, which will increase the transaction cost (Williamson, 1975, 1985). Based on the scholars' research, this study uses the uncertainty and opportunistic hypothesis in transaction cost theory to explore the influence of opportunistic behavior tolerance on the choice of response strategy and the mediating role of contract formulation. Based on the assumption of uncertainty, the completeness of the transaction clauses signed by both parties is different from the completeness of the contingency-handling clauses. Based on the assumption of opportunistic behavior, when the other party violates the terms of the contract and carries out opportunistic behavior to its side, its side will choose different response strategies.

Psychological Contract Theory

Psychological contract theory originated from organizational behavior and was initially applied in human resources, but now psychological contract theory is widely used in marketing research. Argyris and Ditz (1960) first proposed the concept of the psychological contract in his research but did not define it in detail. Levinson, the originator of the concept of the psychological contract, defines a psychological contract as an "unwritten contract" formed between an organization and its employees; in other words, the belief that an individual exchanges terms and conditions of a contract with another party (Robinson, 1996). In a marketing environment, a psychological contract is consumers' cognition and belief of implicit and unwritten mutual responsibility and obligation between themselves and enterprises (She et al., 2020). In the organizational environment, a psychological contract is a mutual agreement that restricts both employees and employers (Robbins, 2012). Based on the psychological contract perspective, Lusch and Brown (1996) studied the relationship between enterprises and channel dealers in channel transactions. The psychological contract can be divided into transactional and relational contracts, representing different orientations. Relational contracts mainly consider long-term interests, while transactional contract pays more attention to immediate interests. In the channel transaction, more attention is paid to the relationship contract, the contract between the two sides of the channel organization, organization and personnel, personnel and personnel. The contract will influence the behavior of the two sides of the channel members. Different types of psychological contract perception also affect opportunistic behaviors in channels (Chen et al., 2017). Based on this, this article argues that under the condition of cooperation between the two parties, when channel boundary personnel tolerate the opportunistic behavior of the other party based on work and personal tolerance, the perception of a

psychological contract will affect the opportunistic behavior of border personnel.

Omission Bias Theory

The omission bias originates from omission in jurisprudence, which refers to the legal actor who has a duty and should have the right and obligation to carry out a specific act but does nothing in the actual situation. There are usually two forms of omission, namely, to do nothing and to deliberately choose not to take action or not to change (Yeung et al., 2021). Inaction tendencies are linked to the "principle of harmful behavior," which describes a phenomenon in which harm caused by behavior is often judged morally worse than harmful inaction (Hayashi and Mizuta, 2022). Therefore, when faced with the dilemma of action and inaction, both lead to similar adverse outcomes, people tend to choose omission (Yeung et al., 2021). Therefore, channel boundary personnel are more receptive to the opportunistic behavior caused by the other party's failure to fulfill its obligations or responsibilities and cannot tolerate the opportunistic behavior caused by the other party's failure to do what it can do (Seggie et al., 2013; Chen, 2017). The theory of omission bias is widely used in various fields, moral or legal judgments of various criminal acts due to omission; medical decisions on whether to vaccinate; and the harm of government personnel's inaction to citizens. There is still much room to explore the theory of omission bias in the study of marketing channels. Based on this theory, channel members can understand each other's attitude to opportunistic behavior in the transaction and choose different response strategies.

Model Construction and Theoretical Hypothesis

Based on other scholars' research, the theoretical model of this study is constructed by taking the tolerance of channel boundary personnel to opportunistic behaviors as antecedent variables, opportunistic behavior-coping strategies as outcome variables, and contract formulation as mediator variables, as shown in **Figure 1**.

The first is the relationship between opportunistic tolerance of channel boundary personnel and opportunistic behavior response strategies.

In channel trading, channel members will take opportunistic actions to maximize their interests (Williamson, 1975). First, as a member in the organization, the personnel of channel boundary may assume corresponding responsibilities, considering both sides' cooperation relationship in the organization, in the face of the other side of the opportunism behavior, will think the other party members have no respect for their own, destroyed the contract relationship, and are more reluctant to choose positive opportunism response strategy (passive acceptance and positive suggestions). Second, when the other party carries out opportunistic behavior, channel boundary personnel will think that the other party members do not act and tend to choose negative opportunistic behavior response strategies (expressing complaints, alienating relationships, threatening withdrawal and direct withdrawal) in order to ensure the maximization of organizational interests. Finally, with the increase in investment in proprietary assets in the transaction process, the barriers for both parties to withdraw from the relationship are higher (Williamson, 1985). They will not easily withdraw from the opportunistic behavior of the other party. Based on the above research, the following hypotheses are proposed:

H1a: The more the channel boundary personnel tolerate the other party's opportunistic behavior based on their work, the less they will choose the positive opportunistic behavior response strategy.

H1b: The more the channel boundary personnel tolerate the other party's opportunistic behavior based on their work, the more they will choose the negative opportunistic behavior response strategy.

Compared with the work-based tolerance of opportunistic behavior, individual-based tolerance of opportunistic behavior pays more attention to personal interests and personal emotions.

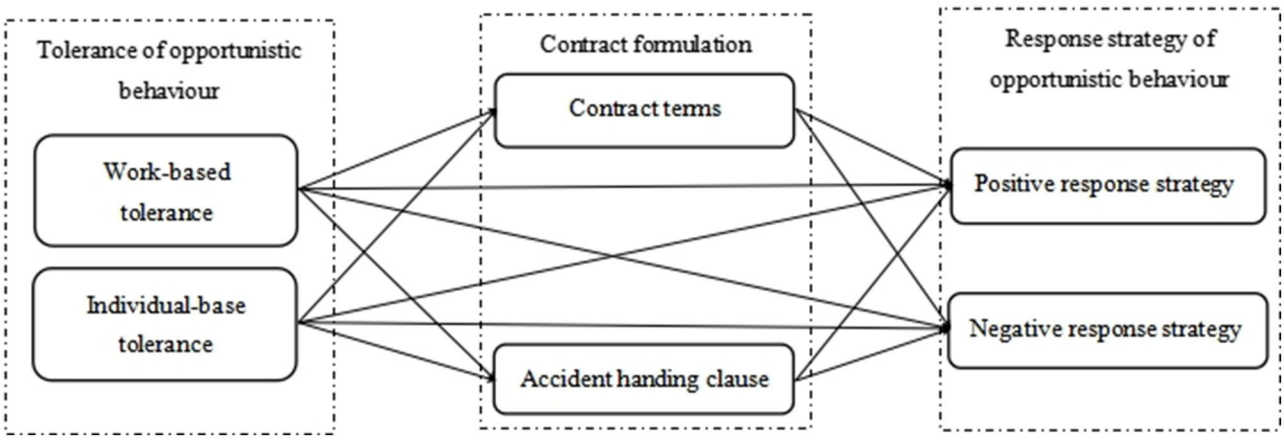

FIGURE 1 | The relationship model between tolerance of opportunistic behavior, contract formulation, and response strategy of opportunistic behavior.

The relationship in China is mainly reflected in human relations. The interpersonal relationship between border personnel on both sides in channel transactions is significant. When the border personnel believe that the two sides have a "psychological connection" through communication or contact (Zhuang et al., 2008), they will tolerate opportunistic behavior based on personal relationships. In the face of the opportunistic behavior of the other member, they will think that the other member has ignored the personal friendship accumulated by both sides, and the less their member will adopt the positive opportunistic behavior response strategy (passive acceptance and positive suggestions). In addition, according to the theory of omission bias, people are more willing to accept the other members due to not as opportunistic behavior (Chen, 2017), for the other members of the intended opportunistic behavior, their members will take opportunism behaviors of the adverse reaction strategy (threatening withdrawal, expressing complaints, alienating relationship and direct withdrawal). Based on the above research, the following assumptions are put forward:

H2a: Based on the individual, the more tolerant the opportunistic behavior of the other party, the less likely the channel boundary personnel will choose the positive opportunistic behavior response strategy.

H2b: The more individuals tolerate opportunistic behavior, the more they choose negative opportunistic behavior response strategies.

The second is the relationship between opportunistic behavior tolerance of channel boundary personnel and contract formulation.

In channel transactions, the contract terms made by channel members and the other party are also different based on their work and personal tolerance to opportunistic behavior. The other party acting beyond the scope of the contract will be more opportunistic and more likely to destroy a stable exchange environment (Qian and Liao, 2021). When the channel boundary personnel are more tolerant of each other's opportunistic behavior based on their work, considering the relationship between both sides form a contract, pay attention to the long-term cooperation of the guidance, the more do not want to let the other side to implement opportunism behavior destroy the relationship between the two sides, in the process of contract making use of trade terms and more detailed and more comprehensive accident-handling terms. When the channel boundary personnel are more tolerant of the opportunistic behavior of the other party, it indicates that both parties have a specific "human basis" and do not want to damage the relationship between them. However, interdependent channel partners need to use institutionalized and legalized contract management channels (Qian and Liao, 2021). They tend to choose more comprehensive contingency settlement clauses and more detailed transaction clauses to reduce conflicts and encourage cooperation. Based on this, the following hypotheses are proposed:

H3a: Channel boundary personnel's tolerance of opportunistic behavior based on work positively impacts the detail of transaction terms.

H3b: Channel boundary personnel's tolerance of opportunistic behavior based on work positively impacts the comprehensiveness of accident-handling clauses.

H3c: Channel boundary personnel's tolerance of opportunistic behavior positively affects the detail of transaction terms.

H3d: Channel boundary personnel's tolerance of opportunistic behavior positively affects the comprehensiveness of accident-handling clauses.

The third is the relationship between contract formulation and the choice of opportunistic response strategies.

The contract represents a formal relationship constraint with legal force, a written norm formed through formal negotiation (Zhou and Poppo, 2010). The contract terms include accident-handling terms and transaction terms. Transaction terms include generally predictable matters. Contingency clauses include future uncertainties in the contract terms (Luo, 2002). According to the neglect bias theory, one's side will perceive that the other side's tolerance of opportunistic behavior, whether based on work or personal, does not respect the agreement reached by both sides and is a manifestation of inaction in the transaction relationship. Therefore, the more detailed the transaction terms signed by both parties or the more comprehensive the contingency-handling terms will be, prompting channel boundary personnel to adopt negative opportunistic behavior response strategies (express complaints to stop loss in time, threaten to quit, alienate the relationship to ensure the protection of vested interests, withdraw to end the cooperative relationship with the other party). The more detailed the transaction terms signed by both parties or the more comprehensive the contingency-handling terms are, the more the channel boundary personnel are restrained from adopting positive opportunistic behavior response strategies (positive suggestions and passive acceptance are selected in turn). Based on the above discussion, this study proposes the following assumptions:

H4a: The details of transaction terms negatively affect the choice of a positive opportunistic behavior response strategy.

H4b: The comprehensiveness of the accident-handling clause hurts the choice of a positive opportunistic behavior response strategy.

H4c: The details of transaction terms positively affect their choice of a negative opportunistic behavior response strategy.

H4d: The accident-handling clause comprehensiveness positively impacts the choice of a negative opportunistic behavior response strategy.

The fourth is the mediating role of contract formulation.

Transaction cost theory believes that transaction uncertainty, that is, the probability of various risks occurring in the transaction process, is an important factor affecting transaction costs (Williamson, 1985). The contract stipulates the responsibilities and obligations of both parties, increasing the transparency of cooperation between the two parties (Tang et al., 2021) and reducing uncertainty (Kashyap and Murtha, 2017). Therefore, both companies will consider transaction costs and relationship coordination, jointly draft contract terms, and clear transaction items (Wang et al., 2019). The transaction clause in the contract can restrain each other's behavior and reduce conflicts. In case of uncertainty, the loss of

both parties can be reduced, and the cooperative relationship can be maintained according to the contingency clause (Zhou et al., 2013). Channel border personnel, whether based on their job responsibilities within the organization, or based on the personal relationship status of opportunistic behavior to adopt a tolerant attitude, are considering there are certain dependencies on both sides, right now are more willing to use the prior consensus of formal contract to express emphasis on relations of cooperation, to guide subsequent transactions (Qian and Liao, 2021). Therefore, the opportunistic behavior tolerance of channel boundary personnel influences the choice of response strategy through contract formulation. Based on the above discussion, this study puts forward the following assumptions:

H5a: Channel boundary personnel choose positive opportunistic behavior response strategies based on job tolerance of opportunistic behavior through accident-handling clauses.

