EMOTIONS IN THE WORKPLACE: ADVANCES IN RESEARCH FOR THE WELL-BEING

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PUBLISHED IN: Frontiers in Psychology

frontiers Research Topics

frontiers

ISSN 1664-8714
ISBN 978-2-88974-358-2
DOI 10.3389/978-2-88974-358-2

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Citation: del Carmen Pérez-Fuentes, M., Gázquez, J. J., del Mar Molero, M., Saracostti, M., eds. (2022). Emotions in the Workplace: Advances in Research for the Well-Being. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88974-358-2

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frontiers in Psychology

ORIGINAL RESEARCH
published: 25 October 2019
doi: 10.3389/fpsyg.2019.02431

When Holding in Prevents From Reaching Out: Emotion Suppression and Social Support-Seeking in Multicultural Groups

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Members of multicultural groups benefit from developing diverse social support networks. Engaging openly with people who have a different worldview (i.e., given by a different cultural background) broadens one's cognitive horizons, facilitates one's adaptation to new contexts, decreases stereotyping and discrimination and generally improves individual and group performance. However, if this social connection is hindered (either by limiting the number of people one reaches out to or in terms of preferring to connect to similar others), then the diversity advantage is lost – both for the individuals and for the groups. Through two case studies of professional groups with varying cultural diversity (moderate and superdiverse), we investigate the evolution of their members' social support networks (i.e., to what extent and to whom they reach out for support) depending on (1) individuals' habitual emotion suppression and (2) cultural orientation on the individualism-collectivism dimension. Results show that individualistic cultures suffer a double-whammy: when suppressing, their members seek less support (i.e., don't reach out so much to ask for support) and tend to seek culturally similar others for it when they do. Suppressing collectivists are less affected in absolute levels of connectedness, but still prefer culturally similar others as sources of support. Our study offers an emotion-based view of why people stick together with similar others in diverse groups and how learning to better cope with emotions can make us more open-minded toward diversity in professional settings.

Keywords: emotion suppression, individualism – collectivism, social support, similarity attraction, multicultural groups

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Catherine S. Daus, Southern Illinois University Edwardsville, United States
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Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *24 July 2019*
Accepted: *14 October 2019*
Published: *25 October 2019*

Citation:
Boroş S, van Gorp L and Boiger M (2019) When Holding in Prevents From Reaching Out: Emotion Suppression and Social Support-Seeking in Multicultural Groups. Front. Psychol. 10:2431. doi: 10.3389/fpsyg.2019.02431

INTRODUCTION

In a world where cultural diversity in professional settings is more often than not the norm, it is crucial to have in-depth understanding of the role emotional dynamics play in multicultural groups. However, research on emotional processes in multicultural groups is so far scant (Elfenbein and Shirako, 2006; Fischbach, 2009). This may be surprising, given the growing attention to both

the topic of emotions in organizations (Ashkanasy et al., 2017) and that of cultural variation in emotions (Elfenbein and Ambady, 2002; Van Hemert et al., 2007; Mesquita et al., 2017) in the past two decades.

Multicultural groups challenge our most basic assumptions about the "rules of the game" of working together (Stahl et al., 2010).[1] These challenges often come with intense emotions for members of multicultural groups, and group members may reach out to others in their group for support in handling and making sense of these emotions (Rimé, 2009).

Seeking social support in distressing situations offers a double-win. To the support seeker, it offers emotion support and help with emotion regulation; it also provides an opportunity to cognitively elaborate on experiences, which may help to better adapt to the situation. For the larger group to which the individual belongs, social support exchanges are the canvas that allow stronger and longer-lasting relationships to be built (Ibarra, 1993), newcomers to be socialized into organizational culture, organizational culture to be propagated and strengthened (Morrison, 2002), and groups to become more cohesive (Hogg, 1992).

It follows logically then that building a diverse social support network would be an optimal way both at individual and at group level to cope with emotions in multicultural groups, be they teams or larger social groups (such as communities). Diverse support networks makes adaptation to a new environment – be that professional (Ibarra, 1993) or even cultural (De Leersnyder et al., 2011) faster and swifter; it has a positive impact on work performance and career prospects (McDonald and Westphal, 2003), as well as general well-being (Cohen and Janicki-Deverts, 2012). However, reality shows this is rarely the case (Leung and Wang, 2015), and multicultural groups remain the terrain of separation and faultlines. Going beyond cognitive and social categorization analyses of this process, we focus instead on the emotional processes that impact the development of diverse social support networks. More precisely, we set out to explore how the individual emotion coping styles of members shape the emergence of their social support networks with dissimilar others in multicultural groups.

Research shows that notwithstanding the benefits of looking for support as an emotion regulation and meaning creation strategy, more basic, intrapersonal strategies are often the preferred, easier alternative. Such automatic strategies are primarily directed at modifying the outer expression of the emotion (i.e., emotion suppression), in order to respond appropriately to the situation (Gross, 2002). Emotion suppression consists of controlling or neutralizing emotional behavior (Gross and John, 2003; Matsumoto et al., 2008) and of actively inhibiting the observable expression of the emotional experience (Gross and Thompson, 2007). This is often a desirable and adaptive strategy in social interactions – for instance, when suppressing anger in front of a colleague or when wanting to hide anxiety before a big presentation. However, emotion suppression comes at both intrapersonal (Gross, 2002) and interpersonal costs, especially when it is a habitual regulation mechanism (i.e., habitual suppression). At interpersonal level, research has shown that *habitual suppression interferes with one's engagement in social relationships*, both by disrupting the dynamics of social interactions and existing relationships (Butler et al., 2003; Srivastava et al., 2009), and by preventing habitual suppressors from forming social connections in the first place (English et al., 2012; Tackman and Srivastava, 2016). In other words, habitual suppression appears to hinder the establishment of social support networks thereby limiting interpersonal regulatory strategies such as support seeking.

However, the exact *consequences of habitual suppression appear to vary across cultural contexts* (Butler et al., 2007). For example, in an European American context, suppression is associated with higher levels of depression and lower levels of life satisfaction. However, for Hong Kong Chinese, for whom suppression is instrumental to adjusting to others, suppression is not associated with depression or less life satisfaction (Soto et al., 2011). These cultural differences may be explained by the different role that self-expression plays in these contexts (Tsai and Lau, 2013): emotion suppression violates the individualistic norm for self-expression, while it is generally in line with collectivistic norms of self-adjustment.

This evidence focuses on the impact of emotion suppression on the individuals themselves (e.g., well-being, job satisfaction, levels of depression). The question remains *how the differential preferences for suppression depending on culture of origin will impact people's interpersonal behavior in multicultural groups*. We know that a basic condition for reaping the benefits of diversity in groups is engaging openly with people who have a different worldview – e.g., with a different cultural background (Stahl et al., 2010). If this social connection is limited by emotion suppression (either by *limiting the number* of people one reaches out to or in terms of *preferring to connect to similar others*), then the diversity advantage is lost (Cox and Blake, 1991; Ely and Thomas, 2001; Ashkanasy et al., 2002).