H5b: Channel boundary personnel choose positive opportunistic behavior response strategies through transaction terms based on job tolerance of opportunism behavior.

H5c: Channel boundary personnel choose negative opportunistic behavior response strategies through accident-handling clauses based on job tolerance of opportunism behavior.

H5d: Channel boundary personnel choose negative opportunistic behavior response strategies through transaction terms based on job tolerance of opportunism behavior.

H5e: Based on the individual's tolerance of opportunistic behavior, channel boundary personnel can influence their choice of positive opportunistic behavior response strategy through accident-handling clause.

H5f: Based on the individual's tolerance of opportunistic behavior, channel boundary personnel influence their choice of positive opportunistic behavior response strategy through transaction terms.

H5g: Channel boundary personnel choose negative opportunistic behavior response strategies based on individual tolerance of opportunistic behavior through accident-handling clause.

H5h: Based on individual tolerance of opportunistic behavior, channel boundary personnel influence their response strategies to negative opportunistic behavior through transaction terms.

Questionnaire Design and Research Samples

In the prediction stage, this study selects electronics industry, through electronic mail questionnaire, a total of 120 questionnaires, to take practical questionnaire analysis by SPSS software series, minor repairs on a questionnaire, delete the item title, not modify inaccurate expression language, and eventually formed the formal questionnaire for this study. During the formal investigation stage, select Beijing Zhongguancun electronic products channel boundary personnel as the research object, a total of 250 questionnaires were distributed, 220 copies were recovered, of which 206 valid questionnaires, the effective recovery rate was 82.4%, as shown in **Figure 2.**

The scales in this study are all from the mature scale. In order to make the items closer to the situation of the channel boundary personnel, the items are slightly modified in combination with the social background of Chinese human relations. All the measurement items of scale variables were measured by the Likert 7-point scoring method, with the degree from 1 to 7 becoming deeper and deeper, from completely disagree to completely agree. Respondents chose items from 1 to 7 according to their actual situation.

The opportunistic behavior tolerance scale refers to the scale developed by Chen (2017) and is modified in combination with the actual situation between social background and channels. Finally, it was determined that there are four items for individual-based opportunistic tolerance (TP) and four items for work-based opportunistic tolerance (TW). Opportunistic behavior reaction strategy references Zhang et al. (2016) and Zhang and Yin (2019) revised scale based on Ping (1993) division of opportunistic behavior reaction strategy and connecting with the social background and the actual situation of modified between channels, ultimately determining five items for passive

FIGURE 2 | Sample statistical distribution results.

TABLE 1 | Questionnaire items and reliability test.

Latent variable	Observation items	Factor load	Mean	SD
Individual-based tolerance of opportunistic behavior AVE = 0.784, Cronbach's α = 0.908, CR = 0.927	TP1: Because of the personal relationship, to protect our interests, partners occasionally give us some untrue information, and we can often accept it.	0.913	4.859	1.5879
	TP2: Because of the personal relationship, sometimes the partner made promises to us on certain things, but then they did not really do it, and we often did not care about it.	0.863	4.835	1.5623
	TP3: Because of the personal relationship, sometimes the partner does not comply with the agreement reached with us to protect their interests, and we often do not hold it accountable.	0.871	4.854	1.6844
	TP4: Because of the personal relationship, sometimes partners have to hide some facts to get what they want from us, and we often tolerate it.	0.893	4.879	1.6586
Work-based tolerance of opportunistic behavior AVE = 0.770, Cronbach's α = 0.900, CR = 0.931	TW1: Based on the working relationship, we will tolerate the occasional behavior of partners who provide us with untrue information.	0.890	4.927	1.6078
	TW2: Based on the working relationship, we often tolerate the partner's failure to fulfill promises.	0.863	4.879	1.7022
	TW3: Based on the working relationship, we will tolerate the occasional non-compliance of the agreement with the manufacturer by the partner.	0.871	4.840	1.6075
	TW4: Based on the working relationship, we will tolerate the occasional behavior of the partner to conceal some facts.	0.886	4.913	1.5810
Passive acceptance AVE = 0.764, Cronbach's α = 0.921, CR = 0.942	AC1: If the partner has problems, I do not have to say anything to the partner because these problems will be solved by myself.	0.886	3.131	1.5640
	AC2: If there is a problem with this partner, I will ignore it because they will be resolved by themselves.	0.883	3.121	1.3968
	AC3: If there is a problem with the partner, the partner's problem and I will usually resolve it independently.	0.864	3.053	1.5994
	AC4: If there is a problem with this partner, I will ignore the problem with this supplier.	0.844	3.131	1.6579
	AC5: If there is a problem with this partner, I usually ignore it because they will be resolved by themselves.	0.892	3.068	1.6514
Positive suggestions AVE = 0.795, Cronbach's α = 0.913, CR = 0.939	VO2: If there is a problem with the partner, I will work with him to improve the situation.	0.892	4.971	1.6847
	VO3: If we face common problems, I will work with my partners to solve the problems we face together.	0.880	4.985	1.5726
	VO4: If we face a common problem, I will discuss any related issues with my partners.	0.884	4.888	1.6652
	VO5: If we face common problems, I will discuss our common problems with my partners.	0.909	4.791	1.6049
Express complaints AVE = 0.823, Cronbach's α = 0.926, CR = 0.949	CO1: If there is a problem with the partner, I will tell the partner that it is not feasible.	0.916	4.806	1.3868
	CO2: If there is a problem with the partner, I will tell the partner that his behavior is unacceptable.	0.891	4.684	1.5500
	CO3: If there is a problem with the partner, I will tell the partner I am dissatisfied.	0.901	5.010	1.6849
	CO4: If there is a problem with the partner, I will tell the partner that doing so will affect our cooperation.	0.921	5.010	1.6704
Estrangement AVE = 0.844, Cronbach's α = 0.906, CR = 0.942	NEG2: If we have a problem, I do not care about anything that happens as long as I get what I want.	0.940	3.170	1.7711
	NEG3: If we have a problem, I have given up paying attention to my partner and making the situation worse and worse.	0.910	3.248	1.5115

(Continued)

TABLE 1 | Continued

Latent variable	Observation items	Factor load	Mean	SD
	NEG4: If we have a problem, I will look forward to the deterioration of the relationship with our partners.	0.906	3.223	1.6932
Threatening exit AVE = 0.804, Cronbach's α = 0.936, CR = 0.934	WIT1: I will tell the partner that I will consider ending the transaction relationship if the problem is not resolved.	0.902	3.087	1.6206
	WIT2: I will tell the partner that I may not continue maintaining the trading relationship with this partner if the problem is not resolved.	0.888	3.136	1.5177
	WIT3: I will tell the partner that I may consider changing to another partner if the problem is not resolved.	0.897	3.189	1.7216
	WIT4: I will tell the partner that I am looking for an alternative partner if the problem is not resolved.	0.896	3.209	1.3399
	WIT5: I will tell the partner that I will soon consider an alternative partner if the problem is not resolved.	0.900	2.913	1.8192
Sign out AVE = 0.810, Cronbach's α = 0.940, CR = 0.955	EX1: If there is a problem with this partner, I will end the relationship.	0.914	3.034	1.6181
	EX2: If there is a problem with this partner, I will not continue to maintain the relationship with this partner.	0.897	3.233	1.5219
	EX3: If there is a problem with this partner, I am looking for a new partner.	0.902	3.248	1.4456
	EX4: If there is a problem with the partner, I will change the partner at the right time.	0.885	3.209	1.7051
	EX5: If there is a problem with this partner, I terminate the trading relationship with this partner.	0.903	3.063	1.6589
Transaction clause AVE = 0.837, Cronbach's α = 0.896, CR = 0.939	EXC1: When dealing with our partners, our contract precisely defines the obligations of both parties.	0.914	4.791	1.6734
	EXC2: When dealing with our partners, we have a formal agreement detailing the responsibilities of both parties.	0.916	4.869	1.8232
	EXC3: When dealing with our partners, our contract stipulates how both parties implement the contract terms.	0.914	4.607	1.3813
Accident handling clause AVE = 0.784, Cronbach's α = 0.862, CR = 0.916	UEXP1: When dealing with our partners, our contract or distribution agreement stipulates legal remedies for failure to fulfill the contract terms.	0.896	4.675	1.5605
	UEXP2: When dealing with our partners, our contract or allocation agreement accurately explains what happens in unplanned events.	0.865	4.728	1.5090
	UEXP3: When dealing with our partners, our contract or distribution agreement explains exactly how to resolve the disagreement.	0.895	4.709	1.6087

acceptance (AC), four items for positive suggestions (VO), three items for expressing complaints (CO), five items for alienating relationships (NEG), five items for threatening exit (WIT), and three items for sign out (EX). The contract formulation measurement refers to the scale revised by Zhou et al. (2013) based on Lusch's contract division. It was modified according to the actual situation between the social background and the channel. Finally, it determined three items of the contract terms (EXC) and three items of the accident-handling clause (UEXP), as shown in **Table 1**.

Statistical Methods

SPSS22.0 and AMOS20.0 software were used to analyze the collected data of 206 valid questionnaires. The items analyzed include (1) verifying the reliability and validity of the questionnaire, (2) the model fitting effect, (3) the standard method deviation analysis, and (4) the model path analysis and intermediary test.

DATA ANALYSIS

Reliability and Validity Test

SPSS22.0 software was used to test the reliability and validity of the scale. In the pre-investigation stage, the returned questionnaire was analyzed, and the items with factor loadings below 0.5 were deleted to form a formal measurement scale. Cronbach's α and CR of all latent variables are more significant than 0.8, indicating that the scale's reliability is good. The factor loadings are all >0.8, and the results show that the scale's validity in this study is good, as shown in **Table 1**. The Average Variance Extracted (AVEs) of all variables are more significant than 0.7. The square roots of the AVEs are all the more significant than the

TABLE 2 | Discriminant validity test.

Variable	TP	TW	AC	VO	CO	NEG	WIT	EX	EXC	UEXP
TP	0.885									
TW	0.339**	0.877								
AC	−0.368**	−0.382**	0.874							
VO	0.413**	0.484**	−0.277**	0.892						
CO	0.410**	0.382**	−0.266**	0.245**	0.907					
NEG	−0.350**	−0.307**	0.231**	−0.268**	−0.229**	0.919				
WIT	−0.432**	−0.423**	0.301**	−0.294**	−0.333**	0.251**	0.901			
EX	−0.222**	−0.196**	0.122	−0.199**	−0.121	0.188**	0.170*	0.900		
EXC	0.323**	0.329**	−0.397**	0.252**	0.436**	−0.331**	−0.392**	−0.131	0.915	
UEXP	0.382**	0.365**	−0.256**	0.354**	0.363**	−0.305**	−0.314**	−0.200**	0.125	0.917

The number on the diagonal represents the square root of AVE; $^{**}p < 0.01$, $^{*}p < 0.05$ (double tail).

TABLE 3 | Overall evaluation index of structural equation model.

Statistical test volume	CMIN	CMIN/DF	RMSEA	GFI	NFI	RFI	IFI	TLI	CFI	PGFI	PNFI	PCFI
Index value	174.405	1.111	0.023	0.922	0.926	0.911	0.992	0.990	0.992	0.689	0.765	0.820

correlation coefficients, indicating that the discriminant validity of the model is good, as shown in **Table 2**.