To address this gap, the present paper attempts to contribute to the advancement of knowledge in the field in two ways: First, we replicate previous research of how habitual suppression impacts the search for social support in professional groups in a longitudinal network study design. Second, we explore the role of culture in this relation. Based on previous findings about the most relevant cultural dimensions with differential impact on the consequences of habitual suppression (Butler et al., 2007; Matsumoto et al., 2008; Soto et al., 2011), we will look specifically at differences in individualism – collectivism in one's culture of origin. Moreover, we treat culture both as a value lens (i.e., how cultural values from the primary socialization influence

[1] Because "culture consists of a commonly held body of beliefs and values that define the "shoulds" and the "oughts" of life" (Stahl et al., 2010, p. 691), cultural diversity increases divergent group processes (i.e., processes that bring different values and ideas into the team and juxtapose them with each other – Davison and Ekelund, 2004), such as creativity (positive) and conflict (negative). Systematic evidence (see Stahl et al., 2010 for a meta-analysis) points that multicultural groups experience more task conflicts than homogenous ones, but are also more creative. These processes, however, come at an emotional cost, as cultural diversity has a negative influence on the affective dimension of social integration (i.e., "the attraction to the group, satisfaction with other members of the group, and social interaction among group members" – O'Reilly et al., 1989, p. 22).

the impact of habitual suppression on seeking social support in professional groups) as well as an indicator of group diversity: i.e., we will look at culturally homogenous, moderately diverse (i.e., there is a dominant culture) and superdiverse[2] (there is no dominant culture) groups. To do so, this study presents four case studies. For each case study the members of a particular group were asked to fill out a survey at three or four moments in time, resulting in longitudinal network data which allows us to take into account structural characteristics of network dynamics and to look at the dynamic process of selecting support providers. By adopting a network methodology, we also answer the call for emotion research in organizations to go beyond experiments (Webb et al., 2012) and cross-sectional surveys (Hu et al., 2014) and use novel methods that allow for more comprehensive reflections on the context (social, organizational, cultural) in which these emotional dynamics play in professional settings (Ashkanasy et al., 2017).

In sum, our study aims to answer the following question: How does habitual suppression impact the evolution of people's social support networks in culturally diverse groups? To this aim, we look at (1) the influence of habitual suppression on looking for new support providers, (2) the role someone's cultural background plays in this relationship, as well as (3) at patterns of preferential connections (to whom one reaches for support), thereby testing propositions set forth by cultural homophily research (McPherson et al., 2001).

Suppression and Social Engagement

Emotion suppression, while quick to be activated and easily employed, comes with an array of costs – especially to those for whom self-expression is a core value (Markus and Kitayama, 1991). In the following section, we build on the main findings regarding these costs and explain how intrapersonal costs (i.e., cognitive and affective) impact the social functioning and eventually the adaptability and integration of the habitual suppressor (so the intrapersonal costs). To start, we review the main effects of suppression that previous research has highlighted. The next sections refine these findings by adding the cultural dimension, first by discussing the impact of cultural dimensions on the main effect of suppression, and afterward by looking at variation in group members' culture of origin as a proxy for cultural diversity in groups.

Research (mainly conducted in individualistic cultures – e.g., North American) has overwhelmingly proven thus far that habitual emotion suppression interferes with one's engagement in social relationships: Previous studies demonstrated that suppression not only disrupts the dynamics of social interactions and existing relationships (Butler et al., 2003; Srivastava et al., 2009), but also prevents habitual suppressors from forming social connections in the first place (English et al., 2012; Tackman and Srivastava, 2016).

Emotion suppression impairs social functioning via both affective and cognitive mechanisms. Because suppression decreases both negative and positive emotion-expressive behavior, it thereby ends up masking important social signals that would otherwise be available to social interaction partners. This affects both the partner as well as the suppressor, who comes to feel inauthentic in interactions (affective mechanism) (English and John, 2013). The self-monitoring and self-regulation process is taxing on an individual's cognitive resources, making thereby the suppressor less attentive to and less responsive to the partner's emotional cues –i.e., the cognitive mechanism (Butler et al., 2003; Richards et al., 2003). This in turn makes the partner feel detached or unappreciated (Impett et al., 2012). Both mechanisms point to losses in the richness of the interaction with a suppressor. In time, this leads habitual suppressors to withdraw from the kinds of reciprocal disclosure that would otherwise promote intimacy and closeness (English and John, 2013). Therefore, individuals who habitually suppress are less likely to share either their negative or their positive emotions with others, which in time leads to having poorer social support and making lesser use of social support coping (Gross, 2002). In a longitudinal study on college adaptation, Srivastava et al. (2009) attested that individual differences in suppression predicted difficulties forming close relationships and getting social support in the new college environment (Srivastava et al., 2009). At the end of college, habitual suppressors ended up having less social support, less satisfying social lives, and experienced trouble getting close to others (Tackman and Srivastava, 2016).

Quantifiers of Emotion Suppression Costs: A Cultural Value Lens Analysis

Research conducted with participants from individualistic countries shows that people feel inauthentic and are seen as inauthentic when they do not express themselves (English and John, 2013). However, acts of self-expression enhance perceptions and feelings of authenticity only when they are congruent with the culturally prevalent self-expression norms (Kokkoris and Kühnen, 2014). These norms differ radically between individualistic cultures, which promote an independent construction of the self, and collectivistic cultures, which promote an interdependent construction of the self (Matsumoto, 1990; Markus and Kitayama, 1991).

Values in individualistic cultures emphasize self-affirmation, the pursuit of individual goals and open emotional expression (Frijda and Sundararajan, 2007). They promote a strong shared belief in the independence of the self from others and therefore the major cultural quest is to discover, actualize, and confirm these internal attributes of the self (i.e., the independent view of self, cf Markus and Kitayama, 1991). Since the individualistic values of independence and self-assertion encourage open self-expression, it follows that emotion

[2]We built the moderately diverse-superdiverse dichotomy borrowing from the work of Vertovec (2007) in demographic, who defined superdiverse conditions as: "distinguished by a dynamic interplay of variables among an increased number of new, small and scattered, multiple-origin, transnationally connected, socio-economically differentiated and legally stratified immigrants" (Vertovec, 2007, p. 1024). The concept of super-diversity has been then borrowed by diversity research as a conceptual device with which to observe complex societies; it points to the changing conditions of diversity and the multiplication of variables, a phenomenon which differentiates today's urban societies from previous demographic conditions (Vertovec, 2007).

suppression has primarily a self-protective function in these cultures: i.e., people suppress the expression of their emotions as an act of withdrawal from a social threat (Matsumoto, 1990; Markus and Kitayama, 1991; Tsai and Levenson, 1997; Oyserman et al., 2002; Butler et al., 2007). Therefore, suppression is associated with avoidant attachment, which involves a lack of trust in others and a tendency toward social withdrawal (Gross and John, 2003), less social closeness and support (John and Gross, 2004), reduced rapport, and inhibited relationship formation (Butler et al., 2003).

However, the situation looks different in collectivistic cultures, where cultural values emphasize social connection, in-group harmony, individual restraint and suppression of socially inappropriate emotions (Hu et al., 2014). In these cultures, which hold relational harmony as a primary value, individuals are encouraged to take their proper place in the community. Expansive behavior and emotional expression are seen as "taking too much space," and thus condemned (Mesquita and Walker, 2003). Thus, suppression is not only more frequent than in individualistic cultures (Butler et al., 2007), but it is in fact in line with the fundamental values of the culture.

Since collectivistic cultures promote primarily connectedness or interdependence among those within an ingroup, the major cultural quest is to adjust to relationships and become a proper member of the group (Morling et al., 2002; Boiger et al., 2012). To do this, one must constrain, tame, or otherwise condition internal desires or wishes that may in any way hinder interpersonal harmony and unity (i.e., the interdependent view of self, cf. Markus and Kitayama, 1991). Therefore, the collectivistic values of interdependence and relationship harmony will encourage suppression equally often for prosocial goals (e.g., hiding glee when winning, suppressing anger to preserve a relation) and during positive social interactions, rather than constraining it only to self-protective purposes. When people from collectivistic cultures engage in suppression, it is most often out of concern about hurting someone else, and trying to preserve relationships (Butler et al., 2007). This "other-protective" goal has been shown to even revert the consequences of suppression, by being associated with personal well-being and relationship quality in close relationship (Le and Impett, 2013) rather than decreased feelings of rapport and affiliation, and increased negative feelings about the interaction (Butler et al., 2003).

Because of the ensuing differences in the characteristics and interpretations of suppression, their consequences have been proven radically different for individualistic and collectivistic cultures (see Hu et al., 2014, for a meta-analysis). For example, suppression was correlated negatively with mental health (e.g., life satisfaction, and positive affect) and positively with distress (e.g., depression, anxiety, and overall negative affect) in studies on samples from individualistic cultures, but not in samples of participants from collectivistic ones. In other words, evidence indicates that culture (and in particular the individualism-collectivism dimension) is one of the most relevant moderators of the impact of emotion suppression on individuals' well-being and social functioning. Along these lines, there is a common belief that gender norms generally differentiate between men and women's socially condoned expression of emotions. When it comes to suppressing these expressions, significant effects for habitual suppression were found across gender in Western, individualistic samples (Gross and John, 2003). However, in cross-cultural meta-analyses (Matsumoto et al., 2008), while gender differences persisted, they were not large enough to be reflected in country-level data (within-country differences on gender were smaller than between-country differences), indicating that culture is a more significant moderator of emotion suppression than gender or age (despite both these variables being relevant in individual differences of emotion suppression). Considering extant evidence on the importance of social support for one's well-being and organizational functioning (Kahn et al., 2006; Hayton et al., 2012), as well as the role suppression plays in limiting access to social support networks (Butler et al., 2003; Srivastava et al., 2009), it is imaginable that the less detrimental effects on well-being in collectivist cultures are due to habitual suppressors withdrawing less from support networks. Based on the different dynamics that play in individualistic and collectivistic cultures, we predict that:

> Hypothesis 1: *In culturally diverse groups, the level of Individualism/Collectivism of one's country of origin moderates the relation between emotion suppression and support seeking in such a way that people from more individualistic cultures who suppress their emotions will ask less others for support, while the impact of emotion suppression on support seeking is smaller for people from more collectivistic cultures.*

Cultural Homophily Effects of Habitual Suppressors

The intrapersonal consequences of emotion suppression impact not only the extent to which suppressors reach out for support, but also who they reach out to: Habitual suppressors, who avoid support seeking in most situations, may additionally hamper their chances by reaching out to similar others when they seek support at all. Previous research evidenced repeatedly that a diverse network to tap into for personal support improves people's adaptation to a new environment – be that professional (Ibarra, 1993) or even cultural (De Leersnyder et al., 2011) –, work performance and career prospects (McDonald and Westphal, 2003), as well as general well-being (Cohen and Janicki-Deverts, 2012). When suppressing, however, people may prefer to reach out to those who hold similar worldviews, thereby avoiding to engage in social relations that would have proved more helpful and adaptive in the longer run (Rimé, 2009). So why is that the case? Again, a cognitive and an affective path of suppression costs explain this phenomenon.

Because of the extra strain imposed on the cognitive system by suppression, limited resources are available to process further information (Gross, 2002). Cognitive functioning impaired by suppression means that in more complex processes, such as how we make choices and social judgments, we rely mainly on automatic heuristics (Hofmann et al., 2007). Evidence from similarity-attraction paradigm studies shows that increased similarity with a target (even a total stranger) – with respect

to attitudes, personality traits, or even demographic attributes – is associated with increased attraction to the target (Byrne, 1997). This attraction is automatic, fast, based on one or few salient cues to similarity, and happens through an affective processing path. This automatic processing leads then to reaching out to people holding similar cultural values and attitudes for social support instead of considering who the best person would be to offer that support – i.e., using the cognitive path, which requires deliberation and thought. This automatic processing is one of the possible explanations behind why immigrants for instance choose to reach out to other co-nationals, instead of host country nationals, thereby making their cultural adaptation in a new country more difficult (De Leersnyder et al., 2011).

There is also an affective mechanism which explains the preference for homophily in support networks following emotion suppression. According to Rimé (2009), socio-affective sharing "contributes to the fulfillment of the socio-affective needs of the narrator by providing him or her with responses that offer help, support, comfort, consolation, legitimization, attention, bonding, and empathy" (Rimé, 2009, p. 47). Sharing your problems and relying on support from a person with different attitudes and world-views can thus help the advice seeker broaden their understanding of a situation, and develop new operating schemata and behavioral alternatives. This comes, however, at a cost: the person does not receive immediate alleviation in the interaction: on the contrary, rather than being validated in their emotional experience, they would be challenged further (Rimé, 2009). A lack of emotional and cognitive resources due to suppression prevents suppressors from entering such challenging interactions, making it more likely they will turn to the sources who will offer them comfort and validation instead – so others with similar attitudes and values.

In light of these mechanisms, we hypothesize that:

Hypothesis 2: *In culturally diverse groups, habitual suppressors have a stronger preference to develop a support network with culturally similar others than non-habitual suppressors.*

MATERIALS AND METHODS

Procedure

To investigate the influence of emotion suppression on the development of a support network and the role of individualistic-collectivistic primary socialization in this relation, data were gathered with two different groups: one moderately diverse (i.e., one dominant individualistic culture and a minority of different other nationalities) and one superdiverse group (i.e., no dominant culture/nationality). In order to be able to assess the dynamic process of network development, longitudinal data were collected for each case. The group of MBA participants filled-out a questionnaire at three moments in time. The second, consisting of marketing students (post-masters professional education), filled out a survey at four points in time.

Participants

The two groups were newly formed groups and were both enrolled in a full-time (MBA or Marketing Track) program in a Belgian Business School. The participants in these programs (i.e., young professionals who take a 1 year sabbatical to undergo these executive education programs) had daily contact during a whole academic year. The MBA students filled out a questionnaire at the beginning of the academic year, a second one two and a half months later and the last one at the end of their plenary sessions (i.e., 6 months after the first one). For the marketing students, one additional measurement was scheduled, i.e., in between the first and second measurement point of the MBA sample. As presented in **Table 1**, the group of marketing students consisted of 58 students, of whom 37.9% were male and the average age was 23.1. Regarding country of birth the marketing group was *moderately diverse* with one dominant culture, as 43 of them (74.1%) were born in Belgium and the other 15 students were born in 12 different countries. The group of MBA students comprised 65 participants, of whom 63.1% were male with an average age of 29.2. This group was also the more diverse group in terms of country of birth, only 8 MBA-students (12.3%) having been born in Belgium and the 57 other MBA-students born in 26 different countries (i.e., a *superdiverse* group).

Measures

Habitual Emotion Suppression

At the second data-collection point, the Emotional Regulation Questionnaire (Gross and John, 2003) was included in the surveys. Four out of these ten items are used to measure emotion

TABLE 1 | Sample characteristics.