Evaluation of the Overall Model Fitting Effect

This study uses channel boundary personnel's tolerance to opportunistic behavior as the antecedent variable, opportunistic behavior response strategy as the outcome variable, and contract formulation as an intermediary variable to establish a structural equation model (SEM) to explore channel boundary personnel's tolerance behavior against opportunism research on the influence of behavioral response strategy choices and the mediating role of contract formulation. The 206 questionnaires returned were verified using the AMOS 20 pair model. Through the analysis of the model, root mean square error of approximation (RMSEA) = 0.023, Chi-square degree of freedom (CMIN/DF) = 1.111, goodness of fit index (GFI) = 0.922, normed fit index (NFI) = 0.926, increment fit index (IFI) = 0.992, and comparative fit index (CFI) = 0.992. All the above indexes are within the standard range, indicating that the model fitting effect is good, as shown in **Table 3**.

Model Path Analysis

SEM was used to analyze the hypothetical path, as shown in **Table 4**. First, channel boundary work-based tolerance of opportunistic behavior negatively affects the positive response strategies (ß = −0.53, $p = 0.001$). Work-based tolerance of opportunistic behavior positively impacts negative response strategies (ß = 0.29, $p = 0.000$); H1a and H1b were verified. At the same time, channel boundary personnel individual-based tolerance of opportunistic behavior has a significant negative impact on positive response strategies (ß = −0.39, $p = 0.000$) and a significant positive effect on negative response strategies (ß = 0.37, $p = 0.000$); H2a and H2b was verified.

TABLE 4 | Results of path analysis.

Hypothesis	Relationship	Path coefficient	C.R.	*P*-value	Result
H1a	TW→ PRS	−0.53	−3.603	0.001*	Supported
H1b	TW→ NRS	0.29	3.467	***	Supported
H2a	TP→ PRS	−0.39	−3.603	***	Supported
H2b	TP→ NRS	0.37	4.364	***	Supported
H3a	TW→ CT	0.26	3.280	0.001*	Supported
H3b	TW→ AHC	0.29	3.701	***	Supported
H3c	TP→ CT	0.25	3.213	0.001*	Supported
H3d	TP→ AHC	0.37	3.922	***	Supported
H4a	CT→ PRS	−0.27	−2.710	0.007**	Supported
H4b	AHC→ PRS	−0.53	−1.892	0.058	Not supported
H4c	CT→ NRS	0.46	5.486	***	Supported
H4d	AHC→ NRS	0.29	3.662	***	Supported

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Second, as for the relationship between border personnel's tolerance of opportunistic behavior and contract formulation, the channel border personnel work-based tolerance of opportunistic behavior has a significant positive impact on the completeness of transaction clauses (ß = 0.26, $p = 0.001$) and a significant positive impact on the comprehensiveness of accident-handling clauses (ß = 0.29, $p = 0.000$); H3a and H3b were verified. At the same time, channel boundary personnel based on personal tolerance of opportunistic behavior have a significant positive impact on the completeness of transaction clauses (ß = 0.25, $p = 0.001$), and individual tolerance to opportunistic behavior has a significant positive impact on the comprehensiveness of

TABLE 5 | Intermediary inspection results.

Hypothesis	Mediating effect	Coefficient	Boot SE	95% confidence interval of deviation correction		*P*-value	Result
				Boot LLCI	Boot ULCI		
H5a	TW→ UEXP→ POS	0.0554	0.0217	0.0126	0.0981	0.05*	Partial mediation
H5b	TW→ EXC→ POS	−0.0058	0.0194	−0.0440	0.0324	0.058	Not supported
H5c	TW→ UEXP→ NEG	0.0789	0.0322	0.0135	0.1442	***	Partial mediation
H5d	TW→ EXC→ NEG	0.1617	0.0789	0.1068	0.2166	***	Partial mediation
H5e	TP→ UEXP→ POS	0.0177	0.0218	−0.0253	0.0608	0.75	Not supported
H5f	TP→ EXC→ POS	0.0160	0.0197	−0.0229	0.0549	0.055	Not supported
H5g	TP→ UEXP→ NEG	0.1173	0.0321	0.0540	0.1806	***	Partial mediation
H5h	TP→ EXC→ NEG	0.1647	0.0281	0.1093	0.2201	***	Partial mediation

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

contingency provisions (ß = 0.37, $p = 0.000$); thus, H3c and H3d were verified.

Finally, the path of contract formulation and response strategy is analyzed. The transaction clauses negatively influence boundary personnel to choose a positive opportunistic response strategy (ß = −0.27, $p = 0.007$) and cheerful influence border personnel to adopt negative opportunistic behavior response strategy (ß = 0.46, $p = 0.000$). Similarly, contingency clauses positively influence border personnel to adopt negative opportunistic behavior response strategies (ß = 0.29, $p = 0.000$). However, the impact path of contingency clause on positive opportunistic behavior is not significant (β = −0.53, $p = 0.058 > 0.050$). In summary, H4a, H4c, and H4d have been verified, while H4b has not.

Analysis of Mediating Effect

This article uses the bootstrap confidence interval method to verify the mediating effect. The process plug-in of SPSS was used for intermediary analysis. For the four groups of mediating hypothesis, bootstrap ML, repeated sampling 5,000 times (>1,000), and using bias-corrected 95% confidence interval (LLCI, ULCI) to test the mediating effect, the analysis results are shown in **Table 5**. The confidence intervals of H5b, H5e, and H5f include 0 value. That is, the mediating effect cannot be verified; other mediating effects were verified (confidence intervals excluding 0 and significant).

RESULTS

In this study, 206 valid questionnaires were collected and analyzed, combined with SEM and effect analysis. The empirical results verified H1a, H1b, H2a, H2b, H3a, H3b, H3c, H3d, H4c, and H4d. The H4b effect is not significant, which may be because the more comprehensive the contract contingency treatment clauses are when the other party carries out opportunistic behavior, channel boundary personnel tend to choose positive response strategies based on their personal belief that the other party member does not act. The mediating effects of H5a, H5c, H5d, H5g, and H5h were verified, but H5b, H5e, and H5f were not verified. The mediating effect of the contingency clause on the choice of response strategy based on job tolerance to opportunistic behavior and positive opportunistic behavior has not been verified. On the one hand, it may be due to the small number of samples, and the corresponding conclusions cannot be drawn. On the other hand, if H4b is not verified, H5e is not verified, as shown in **Table 6**.

DISCUSSION

Implications

First, channel transaction is a process of the repeated game. Members of both sides should strengthen communication with each other, understand each other's acting style and worldly attitude, promote the establishment of trust mechanism of both sides, establish a good working relationship and deep personal affection, and achieve a long-term and stable cooperative relationship. Second, the members of both sides of the channel should respect the established cooperative relationship in the transaction process and not attempt to increase their interests through opportunistic behavior at the expense of the partner's interests, which will outweigh the gain. Finally, if both parties want to cooperate for a long time, it is necessary to formulate a contract to constrain the behaviors of both parties. The more detailed the terms of the transaction, the clearer the responsibilities and obligations of both parties. The more comprehensive the contingency clause, the better it will consider all circumstances.

CONCLUSION

Based on transaction cost theory, psychological contract theory, and neglect bias theory, this study constructed a theoretical model with channel boundary personnel's tolerance to opportunism as the independent variable, opportunistic behavioral response strategy choice as the dependent variable, and contract formulation as the intermediary variable. SPSS and AMOS were used to analyze the data of 206 valid questionnaires, and the conclusions were as follows.

First, both parties establish a specific basis of trust and reach a psychological contract in marketing channel transactions. If one channel member is more tolerant of the opportunistic behavior of the other side, he or she is more inclined to choose a

TABLE 6 | Summary of hypothesis validation.

Item	Hypothesis	Result
H1a	The more the channel boundary personnel tolerate the other party's opportunistic behavior based on their work, the less they will choose the positive opportunistic behavior response strategy.	Supported
H1b	The more the channel boundary personnel tolerate the other party's opportunistic behavior based on their work, the more they will choose the negative opportunistic behavior response strategy.	Supported
H2a	Based on the individual, the more tolerant the opportunistic behavior of the other party, the less likely the channel boundary personnel will choose the positive opportunistic behavior response strategy.	Supported
H2b	The more individuals tolerate opportunistic behavior, the more they choose negative opportunistic behavior response strategies.	Supported
H3a	Channel boundary personnel's tolerance of opportunistic behavior based on work positively impacts the detail of transaction terms.	Supported
H3b	Channel boundary personnel's tolerance of opportunistic behavior based on work positively impacts the comprehensiveness of accident handling clauses.	Supported
H3c	Channel boundary personnel's tolerance of opportunistic behavior positively affects the detail of transaction terms.	Supported
H3d	Channel boundary personnel's tolerance of opportunistic behavior positively affects the comprehensiveness of accident handling clauses.	Supported
H4a	The details of transaction terms negatively affect the choice of a positive opportunistic behavior response strategy.	Supported
H4b	The comprehensiveness of the accident handling clause hurts the choice of a positive opportunistic behavior response strategy.	Not supported
H4c	The details of transaction terms positively affect their choice of a negative opportunistic behavior response strategy.	Supported
H4d	The accident handling clause comprehensiveness positively impact the choice of a negative opportunistic behavior response strategy.	Supported
H5a	Channel boundary personnel choose positive opportunistic behavior response strategies based on job tolerance of opportunistic behavior through accident handling clauses.	Supported
H5b	Channel boundary personnel choose positive opportunistic behavior response strategies through transaction terms based on job tolerance of opportunism behavior.	Not supported
H5c	Channel boundary personnel choose negative opportunistic behavior response strategies through accident handling clauses based on job tolerance of opportunism behavior.	Partial mediation
H5d	Channel boundary personnel choose negative opportunistic behavior response strategies through transaction terms based on job tolerance of opportunism behavior.	Partial mediation
H5e	Based on the individual's tolerance of opportunistic behavior, channel boundary personnel can influence their choice of positive opportunistic behavior response strategy through accident handling clause.	Not supported
H5f	Based on the individual's tolerance of opportunistic behavior, channel boundary personnel influence their choice of positive opportunistic behavior response strategy through transaction terms.	Not supported
H5g	Channel boundary personnel choose negative opportunistic behavior response strategies based on individual tolerance of opportunistic behavior through accident handling clause.	Partial mediation
H5h	Based on individual tolerance of opportunistic behavior, channel boundary personnel influence their response strategies to negative opportunistic behavior through transaction terms.	Partial mediation

negative response strategy, and the more intolerant he or she is, he or she will choose a positive response strategy. When formulating the contract, channel boundary personnel, from the perspective of work, will use more detailed transaction terms and more comprehensive contingency-handling terms to restrain the other party from reducing the frequency and probability of the opportunistic behavior of the other party.

Second, in the repeated game between the two sides of the channel, the emotional basis based on individuals has been established. If one channel member is more tolerant of the other party's opportunistic behavior based on a personal relationship, it will choose the negative response strategy. For the sake of long-term interests, various factors will be considered, and detailed general items will be formulated to constrain the behaviors of both parties and reduce the losses of both parties. At the same time, members of both sides will sign more comprehensive accident-handling clauses. When accidents occur in cooperation, both sides can deal with them according to the contract to avoid friction between the two sides.

Third, transaction terms positively affect the choice of negative response strategies based on work and individual opportunistic behavior tolerance and have no intermediary effect on positive response strategies. The more complex the contract terms, the other party's opportunistic behavior will be disloyal to the relationship between the two parties. Whether based on their work or personal tolerance to the opportunistic behavior of the other party, their personnel are more inclined to choose negative response strategies. The contingency clause has no mediating effect on positive response strategies based on individual opportunistic behavior tolerance. The more comprehensive the contingency clause is, the space for both sides of the channel to implement opportunistic behavior will be reduced. Once the other side implements opportunistic behavior, the border personnel of their side will perceive the inaction of the channel members of the other side no matter from the perspective of work or personal and are more inclined to choose negative response strategies.

Limitations and Future Directions

This article has the following research limitations. First, research externalities cannot be guaranteed. The data collected in this study are from only one party. After a comprehensive analysis, future research on channel behavior should collect data from both parties to draw more accurate conclusions. At the same time, this study only collects data from the electronics industry. Data analysis of multiple industries should be collected as much as possible to draw more general conclusions in future studies. Second, the selection of control variables is insufficient. The control variables in this study are mainly the company's size, years of work, gender, age, and other aspects. In future studies, the selection of control variables should be based on factors to make the research results accurate.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

JC made a theoretical construction and completed the summary of the article. RH was responsible for collecting and analyzing data. ZL made translation and article reviews. All authors contributed to this article and approved the version submitted.

FUNDING

This research was supported by the National Natural Science Foundation of China (71562003).

REFERENCES

Argyris, C., and Ditz, G. W. (1960). Understanding organizational behaviour. *Am. J. Sociol.* 26, 457–458. doi: 10.2307/2090533

Chen, J. B., Dai, H. Y., and Sun, Q. Q. (2017). An empirical study on the relationship between farmers' psychological contract and channel opportunistic behavior under the mode of "farming-supermarket connection. *Agric. Technol. Econ.* 7, 41–55. doi: 10.13246/j.cnki.jae.2017.07.004

Chen, J. S. (2017). *A Study on the Effect of Interpersonal Relationships on Opportunistic Behaviour: From the Perspective of Tolerance*. Beijing: Science Press.

Chen, J. S., Dou, Z. H., and Hu, R. Q. (2019). The influence of personnel interaction at channel boundaries on tolerance of opportunistic behaviors. *Res. Financial Issues* 12, 128–136. doi: 10.19654/j.cnki.cjwtyj.2019.12.016

Coase, R. H. (1937). The nature of the firm. *Economica* 4, P386–405. doi: 10.1007/978-1-349-24002-9_3

Ghoshal, S., and Moran, P. (1996). Bad for practice: a critique of the transaction cost theory. *Acad. Manage. Rev.* 21, 13–47. doi: 10.5465/AMR.1996.9602161563

Hayashi, H., and Mizuta, N. (2022). Omission bias in children's and adults' moral judgments of lies. *J. Exp. Child Psychol.* 215, 105320. doi: 10.1016/j.jecp.2021.105320

Hirschman, A. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge: Harvard University Press.

Kashyap, V., and Murtha, B. R. (2017). The joint effects of ex ante contractual completeness and ex post governance on compliance in franchised marketing channels. *J. Market.* 81, 130–153. doi: 10.1509/jm.14.0089

Kingshott, R. P. J., Sharma, P., Sima, H., and Wong, D. (2020). The impact of psychological contract breaches within east-west buyer-supplier relationships. *Indus. Market. Manage.* 89, 220–231. doi: 10.1016/j.indmarman.2020.03.008

Luo, Y. (2002). Partnering with foreign firms: how do chinese managers view the governance and importance of contracts. *Asia Pacific J. Manage.* 19, 127–151.doi: 10.1023/A:1014895724927

Luo, Y., Liu, Y., Yang, Q., Maksimov, V., and Hou, J. (2015). Improving performance and reducing cost in buyer–supplier relationships: the role of justice in curtailing opportunism. *J. Bus. Res.* 68, 607–615. doi: 10.1016/j.jbusres.2014.08.011

Lusch, R. F., and Brown, J. R. (1996). Interdependency, contracting, and relational behaviour in marketing channels. *J. Market.* 60, 19–38. doi: 10.1177/002224299606000404

Ping, R. A. Jr. (1993). The effects of satisfaction and structural constraints on retailer exiting, voice, loyalty, opportunism, and neglect. *J. Retailing* 69, 320–352.doi: 10.1016/0022-4359(93)90010-G

Qian, L. P., and Liao, R. Y. (2021). Contract use, transaction uncertainty and relationship performance in marketing channels. *Foreign Econo. Manage.* 43, 43–56. doi: 10.16538/j.cnki.fem.20201203.301

Qian, Q., and Zhang, L. (2018). Impact of regulatory focus on choice of project-governance modes: role of tolerance of opportunistic behavior. *J. Construct. Eng. Manage.* 144, 04018070. doi: 10.1061/(asce)co.1943-7862.0001526

Robbins, S. P. (2012). *Organizational Behavior, 14th Edn*. Beijing: Tsinghua University Press.

Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administr. Sci. Q.* 41, 574. doi: 10.2307/2393868

Rusbult, C. E., Zembrodt, I. M., and Gunn, L. K. (1982). Exit, voice, loyalty and neglect: response to dissatisfaction in romantic involvements. *J. Personal. Soc. Psychol.* 43, 1230–1242. doi: 10.1037/0022-3514.43.6.1230

Seggie, S. H., Griffith, D. A., and Jap, S. D. (2013). Passive and active opportunism in interorganizational exchange. *J. Market.* 77, 73–90. doi: 10.1509/jm.11.0529

She, S., Xu, H., Wu, Z., Tian, Y., and Tong, Z. (2020). Dimension, content, and role of platform psychological contract: based on online ride-hailing users. *Front. Psychol.* 11, 2097. doi: 10.3389/fpsyg.2020.02097

Song, F. S., and Chen, J. (2020). Corporate reputation, contract governance and off-role altruism in marketing channels. *Business Econ. Manage.* 6, 56–65. doi: 10.14134/j.cnki.cn33-1336/f.2020.06.005

Tang, F. C., Jin, X. M., and Wang, H. Y. (2021). Governance logic of opportunistic behavior in open innovation — from the perspective of corporate moral decision-making. *China Sci. Technol. Forum* 11, 69–77. doi: 10.13580/j.cnki.fstc.2021.11.009

Wang, L., Jiang, F. M., Li, J., Motohashi, K., and Zheng, X. (2019). The contingent effects of asset specificity, contract specificity, and trust on offshore relationship performance. *J. Business Res.* 99, 338–349.doi: 10.1016/j.jbusres.2019.02.055

Wathne, K. H., and Heide, J. B. (2000). Opportunism in interfirm relationships: forms, outcomes, and solutions. *J. Market.* 64, 36–51. doi: 10.1509/jmkg.64.4.36.18070

Williamson, E. (1985). *The Economic Institutions of Capitalism: Firm, Markets, Relational Contracting*. New York, NY: The Free Press.

Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Implications*. New York, NY: Free Press.

Yang, D., Sheng, S., Wu, S., and Zhou, K. Z. (2018). Suppressing partner opportunism in emerging markets: contextualizing institutional forces in supply chain management. *J. Business Res.* 90, 1–13. doi: 10.1016/j.jbusres.2018.04.037

Yeung, S. K., Yay, T., and Feldman, G. (2021). Action and inaction in moral judgments and decisions: meta-analysis of Omission-Bias omission-commission asymmetries. doi: 10.13140/RG.2.2.28468.58249/1

Zhang, C., Du, N., and Cheng, X. (2016). Appeal and withdrawal: the impact of the application of firm power when interfirm relations decline. *Q. J. Manage.* 1, 141–158.

Zhang, C., and Yin, D. (2019). Dedicated asset investment and extramural altruism: the role of favors. *Res. Financial Econ. Issues* 6, 106–113.

Zhang, Q., Zhou, K. Z., Wang, Y., and Wei, H. (2017). Untangling the safeguarding and coordinating functions of contracts: direct and contingent value in China. *J. Business Res.* 78, 184–192. doi: 10.1016/j.jbusres.2016.12.014

Zhou, K. Z., and Poppo, L. (2010). Exchange hazards, relational reliability, and contracts in China: the contingent role of legal enforceability. *J. Int. Business Stud.* 41, 861–881. doi: 10.1057/jibs.2010.7

Zhou, Y., Zhuang, G. J., and Peng, Q. (2013). The influence of long-term orientation on firms' use of contracts to restrain channel speculation. *Business Econ. Manage.* 4, 5–13. doi: 10.3969/j.issn.1000-2154.2013.04.001

Zhuang, G. J., Li, K., and Cui, X. M. (2008). The influence of relationship marketing orientation and inter-organizational interpersonal relationship on enterprise relationship channel governance. *Manage. World* 7, 77–90. doi: 10.19744/j.cnki.11-1235/f.2008.07.01

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

frontiers | Frontiers in Psychology

ORIGINAL RESEARCH
published: 15 July 2022
doi: 10.3389/fpsyg.2022.920041

Why Do Chinese Employees Complain at the Workplace? An Exploratory Study Based on the Theory of Work Adjustment

Shaofeng Yuan[1] *and Ying Gao*[2]*

[1] Business School, Liaoning University, Shenyang, China, [2] Sun Wah International Business School, Liaoning University, Shenyang, China

This study aims to investigate the causes of workplace complaints among Chinese employees and to develop a scale to measure them, drawing on the theory of work adjustment. We first obtained 49 items regarding employees' complaints following rigorous item generation and refinement procedures. Then, we conducted a survey with convenience sampling and obtained a sample of 268 employees. The exploratory factor analysis based on this sample generated a six-factor solution that explained 65.85% of the variance. The six factors include four person-environment (P-E) interactional factors, namely, dissatisfaction due to (a) interpersonal relationships; (b) management systems; (c) work conditions; and (d) authoritarian leadership; and two P-E misfit factors, namely, perceived misfit regarding (e) work content; and (f) job responsibilities. Furthermore, we obtained another sample of 349 employees through snowball sampling, on which we further validated the six-correlated-factor solution through confirmatory factor analysis. This study contributes to the literature by identifying causes of Chinese employees' complaints different from those attributed to their counterparts in Western cultures. This outcome particularly reveals that "dissatisfaction with interpersonal relationships" with colleagues was the leading cause of complaints among Chinese employees, rather than the "misfit between employees' needs and organizational rewards" revealed by Western culture-based studies. Both our findings and the scale we developed have practical implications for companies that employ Chinese employees.

Keywords: causes of employee complaints, measurement scale, Chinese employee, person-environment fit, interpersonal relationships

OPEN ACCESS

Edited by:
M. Isabel Sanchez-Hernandez, University of Extremadura, Spain

Reviewed by:
John Mark R. Asio, Gordon College, Philippines
Ana Moreira, University Institute of Psychological, Social and Life Sciences (ISPA), Portugal

***Correspondence:**
Ying Gao
ying.gao@lnu.edu.cn

Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *14 April 2022*
Accepted: *20 June 2022*
Published: *15 July 2022*

Citation:
Yuan S and Gao Y (2022) Why Do Chinese Employees Complain at the Workplace? An Exploratory Study Based on the Theory of Work Adjustment. Front. Psychol. 13:920041. doi: 10.3389/fpsyg.2022.920041

INTRODUCTION

Chinese employees' complaints in the workplace are a universal phenomenon. An investigation based on a sample of over 5,000 Chinese employees, which was conducted by a leading recruitment website in China, indicated that 65.7% of workers in the sample usually complained 1–5 times, 13.8% complained 6–10 times, 3.7% complained 11–15 times, and 4.8% complained over 15 times a day in their workplace, and 80.5% of their complaints were targeted at their jobs (cf. Lu and Liu, 2016). Employee complaints are expressions of work- and organization-related dissatisfaction (Kowalski, 1996; Walker and Hamilton, 2011a). Individually, employee complaints are usually

accompanied by negative outcomes such as absenteeism, turnover, lowered productivity, and disruptive workplace behaviors (Bamberger et al., 2008; Walker and Hamilton, 2011a). Collectively, employee complaints might result in negative outcomes such as poor firm performance (Dimmock and Gerken, 2018), overall lowered organizational commitments (Gutierrez et al., 2012), and decreased intention of voice (Wu and Ma, 2022). Thus, identifying the causes of Chinese employees' complaints and developing a scale to measure them are important issues for firms.