	Marketing students	MBA students
	M (SD) or %	*M* (SD) or %
Age	23.1 (1.2)	29.2 (2.8)
Membership (in years) group t1	<2 weeks	<2 weeks
Gender – male	37.9%	63.1%
Country of birth		
Belgian	74.1%	12.3%
The Netherlands	1.7%	–
Germany	3.4%	3.1%
Spain	1.7%	–
India	3.4%	13.8%
Russia	3.4%	7.7%
United States of America; Colombia	1.7%	6.2%
China	1.7%	3.1%
Australia; France; Hungary; Slovakia	1.7%	–
Romania		7.7%
Kazakhstan; Taiwan; Greece; South Africa; Georgia; Vietnam; Azerbaijan		3.1%
Hungary; Thailand; Austria; Peru; Brazil; Cyprus; Ukraine; New-Zealand; Malaysia; Moldova; Indonesia; Chile		1.5%
	N = 58	*N* = 65

For economy of space, countries are presented together in the same cell when they share the same representation value in the sample.

suppression. All four suppression items were measured on a 7-point Likert scale ranging from "Strongly disagree" (= 1) to "Strongly agree" (= 7). A sample item is "I keep my emotions to myself." As presented in **Table 2**, the Cronbach's alpha for this scale is sufficiently high in both samples: 0.81 and 0.82 respectively.

Cultural Similarity I (Belgian – Non-Belgian)

In the marketing group there is a *moderate diversity* regarding country of birth; in this group, 74.1% of participants were born in Belgium. With one dominant cultural group, the most salient distinction between members was assumed to be non-Belgian vs. Belgian. Consequently, we operationalized cultural similarity in this group as a dichotomized variable, namely non-Belgians (= 0) vs. Belgians (= 1) and respondents from the same group are considered to be culturally similar.

Cultural Similarity II

The MBA-group is a *superdiverse* group regarding country of birth as there is no one dominant country of birth and the 65 students are born in 27 different countries. Cultural similarity in this group is based on a metric variable, namely Hofstede's country values on the dimension collectivism-individualism (Hofstede et al., 2010), and respondents are considered to be more cultural similar the more comparable their collectivism-individualism score. We used this proxy for the value system in which someone got his/her primary socialization following similar research conducted by Tröster et al. (2014). The initial Hofstede' country values ranged between 13 and 91 and were rescaled by dividing them by 13 in order to have the same range as the other measures used (i.e., 1–7). A low score on this variable indicates that someone is born in a more collectivistic culture, and a high score points to a more individualistic culture.

Social Support

In line with research of De Lange et al. (2004) social support was measured by giving respondents a roster with the names of all group members (i.e., recognition method) and asking them to put a check mark next to "*each person you repeatedly consulted for help and support on personal-related problems, such as for example relational problems, death of a beloved one, lack of motivation, problematic relation with another student,. . ..*" Respondents were asked to make a binary judgment for each of their fellow group members. We chose binary judgments because they are less difficult for respondents (Marsden, 2005) and thus help avoid respondent fatigue or drop-out for this network panel design. Social support was measured in this way during each data-collection point. In **Table 2**, the number of reported support ties are presented for each group and each data-collection moment, as well as the density of the social support network, that is, the number of actual ties divided through the number of possible ties.

Descriptive Statistics and Analytic Strategy

Surveys were distributed on paper and collected in blank, sealed envelopes. As participants shared personal info on the survey itself (to allow for longitudinal data integration), we also guaranteed participants anonymity of their results – i.e., sharing them only as a group pattern. Participation was voluntary and response rates are relatively high, varying between 74.1 and 100% as shown in **Table 2**. As a response rate of 70% is needed to perform longitudinal network analyses (Kossinets, 2006), the data of this study meet this criterion.

To test our hypotheses, we used stochastic actor-based models. The models capture network dynamics over time and are most appropriate for complete network data. Social support is measured in this study by collecting data on whole networks, as a roster of the names of all group members is used in each group. Data on this social support measurement resulted for each group and for each wave in a binary adjacency matrix (i.e., a square matrix that represents which ties are present and which not between all possible pairs of the network) of size N*N, so for instance for the MBA group the social support variable results for each wave in a table with 65 rows and 65 columns. If someone (i.e., ego *i)* indicated to rely on someone else (i.e., alter *j*) for social support, the cell x_{ij} got code 1. If there was no relationship (i.e., no tie from *i* to *j)* the cell was coded 0. Given the specific structure of this measurement in combination with the different data-collection moments, stochastic actor-based models for network dynamics are most appropriate and analyses are executed according to the procedures described in Ripley et al. (2011) and Snijders et al. (2010) with RSiena (version 1.1-232).

The density indicators of the social support network in **Table 2** show both intense support-seeking activity in both groups, and that the number of support ties increases over time in both samples. When applying stochastic actor-based models for network dynamics, networks need to change over time but they also need to maintain a certain stability (Ripley et al., 2011). The Hamming distance coefficients (i.e., the indicators for the amount of tie changes between two periods) were above the 0 threshold, and the Jaccard coefficients (i.e., the indicator for network stability, which takes into account both the number of changing ties as well as the number of stable ties) were above 0.1, indicating that there is both enough stability and change to consider the data as an evolving network and to apply stochastic actor-based models for network dynamics. The convergence of the estimation algorithm was excellent for all models presented (all t-ratios < 0.1).[3]

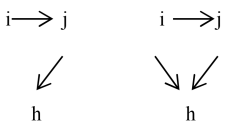
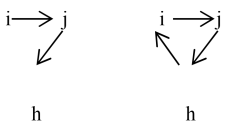
Typical for stochastic actor-based models is to include some basic structural effects that are often at play in a social network. As such, some structural endogenous network effects are included

[3]When applying stochastic actor-based models it is crucial to check the convergence of the algorithm in order to see if the algorithm could be applied on the data or not. This check considers the deviations between simulated values of the statistics and their observed values. Ideally, these deviations should be 0. Because of the stochastic nature of the algorithm, when the process has properly converged the deviations are small but not exactly equal to 0. We calculated the averages and standard deviations of the deviations in RSIENA and combined these in a t-ratio (in this case, average divided by standard deviation). The overall maximum convergence ratio is the maximum value of the ratio average deviation standard deviation for any linear combination of the target values.

TABLE 2 | Descriptive statistics.

	Marketing students			MBA students		
	$\bar{x}$	SD	α	$\bar{x}$	SD	α
Emotion suppression	3.31	1.24	0.81	3.72	1.41	0.82
Collectivism-individualism	/			3.38	1.81	
Response rate						
t 1		98.3%			90.8%	
t 2		100%			90.8%	
t 3		89.7%			81.5%	
t 4		93.1%				
Social support network:	**Nr support ties (δ)**		**Density δ/(n*n-1)**	**Nr support ties (δ)**		**Density δ/(n*n-1)**
t 1	91		0.03	106		0.03
t 2	222		0.07	120		0.03
t 3	193		0.07	153		0.05
t 4	271		0.09			
	Hamming Distance		**Jaccard**	**Hamming Distance**		**Jaccard**
t 1-t 2	208		0.19	153		0.16
t 2-t 3	191		0.33	132		0.32
t 3-t 4	189		*0.39*			
		N = 58			*N* = 65	

TABLE 3 | Explanation and visualization of network effects.