A vast majority of prior studies addressing the causes of employee complaints have been conducted in Western cultures. They have documented that employees' perceived misfit with work content, and/or job responsibilities could result in employees' grievances or complaints (Bacharach and Bamberger, 2004; Furåker, 2009; Branham, 2012; Warr and Inceoglu, 2012). Moreover, employees' dissatisfaction with supervision, work conditions (Bacharach and Bamberger, 2004), managerial monitoring (Kleiner et al., 1995), unfair treatment (Boswell and Olson-Buchanan, 2004), and employment rights disputes (Walker and Hamilton, 2011b) have also been affirmed as causes of complaints. While all of these factors can lead to employee complaints, more studies (e.g., Piasentin and Chapman, 2006; Westover and Taylor, 2010; Rubin and Edwards, 2020) based on the theory of work adjustment suggested that the misfit between employees' need and organizations' reward was the principal cause of Western employees' complaints in the workplace.

Given that there are significant differences between the West and China regarding employees' personalities, cultural values, economic systems, laws, and industrial relations (Dessler and Tan, 2008; Xiao and Cooke, 2012), the causes of Chinese employees' complaints might significantly differ from those of their counterparts in Western cultures. However, few prior studies have specifically investigated the causes of Chinese employees' complaints in the workplace (Lu and Liu, 2016).

To fill this gap, this study aims to investigate the major causes of Chinese employees' complaints and develop a scale to measure them. The theory of work adjustment (Dawis and Lofquist, 1984)—a theory concerning a person (P) in a work environment (E) and the fit and interactions between the P and the E—was widely used in organizational psychology to explain employees' job-related behaviors (Bayl-Smith and Griffin, 2015; Guan et al., 2021), this study follows this theory to explore the causes of employees' complaints. Through two survey-based studies, this research identifies six crucial causes of Chinese employees' complaints, four of which are P-E interactional factors: dissatisfaction with (a) interpersonal relationships; (b) management systems; (c) work conditions; and (d) authoritarian leadership; the remaining two are P-E misfit factors: perceived misfit regarding (e) work content; and (f) job responsibilities. The findings show that the first factor (i.e., dissatisfaction with interpersonal relationships) contributed the most variance in complaints.

This study makes the following contributions. First, it reveals six crucial causes of Chinese employees' complaints. In particular, it shows that the P-E interactional factor, i.e., dissatisfaction with interpersonal relationships with colleagues, was the leading factor (accounting for 34.25% of the variance) of Chinese employees' complaints. In contrast, prior Western culture-based studies (cf. Piasentin and Chapman, 2006; Westover and Taylor, 2010; Rubin and Edwards, 2020) affirmed that the misfit between employees' needs and organizations' rewards was a key factor leading to employees' complaints. Moreover, this study develops a scale for employers to measure those causes and thus can help companies address their Chinese employees' complaints.

The rest of this study is divided as follows. The next section provides the theoretical background and research questions. Then, in Study 1, item generation and initial reduction procedures are presented, and an exploratory factor analysis based on a sample of 268 employees was conducted to further remove unrepresentative items. In subsequent Study 2, confirmatory factor analysis based on another sample of 349 employees was conducted to validate the scale. Finally, the article ends with a general discussion.

THEORETICAL BACKGROUND AND RESEARCH QUESTIONS

The Theory of Work Adjustment

Extensive prior studies in the field of organizational psychology applied the theory of work adjustment to explain employees' satisfied or dissatisfied behaviors in the workplace (Bayl-Smith and Griffin, 2015; Guan et al., 2021). It can also provide explanations for the possible causes of Chinese employees' complaints in their workplace. This theory is one kind of P-E theory (Dawis and Lofquist, 1984; Guan et al., 2021). In the workplace, P refers to the employee, and E refers to the work environment of an organization (e.g., job requirements, work conditions, interpersonal relationships, performance appraisal systems, payment systems, incentive systems). The basic proposition of this theory is that although the P and E variables can contribute to the explanation of employees' behavior or behavioral outcomes, it is a particular P-E combination that will best explain the specific behavior or behavioral outcome (Dawis, 2005).

Two constructs, fit and interaction, were used to denote the P-E combination. Fit is defined as the degree to which the P and E characteristics match (Kristof-Brown et al., 2005). The P characteristics include an employee's physiological or psychological needs, values, goals, abilities, or personalities, while the E characteristics include intrinsic and extrinsic rewards, job demands, cultural values, or characteristics of other individuals and collectives in the P's work environment (Kristof-Brown et al., 2005). By matching the right employee with the right job, employees can achieve a balanced state that leads to maintenance behavior (e.g., commitment to the organization). Otherwise, a misfit between an employee and a job position will result in his or her behaviors changing the situation (adjustment behavior).

Interaction refers to a P's and an E's actions and reactions in relation to one another in a mutual give and take (Dawis, 2005). As living organisms, employees (P) have needs (e.g., physiological and psychological needs) that must be met, most of them through the work environment (E). Employees have abilities (e.g., work

skills) that enable them to meet these needs, and most employee behaviors in interacting with the work environment involve meeting these needs. Moreover, the work environment (E, in parallel with P) has demands (e.g., job requirements, firm norms, and role expectations) that must be met and supplies (e.g., payment, prestige, and working conditions) that enable it to meet its demands.

In the process of fulfilling mutual requirements, satisfaction or dissatisfaction occurs for employees and organizations. Satisfaction for both employees and organizations will lead to behaviors that maintain mutual interaction (maintenance behavior), but dissatisfaction will result in behaviors that change the situation (adjustment behavior).

Accordingly, a misfit between an employee and an organization and the absence of mutual satisfaction in P-E interactions will lead to adjustment behaviors to change the situation (Guan et al., 2021). One adjustment behavior of dissatisfied employees is to complain to management (Dawis, 2005) or others in their work environment. Thus, factors that lead to the following two situations could cause employees to complain: (a) there is a misfit between the employee and the organization, for instance, an employee's abilities are greater or less than the job requirements; and (b) there is dissatisfaction in the P-E interactions; for example, an employee's physiological or psychological needs are not met in the organization.

Brief Review of the Causes of Employees' Complaints

We adopted the P-E combination perspective to review prior studies. Concerning the P-E misfit factors, some prior studies (e.g., Bacharach and Bamberger, 2004; Furåker, 2009; Branham, 2012; Warr and Inceoglu, 2012) from Western cultures have indicated that employees' perceived misfit with work content and job responsibilities could result in their dissatisfaction and subsequent behaviors (e.g., complaints). However, more studies (e.g., Piasentin and Chapman, 2006; Westover and Taylor, 2010; Rubin and Edwards, 2020) based on the theory of work adjustment supported that the misfit or incongruence between employees' needs and organizations' rewards was the principal factor that determined employees' dissatisfaction and subsequent workplace complaints.

Regarding the P-E interactional factors, prior studies have documented that dissatisfaction with supervision, work conditions (Bacharach and Bamberger, 2004), managerial monitoring (Kleiner et al., 1995), unfair treatment (Boswell and Olson-Buchanan, 2004), and employment rights disputes (Walker and Hamilton, 2011b) could result in employee dissatisfaction and complaints. Additionally, some theoretical articles (e.g., Barrick et al., 2013; Carnevale and Hatak, 2020) also showed that employees' perceived incongruence in work relationships with others could result in employee dissatisfaction and thus might further trigger their complaints.

Drawing on the theory of work adjustment theory and prior studies, this study specifically sheds light on the following questions:

RQ1: What specific misfit factors between P and E resulted in Chinese employees' complaints in the workplace?

RQ2: What specific dissatisfactory factors in P-E interactions resulted in Chinese employees' complaints?

RQ3: Are there any significant differences between China and the West in terms of their employees' complaints causes?

Two studies were conducted to explore the causes of workplace complaints among Chinese employees and to answer the three research questions above. Study 1 aimed to develop a scale that could describe the main components of the causes of employees' complaints and assess the internal consistency reliability of the components of this scale. Study 2 aimed to test the validity of this scale with a sample from another survey. The research procedures are depicted in **Figure 1**. We designed these procedures based on the prior scaling literature (Netemeyer et al., 2003) and scale development research (e.g., Zhang et al., 2011, 2021). IBM SPSS software, versions 25.0, and LISREL software, versions 8.7, were used to analyze the data in Studies 1 and 2, respectively.

STUDY 1: SCALE DEVELOPMENT

This study specifically included three stages. The first was the "item generation" stage, in which we generated a pool of 75 items on the causes of employee complaints through exploratory interviews, focus groups, and a literature review. The second was the "item refinement" stage, in which we conducted two rounds of expert evaluations to assess the content validity of each item. After this stage, we obtained 49 items with initial content validity. The third was the "component generation" stage. In this stage, we conducted a survey and obtained 268 valid responses, and then we conducted exploratory factor analysis to generate components of the causes of employee complaints.

Item Generation

First, an original pool of 75 items regarding the causes of employee complaints was generated from exploratory interviews, focus groups, and a review of related prior studies. The exploratory interviews were conducted with 24 employees, 21 of whom worked in the IT, auto parts, electric power, management consulting, mobile communication, steel smelting, and real estate industries, respectively; the remaining three worked in the retail (2) and higher education (1) industries. The focus groups were conducted among 20 MBA students (employees of different companies) at a comprehensive university in northeast China.

Item Refinement

Two associate professors and two Ph.D. students majoring in human resource management were invited to evaluate the understandability, clarity, and similarity of the 75 items generated from the previous stage. Before the evaluation procedure, they were told about the research's purposes and given the definition of the causes of employees' complaints. A revised pool of 62 items was obtained after eliminating ambiguous and essentially identical items based on the four judges' evaluations.

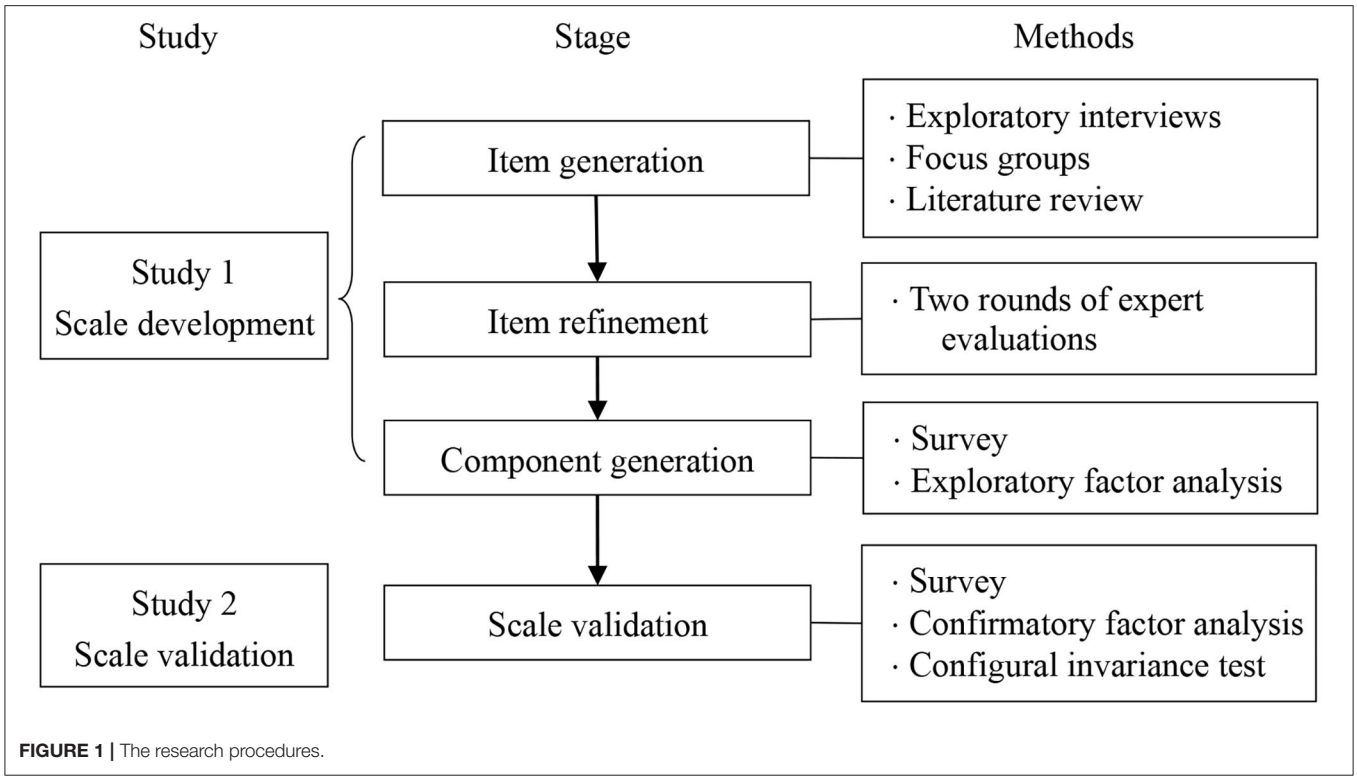

FIGURE 1 | The research procedures.

Next, three additional evaluators (Ph.D. students) were invited to evaluate the representativeness of each item according to the procedure recommended by Hinkin (1998). They were also told of the research purposes, given the definition of the causes of employees' complaints, and showed examples of these causes. They then evaluated each item on the following scale: 1 = *clearly representative*, 2 = *partially representative*, 3 = *not representative at all*. Only items judged as clearly represented by at least two evaluators were retained. The judgment results indicated that 38 items were "clearly representative" by all three evaluators, and 11 items were "clearly representative" by two of the three evaluators. Thirteen items were eliminated in this process, leaving 49 items for the following analysis.

Component Generation

Subjects

Given the exploratory nature of this study and with reference to prior scale development studies (e.g., Zhang et al., 2011, 2021), a convenience sample was collected at this stage. Specifically, both online and offline data collection was used in this study. For the online part of the study, after designing the questionnaire on the Quatrics platform, links were delivered to employees in various industries. Of the 193 individuals who began the online survey, 157 finished it. For the offline part of the study, 125 printed questionnaires were distributed to MBA students of a leading university in northeastern China; 65 of them were distributed in marketing classes, and the other 60 were distributed in strategic management classes. In total, 111 valid responses were returned. All the participants provided informed consent. Of the 268 individuals who participated (including both offline and online participants), 47.0% were men, 50.0% were women, and 3.0% did not report their gender; 11.6% had a junior college degree, 34.0% had a bachelor's degree, 51.8% had a master's degree or above, and 2.6% did not report their education level; 30.7% worked in manufacturing, 26.8% in IT, 30.2% in services, 6.1% in energy, 3.2% in education, and 3.0% did not report their industries; 16.8% worked in a junior position, 52.6% worked in an intermediate position, and 30.6% worked in a senior management or technical position. The participants' ages ranged from 22 to 57 (M_{age} = 29.63, SD = 5.00).

Measures

The measurement included 49 items obtained from the second stage (i.e., item refinement) of this study. Participants answered each item on a 7-point scale, with 1=*completely disagree* and 7= *completely agree*.

Results

Before the formal analysis, possible differences between the online (N = 157) and offline (N = 111) datasets regarding participants' responses on the 49 items were examined. The results of a one-way analysis of variance (ANOVA) showed that participants' responses on most of the items (44 out of 49) were not significantly different ($p > 0.05$) between the online and offline datasets; we combined these two datasets in the following analyses.

Next, the 49 items were factor-analyzed through principal component analysis with varimax rotation. The results showed that the Kaiser–Meyer–Olkin value reached 0.90, and Bartlett's

test of sphericity showed statistical significance ($p < 0.001$), indicating that the data were suitable for factor analysis. Nine components with eigenvalues over 1 were obtained, and they explained 69.22% of the cumulative variance.

Of these items, those with factor loadings >0.4 on two or more intended components and those that did not load on any components at the criterion of 0.4 were eliminated (cf. Zhang et al., 2011). Only items with high factor loadings on one component but low loadings on other components were selected after this elimination process. A second-factor analysis that included the retained items was conducted, and the results showed a six-factor solution that accounted for 65.85% of the total variance. Factors 1 to 6 contributed 34.25, 8.90, 7.91, 6.06, 4.62, and 4.12% of the variance, respectively. The final six-factor solution with factor loadings, along with the commonalities, the eigenvalues, and the total variance explained, is shown in **Table 1**.

The results in **Table 1** show that the first factor consists of 7 items[1] that describe employees' dissatisfaction with interpersonal relationships with colleagues (e.g., "Sometimes, some of my colleagues plot against me in my work"). We named it "dissatisfaction with interpersonal relationships". The second factor, which includes 5 items, describes employees' perceived misfit with work content (e.g., "My work content is relatively simple and lacks challenges"), we named it "perceived misfit with work content".

The third and fourth factors consist of 4 statements that reflect employees' discontentment with low-quality management (e.g., "The job description of my position is ambiguous") and work overload (e.g., "My workload is heavy") in their companies, representing the "dissatisfaction with management system" and "perceived misfit with job responsibilities" dimensions, respectively. The fifth and sixth factors consist of 3 statements that reflect employees' discontentment with poor work environments (e.g., "The surroundings of my company are poor") and authoritarian leadership (e.g., "In my company, channels for employees to feedback problems to managers are lacking") in their companies, representing the "dissatisfaction with work conditions" and "dissatisfaction with authoritarian leadership" dimensions, respectively.

Furthermore, the internal consistency of the scale was examined. The Cronbach's alpha of the six factors is 0.89, 0.82, 0.81, 0.77, 0.80, and 0.84 (see **Table 2**). The corrected item-total correlations of 26 items were no less than 0.5. These results indicate that the scale has good internal consistency.

The results of the correlation analysis based on the means of each factor's items (see **Table 2**) reveal that the Pearson coefficients between "dissatisfaction with interpersonal relationships" and "dissatisfaction with authoritarian leadership" ($r = 0.63$, $p < 0.01$), between "dissatisfaction with interpersonal relationships" and "dissatisfaction with management system" ($r = 0.58$, $p < 0.01$), and between "dissatisfaction with authoritarian leadership" and "dissatisfaction with management system" ($r = 0.56$, $p < 0.01$) were relatively high, and the other correlation coefficients were moderately high (r ranging from 0.20 to 0.46).

STUDY 2: SCALE VALIDATION

Study 1 generated six causes of Chinese employees' complaints in the workplace. However, it was generated from a convenient sample of employees. It was necessary to examine the generalizability of the six-dimensional solution among different samples. Study 2 aims to do this based on a different employee sample by employing confirmatory factor analysis.

Subjects

A survey comprising the six-dimensional measures of the causes of complaints was conducted among companies in a province of northeastern China. The snowball sampling technique was employed in the data collection. Specifically, ten MBA students from one of the leading universities in northeastern China were selected to help with the questionnaire collection. The selection criteria of these MBA students were (a) being willing to help us collect the questionnaires, (b) working for a company but not a nonprofit organization, and (c) holding a management position in their company. They were first trained for the purposes of the survey and in questionnaire administration techniques, such as not letting the subjects know the purposes of the study and allowing them to complete the questionnaire individually and without interference. Then, 40 printed questionnaires were assigned to each MBA student, and they were asked to return the questionnaires in 3 days. Four hundred questionnaires were distributed, and we received a total of 349 valid responses, for a valid response rate of 87.25%. All of the subjects in this study also provided informed consent. Within the sample of valid responses, 65.9% of respondents were men, 27.5% were women, and 6.6% did not report their sex; 37.8% had a junior college degree, 41.8% had a bachelor's degree, 8.3% had a master's degree or above, and 12% did not report their education level; 28.1% worked in services, 20.3% in manufacturing, 19.2% in education and training, 5.2% in IT, 2.0% in energy, and 25.2% in other industries; 42.1% were ordinary staff, 24.1% worked in a technical position, 17.2% worked in a junior management position, 7.4% worked in an intermediate position, 2.0% worked in a senior position, and 7.2% did not report their positions. Their ages ranged from 20 to 60 ($M_{age} = 35.12$, $SD = 8.35$).

Measures

To reduce subjects' burden in completing the questionnaire measuring the causes of complaints, only the 4 items with high factor loadings were retained for the "dissatisfaction with interpersonal relationships" and "perceived misfit regarding work content" dimensions. Thus, the measurement of the causes of complaints consisted of 22 items: factors 1 to 4

[1] All of the original dimensional items in **Table 1** were generated in Chinese. These items were translated according to the procedure recommended by Brislin (1970). The authors and two other Ph.D. students translated these items into English, and an associate professor who earned his Ph.D. in Australia were asked to back-translate the English version items into Chinese. Discrepancies in the translations were carefully checked and corrected.

TABLE 1 | Measurement of Chinese employee complaint causes.

Factors and Items	Loadings						Co
	1	2	3	4	5	6	
Factor 1: Dissatisfaction with interpersonal relationship							
Sometimes, some of my colleagues plot against me in my work.	**0.78**	0.07	0.12	0.22	0.04	0.12	0.69
During my work, useful information is deliberately withheld sometimes.	**0.77**	0.20	0.06/	−0. 04	0.18	0.21	0.72
At work, I am often misunderstood by my colleagues.	**0.73**	0.06	0.28	0.11	0.11	0.14	0.66
In my company, some colleagues harm others without benefiting themselves.	**0.71**	0.11	0.17	0.16	0.04	0.11	0.59
At work, I always feel isolated or neglected.	**0.67**	0.20	0.14	−0.08	0.19	0.28	0.62
In my company, intriguing against each other among employees is what the supervisors want.	**0.67**	0.20	0.04	0.07	0.06	0.25	0.56
I always have to brag to others about my contributions at work.	**0.62**	0.23	0.29	0.07	0.01	0.07	0.54
Factor 2: Perceived misfit with work content							
My work content is relatively simple and lacks challenges.	0.20	**0.77**	−0. 03	−0. 19	0.17	0.05	0.71
I find it difficult to achieve my career goals at current company.	0.14	**0.73**	0.28	0.16	0.06	0.04	0.65
My work content is always the same, I cannot learn anything new.	0.21	**0.71**	0.03	0.07	0.19	0.18	0.62
I am not interested in my work.	0.28	/**0.68**	0.07	0.02	0.09	0.02	0.56
The training in my company is inadequate.	−0. 03	**0.65**	0.31	0.15	0.08	0.24	0.61
Factor 3: Dissatisfaction with management system							
The job description of my position is ambiguous.	0.25	0.22	**0.76**	0.03	0.21	0.08	0.74
Objectives and responsibilities are ambiguous in my company.	0.19	0.15	**0.72**	0.15	0.34	0.11	0.73
I'm working under multiple managers.	0.38	0.06	**0.63**	0.14	0.05	0.25	0.63
The process of my work is not standardized.	0.18	0.15	**0.55**	0.24	0.11	0.27	0.51
Factor 4: Perceived misfit with job responsibilities							
My workload is heavy.	0.06	0.00	0.16	0**.80**	−0. 04	0.07	0.68
My job is of great responsibility.	0.06	−0. 14	−0. 18	/**0.79**	0.12	0.02	0.70
I always feel pressed for time completing tasks because they are assigned late.	0.13	0.12	0.31	**0.70**	0.10/	0.14	0.65
In my work, the inputs outweigh the outcomes.	0.21	0.27	0.22	**0.65**	0.08	0.05	0.59
Factor 5: Dissatisfaction with work conditions							
The surroundings of my company are poor.	0.15	0.17	0.12	0.02	**0.85**	0.15	0.81
The traffic is inconvenient at my workplace.	0.06	0.03	0.16	0.11	**0.82**	0.01	0.72
The decoration in my office is in poor condition.	0.15	0.28	0.20	0.08	**0.68**	0.16	0.64
Factor 6: Dissatisfaction with authoritarian leadership							
In my company, channels for employees to feedback problems to managers are lacking.	0.28	0.12	0.22	0.08	0.13	**0.78**	0.77
In my company, communications are lacking between supervisors and employees.	0.39	0.14	0.08	0.05	0.11	**0.75**	0.75
In my company, the supervisors are dictatorial and undemocratic.	0.32	0.17	0.26	0.19	0.10	**0.69**	0.72
Eigenvalue	8.91	2.31	2.06	1.58	1.20	1.07	
Contribution rate (%)	34.25	8.90	7.91	6.06	4.62	4.12	

Co, Communalities; Extract, principal component analysis; Rotation, Varimax.

included 4 items each, whereas factors 5 and 6 included 3 items each. Subjects indicated their attitudes toward each item on a 7-point scale, with 1 = *completely disagree* and 7 = *completely agree*.