Effect	Explanation	Visualization
Outdegree	Tendency to create new support ties to arbitrary others. Outdegree is the effect that indicates how many new ties there are formed to randomly another actor in the network)	
Reciprocity	Tendency to ask for support from someone that asked you already for support. Reciprocity is the indicator showing that if someone asks you for support you are more likely to ask that person for support in the future than a random other person for the group	
Transitive triplets	Tendency of i to ask for support from the support provider of a current support provider. Transitive triplets effect refers to the phenomenon that if A asks B for support and B ask C for support than it is more likely in the future that A will ask C for support than a random other in the network	
3-cycle effect	Tendency that is asked for support by the support provider of his own support provider. 3-cycle-effects refer to the effect that if A asks B for support and B asks C for support C is more likely to ask A for support than a random other	

as control variables in this study, namely an effect for outdegree, reciprocity, transitive triplets effect and 3-cylces. **Table 3** shows a visual representation of these effects as well as an explanation. Moreover, for traditional variables different effects can be included. For instance, gender can be included as a characteristic of the person who is asking someone else for social support, that is someone who is sending a tie. In this case, the effect is called an "ego-effect." However, gender can also be a characteristic of the person who is being asked for social support, that is the person who receives a tie from someone else. In these cases, the gender-effect is called an "alter-effect." Finally, when combining both the information of ego and alter a third effect can be calculated for the same variable, namely a "similarity-effect" which represents the similarity or difference between alter and ego. Both for age and gender all three effects are included as controls in the analyses.

To test Hypothesis 1 – "In culturally diverse groups, the level of Individualism/Collectivism of one's country of origin moderates the relation between emotion suppression and support seeking in such a way that people from more individualistic cultures who suppress their emotions will ask less others for support, while the impact of emotion suppression on support seeking is smaller for people from more collectivistic cultures." We calculated the interaction term between the "ego-effect" of emotion suppression and the "ego-effect" of the individualism/collectivism score. This hypothesis can only be tested in groups that are highly culturally diverse and as such we tested it in the superdiverse (i.e., MBA) sample only.

We tested Hypothesis 2 – "In culturally diverse groups, habitual suppressors have a stronger preference to develop a support network with culturally similar others." By calculating an interaction term between the "ego-effect" of emotion suppression and the "similarity-effect" of the individualism/collectivism score. We took into account that it may be possible for this effect to be limited to the specific case where there is no culturally dominant group: in this case it may be particularly tempting to be associated with culturally similar others, and little pressure to engage with dissimilar others. However, we wanted to test if this was also true in a setting where one could assume more pressure to associated with the culturally dominant group. Therefore, Hypothesis 2 is tested in both the superdiverse (MBA) and moderately diverse (Marketing) groups.

RESULTS

We proposed that the negative effect of suppression on social support network expansion would vary depending on the cultural values regarding individualism/collectivism in which people got their primary socialization. To investigate if the impact of suppression is different for people coming from more collectivistic vs. more individualistic cultures when they are interacting together in a multicultural group we focus on the superdiverse case, that is the group of MBA students. Results (presented in **Table 4**) suggest that the influence of suppression on the likelihood of looking for additional support providers is influenced by someone's cultural background. More precisely, results suggest that especially for people from more individualistic cultures being a habitual suppressor prevents them to extend their social support network ($b_{interaction} = -0.07$; $p < 0.05$). Therefore, results support Hypothesis 1.

To further zoom in on the influence of suppression on the development of social support networks in culturally diverse groups this study investigates in both a culturally superdiverse case as well as in a culturally moderately diverse case if habitual suppression influences someone's preference to ask for support from culturally similar others. Results of the culturally superdiverse case show that, in general, groups members have a preference to extend their support network with culturally similar others ($b = 1.25$; $p < 0.001$). Moreover, results also suggest that this homophily preference is especially present the more people suppress their feelings ($b_{interaction} = 0.44$; $p < 0.05$). Similar effects are found in the culturally moderate diverse case, that is the marketing students. Results of this case also show that in general people from the cultural dominant group prefer to extent their social support network with others from the cultural dominant group while groups members from the cultural minority groups prefer others from a minority group ($b = 0.19$; $p < 0.05$). In addition, results also suggest that, on a marginally significant level, the more someone suppresses his/her feelings the stronger their preference to extend their support network with others from the same cultural group (majority group vs. minority group) ($b_{interaction} = 0.11$; $p < 0.10$). Therefore, Hypothesis 2 is supported by the data.

DISCUSSION

Through two case studies of professional groups with different degrees of cultural diversity, we set out to investigate the evolution of social support networks depending on group members' habitual emotion suppression and cultural orientation, as indicated by their culture of primary socialization's individualistic or collectivistic tendencies. In line with previous studies conducted in individualistic settings (English et al., 2012; Tackman and Srivastava, 2016), our data confirmed that individualistic people who habitually suppress tend to expand less their support networks over time, whereas habitual suppressors coming from more collectivistic countries are less impacted by the negative social consequences of suppression (H1).

What holds true irrespective of a person's culture of origin is a preference for habitual suppressors to seek out culturally similar others for social support (H2). In moderately diverse groups, this plays out as a simple "us vs. them" dichotomy (i.e., "Belgians vs. internationals," in our sample). In superdiverse groups, the cultural homophily effect becomes more nuanced: suppressors from individualistic cultures reach out to others coming from individualistic cultures (irrespective if it is the same country as theirs or not), whereas suppressors from collectivistic cultures will reach out to other collectivists. Given that one's culture's degree of individualism and collectivism is not a visible personal attribute (like gender or age), what could explains this effect?

We link this finding with previous research on how a culture's degree of individualism-collectivism shapes the view of self of its members, and how this in turn dictates desirable behaviors. Fundamentally, the source of self-esteem for collectivists is generically based on "getting along," while for individualists it is based on "getting ahead" (Triandis, 2001). This means that collectivists' *social interactions* are characterized by attentiveness and responsiveness to others, by continually adjusting and accommodating to these others in many aspects of behavior whereas for individualists, a primary need is to express one's own thoughts, feelings, and actions to others rather than be at the receiving end of the interaction (Markus and Kitayama, 1991). Consequently, during *teamwork* or in relation to tasks in general, the former would likely focus more on group harmony while the latter on individual achievements and performance. Furthermore, for collectivists *conformity* to relevant in-group others can be a highly valued end state instead of a sign of weakness, as an individualist would see it (Markus and Kitayama, 1991). Finally, in *conflict* situations collectivists are primarily concerned with maintaining relationships with others, whereas individualists are primarily concerned with achieving justice (Triandis and Suh, 2002).

Observing these differences in the others' behaviors in professional settings can easily lead to stereotyping of the "Other": for instance, collectivists can see individualists as cold, too ambitious at the cost of relationships, rude and unfeeling in conflict management. Alternatively, individualists can see collectivists as not ambitious/driven enough, not having their own mind/opinion, and possibly unreliable and hypocritical as they don't express their position transparently (Clausen, 2010). These stereotypes bring with them a level of discomfort in

TABLE 4 | Dynamics of social support networks in culturally super-diverse and moderately diverse groups – unstandardized coefficients (standard errors).