Results and Discussion

Referring Zhang et al. (2011), various confirmatory factor analyses were performed based on the LISREL computer program, version 8.7 (Jöreskog and Sörbom, 1996) to compare

TABLE 2 | Mean, standard deviation (SD), Cronbach's alpha, and Pearson's correlations of the scale components.

Scale dimensions	Mean	SD	1	2	3	4	5	6
1. Dissatisfaction with interpersonal relationship	3.05	1.19	**0.89**					
2. Perceived misfit with work content	3.75	1.29	0.46**	**0.82**				
3. Dissatisfaction with management system	3.43	1.36	0.58**	0.46**	**0.81**			
4. Perceived misfit with job responsibilities	4.21	1.27	0.31**	0.20**	0.40**	**0.77**		
5. Dissatisfaction with work conditions	3.19	1.49	0.34**	0.38**	0.46**	0.23**	**0.80**	
6. Dissatisfaction with authoritarian leadership	3.44	1.46	0.63**	0.42**	0.56**	0.31**	0.36**	**0.84**

***p < 0.01; The bold values on the diagonal are the Cronbach's alpha values.*

the proposed model with alternatives to determine the best fitting model. Given that the Pearson correlation coefficients between original factors 1 and 6, 1 and 3, and 3 and 6 in Study 1 were high (i.e., over 0.5), five competing models were tested in these analyses: three five-factor models with the integration of original factors 1 and 6, 1 and 3, 3 and 6; a four-factor model in which original factors 1, 3 and 6 were integrated; and the proposed model with six correlated factors (see **Table 3**). The maximum likelihood method was used in these analyses. A covariance matrix of the 22 items was generated as input data (cf. Zhang et al., 2011).

Seven fit indicators generated by LISREL software, version 8.7, were used to compare the six models. The first is the ratio of Chi-square to its degree of freedom, which tests the extent to which the sample data support the hypothesized model; the value of this ratio between 2 and 3 is deemed acceptable (Tabachnick and Fidell, 2019). The second indicator is the goodness-of-fit index (GFI), which assesses the degree to which the observed covariance matrix fits the hypothesized model. The third indicator is the adjusted goodness-of-fit index (AGFI), which adjusts the GFI according to the number of items of each latent variable. A GFI over 0.9 and an AGFI over 0.8 indicate an acceptable model fit (Tabachnick and Fidell, 2019). The fourth indicator is a normed fit index (NFI), which analyzes the chi-square discrepancy between the hypothesized model and null model; when this index is above 0.9, there is a good fit of the examined model (Tabachnick and Fidell, 2019). The fifth indicator is the Tucker Lewis Index (TLI), which is similar to the NFI. However, this indicator is lower, and the proposed measurement model is regarded as less acceptable. TLI values >0.95 are considered to be a good fit (Hu and Bentler, 1999). The sixth index is the standardized root mean square residual (SRMR) which describes the standardized difference between the observed correlation and the predicted correlation. SRMR values <0.06 are considered a good fit, and those <0.07 are considered acceptable (Hu and Bentler, 1999). The final index is the root mean squared error of approximation (RMSEA), which indicates the discrepancy between the covariance structure set in the model and the covariance structure observed in the sample data. If this index is below 0.08, there is an acceptable fit to the data (Tabachnick and Fidell, 2019).

Compared to the four alternative models, the results shown in **Table 3** indicate that the proposed model of six correlated factors best fits the sample data. The χ^2/df ratio was 2.84, GFI equaled 0.87, AGFI was greater 0.8, NFI equaled 0.97, TLI equaled 0.98, the SRMR equaled 0.056 and the RMSEA equaled 0.074. Only the GFI index was slightly smaller than the required value, and all of the other indices meet the requirements. In the six-correlated-factors model, the 22 items had loadings ranging from 0.70 to 0.90 that loaded on factors 1 through 6.

Additionally, the configural invariance test (Milfont and Fischer, 2010) was performed to determine whether the six-factor solution of the causes of employee complaints was stable across the samples of Study 1 ($N = 268$) and Study 2 ($N = 349$). We conducted this test using multiple-group confirmatory factor analysis with LISREL 8.7 (Milfont and Fischer, 2010). Specifically, we first conducted two confirmatory factor analyses with samples from Study 1 and Study 2. Then, we performed multiple-group confirmatory factor analysis with a combined sample of the two studies. The results of the fit indices of the three models were shown in **Table 4**. The results showed that the six-factor solution of the causes of employee complaints fit well for the sample from Study 1, the sample from Study 2, and the combined sample from both studies. For all three models, the χ^2/df ratio was <3, NFI was >0.9, TFI was >0.95, SRMR was ≤ 0.07 (acceptable level, Hu and Bentler, 1999), and RMSEA was <0.08. These indices indicate that the six-factor solution was equal across the two samples (Milfont and Fischer, 2010).

GENERAL DISCUSSION

This study focuses on the causes of Chinese employees' complaints in their workplace. Although prior studies based on Western cultures documented many causes of employees' complaints, little research has specifically investigated the causes of Chinese employees' complaints. Based on two Chinese employee samples, this study developed and validated the dimensions of the causes of employee complaints in the workplace based on the theory of work adjustment.

Specifically, we first obtained 49 items about the causes of complaints following the rigorous item generation procedures recommended by the extant literature. Then, an exploratory factor analysis of the causes of employees' complaints in Study 1 generated six components that explained 65.85% of the variance. Using items with high factor loadings in Study 1, we performed confirmatory factor analysis in Study 2, and the results showed that the six correlated factor solutions fit the sample data well. Further configural invariance test verified the

TABLE 3 | LISREL model comparison for the items on the causes of employee complaints.

Models	χ^2	df	χ^2/df	GFI	AGFI	NFI	TLI	SRMR	RMSEA
Five factors (factors 1 and 6 were integrated)	830.91	199	4.18	0.82	0.77	0.96	0.97	0.059	0.097
Five factors (factors 1 and 3 were integrated)	950.43	199	4.78	0.80	0.74	0.95	0.96	0.061	0.106
Five factors (factors 3 and 6 were integrated)	1,019.24	199	5.21	0.79	0.73	0.95	0.96	0.061	0.110
Four factors (factors 1, 3 and 6 were integrated)	1,175.31	203	5.79	0.76	0.70	0.95	0.95	0.065	0.119
Six correlated factors	552.18	194	2.84	0.87	0.83	0.97	0.98	0.056	0.074

TABLE 4 | Fit indices for configural invariance testing toward the six-factor solution.

Models	χ^2	df	χ^2/df	GFI	NFI	TLI	SRMR	RMSEA
$M_{0-\text{Sample of Study 1}}$	398.93	194	2.06	0.88	0.94	0.96	0.070	0.064
$M_{0-\text{Sample of Study 2}}$	552.18	194	2.84	0.87	0.97	0.98	0.056	0.074
$M_{1-\text{Combined sample of two studies}}$	951.11	388	2.45	0.88	0.96	0.97	0.069	0.069

equivalence of the six-factor solution across the two samples of Study 1 and Study 2. These results suggested that the causes of Chinese employees' complaints included dissatisfaction with: (a) interpersonal relationships with colleagues; (b) management system; (c) work conditions; (d) authoritarian leadership; and perceived misfit regarding: (e) work content; and (f) job responsibilities. The former four can be classified as P-E interactional factors, and the latter two are P-E misfit factors. Moreover, this study indicates that the first factor, i.e., employees' dissatisfaction with interpersonal relationships with colleagues, contributed the most to the variance in their complaints.

Theoretical Contributions

This study contributes to the literature in the following ways. First, it identifies four P-E interactional factors and two P-E misfit factors that lead to Chinese employees' complaints in the workplace. Some of these causes—such as dissatisfaction with work conditions, perceived misfit regarding job responsibilities and work content—have been documented in prior studies (e.g., Bacharach and Bamberger, 2004; Furåker, 2009; Branham, 2012; Warr and Inceoglu, 2012). This study reveals that dissatisfaction with interpersonal relationships with colleagues, management systems, and authoritarian leadership are prominent causes in the Chinese context.

In particular, this study reveals that the P-E interactional factor—dissatisfaction with interpersonal relationships with colleagues—is the leading cause (accounting for 34.25% of the variance) of Chinese employees' complaints. In contrast, prior studies based on Western cultures (cf. Piasentin and Chapman, 2006; Westover and Taylor, 2010; Rubin and Edwards, 2020) widely suggested that the misfit between employees' need and organizations' reward was a principal factor in employees' complaints. China is a collectivism-oriented country, and Chinese individuals are highly concerned about their ties both to others and to their organizations (Felfe et al., 2008). Thus, Chinese employees are sensitive to interpersonal relationships with their colleagues (Powell et al., 2009). Once negative feelings related to interpersonal relationships have been experienced (e.g., feeling isolated or neglected by colleagues), Chinese employees will display noticeable reactions such as complaints.

Moreover, the findings indicate that dissatisfaction with the management system is also a China-specific cause of employees' complaints. China remains a developing country at least in terms of business management. There are many imperfections in both state and private-owned companies' management systems. All of the problems in job descriptions, objectives, responsibilities, procedures, etc., make employees feel dissatisfied and potentially likely to complain.

Finally, this study reveals that dissatisfaction with managers' authoritarian leadership is also a China-specific cause of employee complaints. China's recent modernization has reduced its social power distance (Xi et al., 2021), which reflects the extent to which less powerful employees of organizations accept and expect that power is distributed unequally (Wang et al., 2020). This means that contemporary Chinese employees consider that an organization's power should be distributed in a relatively equal manner. In fact, participatory management (encouraging employees to engage in organizational decisions) was recommended by prior studies (e.g., Cheung and Wu, 2014). Nevertheless, many managers in China still adopt an authoritarian leadership style; they are inclined not to listen to subordinates when making decisions (Schuh et al., 2013). This approach will make employees feel dissatisfied and complain.

Practical Implications

First, our findings have implications for both Chinese and foreign employers who employ Chinese employees regarding the causes of employee complaints. In addition to causes such as dissatisfaction with work conditions, a perceived misfit with job responsibilities and work content that are common among Chinese and Western employees, there were some different causes for Chinese employees' complaints. Dissatisfaction with interpersonal relationships with colleagues was the leading factor for Chinese employees. Thus, in the process of investigating employees' complaints or grievances, managers or counselors should pay special attention to this factor.

Second, this study has specific implications for Chinese employers. Given that dissatisfaction with the management system and authoritarian leadership are China-specific causes of employee complaints, improving management qualities following current management science and avoiding authoritarian leadership can help relieve employee complaints in the workplace.

Finally, this research developed and validated dimensions of complaint causes and measurements among Chinese employees. When suffering negative outcomes such as absenteeism, turnover, lowered productivity, and/or disruptive workplace behaviors (Walker and Hamilton, 2011a) from Chinese employees, employers or their counselors could use this measurement to identify the potential dissatisfaction factors of their Chinese employees.