	MBA student	MBA students	MBA students	Marketing students	Marketing students
	Model1.I	Model1.II	Model1.III	Model2.I	Model2.II
	Est. (s.e.)	Est. (s.e.)	Est. (s.e.)	Est. (s.e.)	Est. (s.e.)
Rate period 1 (t1-t2)	8.02 (1.31)	8.16 (1.27)	8.01 (1.26)	15.25 (3.20)	15.19 (2.86)
Rate period 2 (t2-t3)	6.01 (0.82)	6.18 (0.82)	6.04 (0.81)	6.94 (0.72)	6.98 (0.74)
Rate period 3 (t3-t4)				7.38 (0.79)	7.44 (0.78)
	(t1–t2–t3)	(t1–t2–t3)	(t1–t2–t3)	(t1–t2–t3–t4)	(t1–t2–t3–t4)
ENDOGENOUS NETWORK EFFECTS					
Outdegree (density)	−2.32 (0.09)***	−2.34 (0.09)***	−2.35 (0.08)***	−2.19 (0.08)***	−2.20 (0.08)***
Reciprocity	1.74 (0.18)***	1.74 (0.18)***	1.73 (0.18)***	1.80 (0.13)***	1.79 (0.13)***
Transitive triplets	0.54 (0.11)***	0.52 (0.11)***	0.53 (0.12)***	0.52 (0.05)***	0.52 (0.05)***
3-cycles	−0.09 (0.23)	−0.10 (0.22)	−0.08 (0.24)	−0.37 (0.10)***	−0.36 (0.11)***
EXOGENEOUS NETWORK EFFECTS					
Suppression ego	0.02 (0.04)	−0.01 (0.05)	−0.04 (0.05)	−0.06 (0.03)*	−0.14 (0.05)*
Collectivism-individualism ego	−0.01 (0.04)	−0.04 (0.04)	−0.02 (0.04)		
Collectivism-individualism alter	0.01 (0.04)	0.02 (0.04)	0.01 (0.04)		
Collectivism-individualism sim	1.25 (0.26)***	1.30 (0.27)***	1.33 (0.26)***		
Suppr. ego*Collectivism-indiv. Ego		−0.07 (0.03)*			
Suppr. ego*Collectivism-indiv. sim			0.44 (0.20)*		
Belgian - non-Belgian ego				−0.17 (0.11)	−0.19 (0.11)$^{+}$
Belgian - non-Belgian alter				0.09 (0.10)	−0.09 (0.09)
Belgian - non-Belgian same				0.19 (0.09)*	0.20 (0.09)*
Suppr. ego*Belgian - non B. same					0.11 (0.06)$^{+}$
CONTROL COVARIATES					
Gender ego (male = ref. cat.)	0.14 (0.15)	0.06 (0.14)	0.15 (0.14)	−0.23 (0.09)*	−0.25 (0.09)**
Gender alter	−0.00 (0.12)	−0.01 (0.12)	−0.01 (0.12)	0.03 (0.08)	0.04 (0.08)
Gender similarity	0.12 (0.11)	0.12 (0.11)	0.10 (0.11)	0.25 (0.07)***	0.25 (0.07)***
Age ego	−0.04 (0.02)*	−0.04 (0.02)*	−0.04 (0.02)*	−0.03 (0.04)	−0.03 (0.04)
Age alter	−0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)	−0.04 (0.04)	0.04 (0.04)
Age similarity	0.35 (0.33)	0.32 (0.33)	0.36 (0.34)	0.11 (0.18)	0.14 (0.18)
		65			58

$^{+}p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. *Example of interpretation: Positive significant similarity effect of collectivism-individualism score: People are more likely to look for additional support providers over time (t1–t2–t3) that are more similar to them regarding their cultural background on individualism-collectivism than randomly new support providers.*

reaching out to someone you see as behaving in ways that your own cultural formatting deems as undesirable (Stahl et al., 2010), and this holds especially true for habitual suppressors, who will not want their worldviews challenged (Rimé, 2009). This may explain the cultural homophily effect we observed in our diverse groups. Qualitative research investigating the unfolding relation between suppression and stereotyping (how it happens, what are conditions that mitigate it), the emotional cycle triggered by it and how it plays out in subsequent interpersonal interactions would be valuable in exploring this further and in adding to the understanding of conflicts in diverse groups.

What are the *possible implications of cultural homophily* preferences in building social support networks for the *individuals* involved and for the *groups* they operate in? In his model of social sharing of emotions, Rimé (2009) distinguishes between cognitive sharing (i.e., listeners adopt responses that prompt cognitive work) and socio-affective sharing (listeners adopt socio-affective responses, which reassure the individual and offer emotional support but do not challenge the emoter's existing schemata). Seeking similar others to share emotional episodes with, prompts more socio-affective sharing, as these listeners share a similar view of the world with the emoter. However, such a response – though reassuring and validating the experience of the emoter as well as buffering the emotional episode – would not change the initial appraisal of the event, nor would it close the gap in representations and schemata. Overall, "nothing would have contributed constructively to the search for meaning elicited by the episode" (Rimé, 2009, p. 79). Rimé predicts that such an interaction will fail to provide emotional recovery and the emotional impact of the episode that elicited the exchange could persist and reactivate the destabilization. This mechanism can be a possible explanation why migrants who seek social and emotional support preferentially from others from the same home culture have a more difficult time adapting emotionally and culturally to a new context (De Leersnyder et al., 2011).

Therefore, the observed pattern of suppressors to rely preferentially on culturally similar others to get social support, while offering immediate relief and a reduction of loneliness (Rimé, 2009), also risks in the longer run to *strengthen the shared beliefs with culturally similar others* in the network. In a moderately diverse group, this could lead to *difficulty in adapting* to the new culture by newcomers and minorities, as well as a reluctance of the majority to integrate them and accommodate different worldviews (Cooper et al., 2007).

In other words, culturally homophilous social support networks seem to have a double bind: offering emotional relief and support to individuals, while at the same time creating and perpetuating "*us vs. them*" construction, the emergence of *subgroups*, and polarization of opinions in groups (Haslam et al., 2006). These subgroups are all the more stronger since they are formed not just around task content, but also emotion ties, and inform ways of working together and informal connections between group members (McPherson et al., 2001). This finding is in line with previous research on both conflict and effectiveness in diverse groups: On the one hand, highly diverse groups with less dense networks see themselves as less able to solve the task at hand (i.e., lower team potency perceptions) (Tröster et al., 2014) On the other, highly diverse groups on the individualism dimension use less collaborating conflict resolution strategies to solve their disagreements (Boroş et al., 2010), thereby leading to more conflict escalation in time.

The structural effects we have evidenced to be triggered by individuals who suppress (i.e., network density – based on limited development of network ties and cultural homophily), have been shown by previous research to have further effects for the individuals involved: failing to reach out for social support to diverse others has been proven counterproductive for the advancement of minority groups in organizations (Ibarra, 1993). Homogenous support networks are beneficial for the advancement of white males, but less so for women and other minorities. Therefore, it is not unreasonable to link the cultural homophily effect we evidenced in our data with *lesser chances for promotion* and overcoming stereotyping and bias in organizational settings for minorities (Ibarra, 1993), as suppression increases the homogeneity of these minorities' networks.

Limitations and Directions for Future Research

Our study presents a number of limitations, and we tried to make a clear distinction throughout our discussion between what our data says and what it can imply – which could inform future research directions. We summarize these distinctions in the present section.

First, at the group level, our observed structural patterns point toward possible explanations why in diverse groups less information gets transmitted, and when it does, preferential information (which does not challenge fundamentally one's pre-existing cognitive schemata) is easier transmitted. Also based on our results we can see that information has boundaries of transmission – everyone gets to keep their opinion, which possibly explains polarization of opinions in diverse groups. This translates into less use of diversity resources in superdiverse groups and lack of adaptation of minorities in moderately diverse groups. However, our design does not provide any information about the task-related networks, but focuses strictly on social support networks in professional groups. Furthermore, we did not collect any data on the actual content that flows in these networks, but focused only on the structural aspects of the networks. While our data does not directly measure the content transmitted, the structural effects that we evidenced have previously been shown to matter in group performance: in their 2014 paper, Tröster et al. demonstrated how the interplay between network structure and team composition influences the success of a diverse team.

At the individual level, we did not measure the evolution of well-being indicators, in order to be able to draw direct conclusions on how support seeking impacts then the well-being or adaptability of the individual. Furthermore, we measured habitual suppression only at the beginning of the study. While this is in general an accepted practice, Srivastava et al. (2009) showed there are changes in habitual suppression for college students between the first and fourth year of college. We considered that our time span is too short to justify such a change, and for reasons of time needed to fill the network rooster we did not measure it at two times. However, in line with research proposing that support networks are external emotion regulation strategies (Rimé, 2009), it would be interesting to observe in the future if there is a reciprocal effect between support networks and habitual suppression. In other words, could the size or diversity of one's support network impact the use of habitual suppression? And how does this interplay between suppression and support networks influence one's wellbeing, adaptation to a new group, or even position in the group? Longitudinal research in real groups could offer relevant insights on these questions.

Thirdly, building on the work of Tröster et al. (2014) and Stahl et al. (2010), we used Hofstede's country values on the dimension individualism/collectivism (Hofstede et al., 2010) as a proxy for the value system in which someone got his/her primary socialization instead of measuring at individual level one's declared level of individualism/collectivism. While this measurement choice does not come without limitations (e.g., subculture and individual differences within the same country), we opted for it as it indicated the background in which one was socialized and the implicit assumptions on self-expression vs. restraint embedded in that culture, which were relevant for the mechanisms we wanted to reveal. Furthermore, in using an existing indicator we limited collinearity effects in our design (i.e., the moderator was not measured through self-reports). Further research however can continue this investigation by comparing effects of individual-level measurements of individualism/collectivism with country-level, by extending the exploration to other cultural dimensions, as well as by looking into how relevant diversity faultlines (e.g., age, gender) impact the network behavior of actors (as we have only explored one type of diversity in our design, namely cultural). We acknowledge that since norms for emotion expression and suppression vary across genders – and these differences might be experienced

differently in various age cohorts, as norms change over time, further explorations into these intersectional effects on support seeking behaviors are highly relevant for nowadays organizations and their diverse workforce.

Another interesting aspect that warrants interest in future research is the cultural context in which these multicultural groups operate, and whether that impacts the relationships under scrutiny. More to the point, our study was conducted in an individualistic cultural setting. It is not unreasonable to question whether the setting itself (through its salient individualistic values, which might contradict fundamental worldviews about relating practices held by participants coming from collectivistic cultures) impacted the support seeking behaviors of participants, for instance by enhancing the similarity effect of participants coming from collectivistic countries, or by increasing their perception of being outsiders. It would be interesting to explore in future research whether the effects we noticed in our study remain the same or follow different patterns if multicultural groups operate in a collectivistic cultural setting, as well as explore in-depth the psychological mechanisms at play behind these behaviors.

CONCLUSION

We started our research from the assumption that if emotions convey meaning and are tools for social learning, they should help us in learning to navigate relationships with dissimilar others. However, if these dissimilar others do not share these emotions, it remains difficult to "ground" and establish close relations and provide support. In this respect, our findings indicate that people coming from individualistic cultures suffer a double-whammy: when suppressing, their members seek less support and tend to seek similar others for it when they do. Suppressing collectivists are less affected in absolute levels of connectedness, but still prefer culturally similar others as sources of support. In sum, we offer an emotion-based explanation to why people stick together with similar others in diverse groups and propose that learning to better cope with emotions can make us more open-minded toward diversity in professional settings.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Vlerick Business School. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

LG was in charge of data collection and analysis. SB wrote the manuscript, with the two other authors reviewing it at the end. All three authors contributed to the research design.

FUNDING

Vlerick Academic Research Fund, partially subsidized by the Flemish Government, supported the data collection effort for this study.

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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: 17 January 2020
doi: 10.3389/fpsyg.2019.02953

Workplace Bullying, Anxiety, and Job Performance: Choosing Between "Passive Resistance" or "Swallowing the Insult"?

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Anxiety arising from workplace bullying is a key concern for job performance. Anxiety can explain the effects of workplace bullying: individuals may seek to deal with their anxiety by applying specific behaviors. However, anxiety research does not carefully distinguish between state anxiety and trait anxiety, and so the impact of anxiety in general has been seen as complex and contradictory. Individuals may respond to bullying and anxiety through "passive resistance" or by "swallowing the insult." However, under what circumstances do individuals choose between these options? This paper summarizes the mechanisms of state anxiety and trait anxiety and uses cognitive balance theory to measure loss of self-control and the strategic choices. A moderated mediation model is presented for the relationship between workplace bullying and job performance using key variables of state anxiety and trait anxiety. Employee-supervisor pairs from 20 organizations and institutions from Tianjin, Jiangsu, and Hainan participated in a two-point longitudinal survey in 2019, 82.67% effective. Analysis verified that trait anxiety is the decisive perspective for choosing between "passive resistance" and "swallowing the insult." This provides theoretical and practical contributions to psychology and organizational behavior research.

Keywords: workplace bullying, passive resistance, state anxiety, job performance, trait anxiety

OPEN ACCESS

Edited by:
María del Mar Molero, University of Almería, Spain

Reviewed by:
Monica Pellerone, Kore University of Enna, Italy
Nicola Mucci, University of Florence, Italy

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

Received: *15 July 2019*
Accepted: *12 December 2019*
Published: *17 January 2020*

Citation:
Wu M, He Q, Imran M and Fu J (2020) Workplace Bullying, Anxiety, and Job Performance: Choosing Between "Passive Resistance" or "Swallowing the Insult"? Front. Psychol. 10:2953. doi: 10.3389/fpsyg.2019.02953

INTRODUCTION

Workplace bullying is a persistent series of mistreatments of others in the workplace. It can include verbal criticism or direct personal attacks with the purpose of intentionally humiliating or belittling others (Adams and Bray, 1992). Workplace bullying leads individuals to doubt their concept of their own self and worth in the face of a dangerous environment (Attell et al., 2017), inducing psychological and physical discomfort or damage. As interpersonal conflict, workplace bullying represents a comprehensive behavior in the form of offense and insult. It is a negative interpersonal behavior formed on the basis of a formal or informal power imbalance (Ahmad, 2018). Any attempt at effective complaint or defense is likely to be met with silence or attack, resulting in serious adverse consequences for the victim's mood.

Since its recognition as an issue in the workplace in the mid-1980s, workplace bullying has come to be seen as an increasingly serious example of workplace violence (Einarsen and Nielsen, 2015).

Many employees are subjected to bullying of some kind at some point in their career. Chinese employees, however, are more likely to view their experience as typical or normal, given a culture of power orientation and obedience that is unique to Confucianism (Guo et al., 2015; Mengyun et al., 2018).

The negative consequences of workplace bullying may be viewed from different perspectives (Magee et al., 2017). First, employees may suffer from repeated negative behaviors from superiors, colleagues, or subordinates over a long period, causing psychological pressure and emotional damage. Such damage affects physical and mental health and an employee's family life (Finstad et al., 2019). Second, workplace bullying has a strong negative outcome in victims' low work efficiency and quality. This leads to considerable cost to an organization in a financial sense and also has a destructive effect on the organization's growth.

Existing studies mostly draw on social psychology in analyzing the impacts of bullying on the victim. Among these is anxiety. Anxiety is the formation of complex emotional responses such as internal unrest and physiological discomfort (Laws and Bhatt, 2005). High levels of anxiety can impair individual task performance (Eysenck et al., 2007) and can explain the negative consequences of workplace bullying (Rodriguez-Munoz et al., 2015; Duru et al., 2018). Such views can integrate research on workplace bullying and the principles of ego depletion theory (which we address more fully below), in which an individual's self-control resources largely promote or buffer the negative effects. Unavoidable occupational aggression in the organization occupies the limited self-control resources available to a victim and brings about more mental tension and psychological disturbance (Carvalho et al., 2018), inducing adverse consequences (Inzlicht and Kang, 2010). Workplace bullying is an exhausting experience that consumes physical and mental resources (Sprigg et al., 2019). It eventually leads to severe exhaustion of self-control resources and failure of that self-control.