Limitations and Future Directions

This study has limitations. First, given that we focused on investigating the causes of complaints among Chinese employees, convergent and discriminant validity with other similar constructs, such as interpersonal conflict at work (Bianchi, 2015) and abusive supervision (Camps et al., 2016), were not examined. Future research is needed to examine whether each factor generated in this study is a unique or overlapping construct in predicting employees' complaints. Second, we discussed the differences between Chinese and Western employees involving the causes of complaints but did not empirically investigate possible differences based on cross-cultural samples. Further studies are also needed to examine the differences in complaint causes between Chinese employees and their counterparts in developed Western countries.

CONCLUSION

Workplace complaints are common among Chinese employees and are usually accompanied by negative outcomes at both the individual and collective levels. However, few prior studies have empirically examined the causes of Chinese employees' workplace complaints. Drawing on the theory of work adjustment, the current research sheds light on this issue. Through two studies, our findings reveal six causes of Chinese employees' complaints in the workplace. Four of them are P-E interactional causes, i.e., dissatisfaction with: (a) interpersonal relationships with colleagues; (b) management system; (c) work conditions; and (d) authoritarian leadership; and the other two are P-E misfit factors, i.e., perceived misfit regarding: (e) work content; and (f) job responsibilities. Dissatisfaction with interpersonal relationships with colleagues is the number one cause of workplace complaints among Chinese employees. This research also developed and validated a scale for measuring the causes of workplace complaints among Chinese employees. Our findings and the developed scale could help business managers or consultants to identify the causes of workplace complaints among their Chinese employees and thus help them to address these complaints.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

SY was in charge of the paper writing. YG was in charge of data collection and processing. Both authors contributed to the article and approved the submitted version.

FUNDING

The authors would like to acknowledge funding from the National Social Science Foundation of China (18BGL133).

REFERENCES

Bacharach, S., and Bamberger, P. (2004). The power of labor to grieve: the impact of the workplace, labor market, and power-dependence on employee grievance filing. *ILR Rev.* 57, 518–539. doi: 10.1177/001979390405700403

Bamberger, P., Kohn, E., and Nahum-Shani, I. (2008). Aversive workplace conditions and employee grievance filing: the moderating effects of gender and ethnicity. *Ind. Relat.* 47, 229–259. doi: 10.1111/j.1468-232X.2008.00518.x

Barrick, M. R., Mount, M. K., and Li, N. (2013). The theory of purposeful work behavior: the role of personality, higher-order goals, and job characteristics. *Acad. Manage. Rev.* 38, 132–153. doi: 10.5465/amr.2010.0479

Bayl-Smith, P. H., and Griffin, B. (2015). Measuring work styles: towards an understanding of the dynamic components of the theory of work adjustment. *J. Vocat. Behav.* 90, 132–144. doi: 10.1016/j.jvb.2015.08.004

Bianchi, R. (2015). Negative affectivity, interpersonal conflict at work, and immunity: on the importance of considering stress in its complexity. *J. Behav. Med.* 39, 365–366. doi: 10.1007/s10865-015-9705-7

Boswell, W. R., and Olson-Buchanan, J. B. (2004). Experiencing mistreatment at work: the role of grievance filing, nature of mistreatment, and employee withdrawal. *Acad. Manage. J.* 47, 129–139. doi: 10.5465/20159565

Branham, L. (2012). *The 7 Hidden Reasons Employees Leave: How to Recognize the Subtle Signs and Act Before It's Too Late, 2nd Edn*. New York: AMACOM, American Management Association.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *J. Cross Cult. Psychol.* 1, 185–216. doi: 10.1177/135910457000100301

Camps, J., Stouten, J., and Euwema, M. (2016). The relation between supervisors' Big Five personality traits and employees' experiences of abusive supervision. *Front. Psychol.* 7, 1–11. doi: 10.3389/fpsyg.2016.00112

Carnevale, J. B., and Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: implications for human resource management. *J. Bus. Res.* 116, 183–187. doi: 10.1016/j.jbusres.2020.05.037

Cheung, M. F., and Wu, W. P. (2014). Leader-member exchange and industrial relations climate: mediating of participatory management in China. *Asia Pac. J. Hum. Resou.* 52, 255–275. doi: 10.1111/j.1744-7941.2012.00050.x

Dawis, R. V. (2005). "The Minnesota theory of work adjustment," in *Career Development and Counseling: Putting Theory and Research to Work*,ed. S. D. Brown, and R. W. Lent (New York, USA: Wiley), 3–23.

Dawis, R. V., and Lofquist, L. H. (1984). *A Psychological Theory of Work Adjustment: An Individual-Differences Model and Its Applications*. Minneapolis, MN: University of Minnesota Press.

Dessler, G., and Tan, C. H. (2008). *Human Resource Management: An Asian perspective, 2nd Edn*. Boston, MA: Pearson Education.

Dimmock, S., and Gerken, W. C. (2018). How one bad employee can corrupt a whole team. *Harvard Bus. Rev*. Available online at: https://hbr.org/2018/03/research-how-one-bad-employee-can-corrupt-a-whole-team (accessed March 3, 2022.).

Felfe, J., Yan, W., and Six, B. (2008). The impact of individual collectivism on commitment and its influence on organizational citizenship behaviour and turnover in three countries. *Int. J. Cross Cult. Manage.* 8, 211–237. doi: 10.1177/1470595808091790

Furåker, B. (2009). Unsatisfactory working conditions and voice: an analysis involving employees in Sweden. *J. Workplace R.* 14, 157–173. doi: 10.2190/WR.14.2.c

Guan, Y., Deng, H., Fan, L., and Zhou, X. (2021). Theorizing person-environment fit in a changing career world: interdisciplinary integration and future directions. *J. Vocat. Behav*. 126, 103557. doi: 10.1016/j.jvb.2021.103557

Gutierrez, A. P., Candela, L. L., and Carver, L. (2012). The structural relationships between organizational commitment, global job satisfaction, developmental experiences, work values, organizational support, and person-organization fit among nursing faculty. *J. Adv. Nurs.* 68, 1601–1614. doi: 10.1111/j.1365-2648.2012.05990.x

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organ. Res. Methods* 1, 104–121. doi: 10.1177/109442819800100106

Hu, L., and Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Struct. Equ. Modeling* 6, 1–55. doi: 10.1080/10705519909540118

Jöreskog, K. G., and Sörbom, D. (1996). *LISREL 8: User's Reference Guide*. Chicago: Scientific Software International.

Kleiner, M. M., Nickelsburg, G., and Pilarski, A. (1995). Monitoring, grievances, and plant performance. *Ind. Relat.* 34, 169–189. doi: 10.1111/j.1468-232X.1995.tb00367.x

Kowalski, R. M. (1996). Complaints and complaining: functions, antecedents, and consequences. *Psychol. Bull.* 119, 179–196. doi: 10.1037/0033-2909.119.2.179

Kristof-Brown, A. L., Zimmerman, R. D., and Johnson, E. C. (2005). Consequences of individuals' fit at work: a meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Pers. Psychol.* 58, 281–342. doi: 10.1111/j.1744-6570.2005.00672.x

Lu, L., and Liu, J. (2016). An exploratory study on the research framework of workplace complaints. *Hum. Resour. Dev. China.* (9), 6–14.

Milfont, T. L., and Fischer, R. (2010). Testing measurement invariance across groups: applications in cross-cultural research. *Int. J. Psychol. R.* 3, 2011–2084. doi: 10.21500/20112084.857

Netemeyer, R. G., Bearden, W. O., and Sharma, S. (2003). *Scaling Procedures: Issues and Applications*. Thousand Oaks, CA: Sage Publications.

Piasentin, K. A., and Chapman, D. S. (2006). Subjective person-organization fit: bridging the gap between conceptualization and measurement. *J. Vocat. Behav.* 69, 202–221. doi: 10.1016/j.jvb.2006.05.001

Powell, G. N., Francesco, A. M., and Ling, Y. (2009). Toward culture-sensitive theories of the work-family interface. *J. Organ. Behav*. 30, 597–616. doi: 10.1002/job.568

Rubin, E. V., and Edwards, A. (2020). The performance of performance appraisal systems: understanding the linkage between appraisal structure and appraisal discrimination complaints. *Int. J. Hum. Resour. Man.* 31, 1938–1957. doi: 10.1080/09585192.2018.1424015

Schuh, S. C., Zhang, X. A., and Tian, P. (2013). For the good or the bad? interactive effects of transformational leadership with moral and authoritarian leadership behaviors. *J. Bus. Ethics.* 116, 629–640. doi: 10.1007/s10551-012-1486-0

Tabachnick, B. G., and Fidell, L. S. (2019). *Using Multivariate Statistics, 7th Edn*. Boston: Pearson.

Walker, B., and Hamilton, R. T. (2011a). Employee-employer grievances: a review. *Int. J. Manag. Rev.* 13, 40–58. doi: 10.1111/j.1468-2370.2010.00283.x

Walker, B., and Hamilton, R. T. (2011b). Employment rights disputes: what is the role of HR professionals? *Asia Pac. J. Hum. Resou.* 49, 409–424. doi: 10.1177/1038411111422142

Wang, Q., Zhou, X., Bao, J., Zhang, X., and Ju, W. (2020). How is ethical leadership linked to subordinate taking charge? a moderated mediation model of social exchange and power distance. *Front. Psychol.* 11, 315. doi: 10.3389/fpsyg.2020.00315

Warr, P., and Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person-job fit. *J. Occup. Health Psych.* 17, 129–138. doi: 10.1037/a0026859

Westover, J. H., and Taylor, J. (2010). International differences in job satisfaction: the effects of public service motivation, rewards and work relations. *Int. J. Prod. Perform. Man.* 59, 811–828. doi: 10.1108/17410401011089481

Wu, X., and Ma, F. (2022). How Chinese employees' voice behavior is motivated: the role of perceived overqualification. *Front. Psychol.* 13, 736043. doi: 10.3389/fpsyg.2022.736043

Xi, M., Zhou, L., Zhang, X., and Zhao, S. (2021). Labor relations conflict in China: an analysis of conflict measure, conflict solution and conflict outcomes. *Int. J. Hum. Resour. Man.* 1-37. doi: 10.1080/09585192.2021.1903966

Xiao, Y., and Cooke, F. L. (2012). Work-life balance in China? Social policy, employer strategy and individual coping mechanisms. *Asia Pac. J. Hum. Resou.* 50, 6–22. doi: 10.1111/j.1744-7941.2011.00005.x

Zhang, S., Zang, X., and Zhang, F. (2021). Development and validation of the win-win scale. *Front. Psychol.* 12, 657015. doi: 10.3389/fpsyg.2021.657015

Zhang, X. A., Cao, Q., and Grigoriou, N. (2011). Consciousness of social face: the development and validation of a scale measuring desire to gain face versus fear of losing face. *J. Soc. Psychol.* 151, 129–149. doi: 10.1080/00224540903366669

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Advantages of publishing in Frontiers

OPEN ACCESS
Articles are free to read for greatest visibility and readership

FAST PUBLICATION
Around 90 days from submission to decision

HIGH QUALITY PEER-REVIEW
Rigorous, collaborative, and constructive peer-review

TRANSPARENT PEER-REVIEW
Editors and reviewers acknowledged by name on published articles

Frontiers
Avenue du Tribunal-Fédéral 34
1005 Lausanne | Switzerland

Visit us: www.frontiersin.org
Contact us: frontiersin.org/about/contact

REPRODUCIBILITY OF RESEARCH
Support open data and methods to enhance research reproducibility

DIGITAL PUBLISHING
Articles designed for optimal readership across devices

FOLLOW US
@frontiersin

IMPACT METRICS
Advanced article metrics track visibility across digital media

EXTENSIVE PROMOTION
Marketing and promotion of impactful research

LOOP RESEARCH NETWORK
Our network increases your article's readership