However, some scholars also believe that anxiety can motivate individuals to avoid failure (Eysenck, 2010). Most studies have identified negative emotional experiences as mediating variables in studying effects of workplace bullying (Namie, 2014). For example, anxiety is argued to have an adaptive value as a crisis warning of psychological barriers, it drives cognitive processing, and it considers taking risk avoidance measures as early as possible. Individuals may then devote more attention to optimizing coping strategies so as to ensure task completion (Moriya, 2018). Such findings reflect the complex cognition of the relationship between emotions and subsequent behavior, and they prompt more questions. Can anxiety motivate employees to have negative workplace behaviors? Can the theory of ego depletion fully explain the effect of workplace bullying on employee performance?

The mixed findings about the impact of anxiety have mainly arisen from a failure to distinguish the dimensions of anxiety. State anxiety is anxiety about a situation, whereas trait anxiety is the individual's anxiety level as a personal characteristic. (We discuss these further below.) Failure to separate these dimensions has led most scholars to focus only on the emotional responses to stressors and to ignore cognitive processing. This paper therefore proposes a more detailed theoretical view on the behavioral response of individuals to the process of self-control resource consumption in workplace bullying. It argues that trait anxiety can moderate the individual's anxiety perception through influencing the cognitive evaluation system. Trait anxiety represents a personality trait. Individuals can maintain a habitual anxiety mood during different periods and situations, identifying threats or dangers in their external environment (Spielberger, 1985). Individuals with high trait anxiety may not respond to workplace bullying through irrational decision making. They are more likely, instead, to choose silence and endurance, and to prefer negative withdrawal strategies that tolerate and ignore bullying. This is more of a preconceived behavioral motivation (Moriya, 2018).

The moderated mediation model presented in **Figure 1** relates workplace bullying and job performance through key variables of state anxiety and trait anxiety. It can be used to explain when an individual displays "passive resistance" and when he or she chooses to "swallow the insult," or, in a similar metaphor, "turn a blind eye" to the behavior inflicted. This in turn can also explain under what conditions workplace bullying will have a negative impact on the individual's performance. It provides a theoretical explanation for the conflicting findings in previous studies.

This theoretical model provides an innovative contribution.

First, it focuses on the mediating role of state anxiety through a literature review on hostile interpersonal treatment. It summarizes how workplace bullying leads to counterproductive work behavior of employees through ego depletion. Then, focusing on the moderating effect of trait anxiety, this paper proposes a more accurate theoretical framework than does the existing mediating model to investigate whether workplace bullying is related to employees' negative behaviors in the workplace. The theoretical model therefore reveals how state anxiety and trait anxiety together contribute to the relationship between workplace bullying and employees' negative workplace behavior.

Second, the theoretical model can explain contradictory findings about the relationship between workplace bullying and job performance. Theoretical findings on the relationship between workplace bullying and organizational citizenship behavior are contested. Some studies show a negative correlation (Magee et al., 2017), in that employees may retaliate against the organization openly through behaviors that are harmful to the organization's interests, or behaving more covertly, they seek to calm their emotional fluctuations. However, other studies have also shown no significant correlation between the two (Liu, 2016). In the moderated mediating-effect model of this paper, we show that state anxiety under a condition of high trait anxiety cannot effectively exert a mediating effect. Our paper thus improves general understanding of individual behavior choice and deals with the weakness of previous studies.

Third, the construction of a theoretical model to describe the boundary conditions of individual choice between "passive resistance" and "swallowing the insult" contributes to the theory of cognitive balance. When trait anxiety is low, bullied individuals may develop behaviors that are consistent with state anxiety. However, in a passive position, where power is weak and

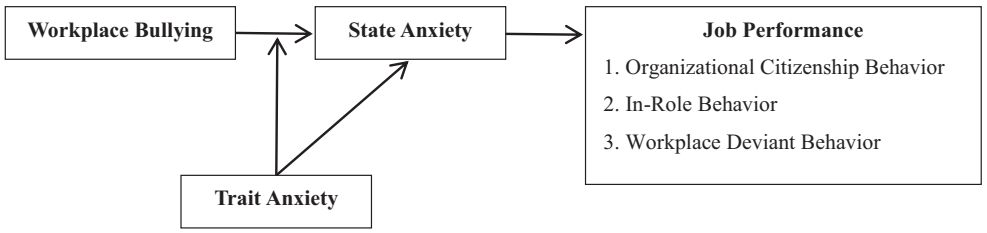

FIGURE 1 | Theoretical model.

resources are scarce, they do not resort to actions that aggravate conflicts but choose indirect passive coping strategies. Individuals with high trait anxiety, we found, are able to avoid the threat of negative stimuli based on their stable anxiety experiences and are more likely to choose avoidance via inaction in order to respond to emotional abuse. This is not out of loyalty to the organization, nor is it a coping strategy (Reknes et al., 2016; Birkeland et al., 2017). It is a complex expression of a tendency to acquiesce. In the field of organizational behavior research, cognitive balance theory, as an internal perspective of individual information processing, can explain such "unexpected" and "expected" cognitive situations. Hence, through integration of ego depletion theory and cognitive balance theory, this paper investigates the choice between "passive resistance" and "swallowing the insult" by adopting trait anxiety as a moderating variable. This deepens the research on the relationship between workplace bullying and employee job performance.

THEORETICAL BASIS AND HYPOTHESIS

Ego Depletion, Workplace Bullying, and State Anxiety

Emotional assessment theory, which explains the formation process of emotional responses, states that the negative emotions of individuals in an organization are derived from the information that they perceive after observing and judging the surrounding environment and environmental changes that may hinder the realization of their own goals or interests (Scherer et al., 2001). State anxiety is an immediate and volatile negative emotion that occurs spontaneously in the face of a specific moment, event, or challenge (Endler and Kocovski, 2001). As a relatively transient psychological condition, it involves cognitive arousal and physiological activation.

According to the theory of ego depletion, state anxiety is the psychological and physiological reaction to differing degrees of mental distress after the individual receives the stress source and forms a pressure perception. This is accompanied by continuous self-control resource consumption, which induces excessive psychological pressure, mental frustration, and helplessness (Kakarika et al., 2017; Carvalho et al., 2018). The relationship between poor work environment and low mood state is therefore rooted in the theoretical framework of ego depletion theory (Li and Zhang, 2017).

Baumeister et al. (1998) proposed the theory of ego depletion to explain workplace bullying effects. Ego depletion theory argues that such bullying can instigate an individual's attitudes and behaviors consistent with negative psychological burdens in the face of emotional responses that are situational and temporary (Hofmann et al., 2009).

Ego depletion is based on negative psychological self-control ability. The lack of input energy means that the bullying victim cannot ensure that subsequent behavior is consistent with the self-control goal. Studies have shown that state anxiety accompanied by impaired cognitive control is an important factor in inducing employee bad behavior (Li and Wu, 2016). Employee depression further affects follow-up work motivation and resource investment in work roles and task management (Wang, 2017). Ego depletion explains how state anxiety can negatively affect job performance: individuals may assess the workplace as of low quality, or a place with more negative than positive interpersonal relationships, and they may have unequal internal relations with others, resulting in a perfunctory work attitude (Du et al., 2017).

In cases of workplace bullying, ego depletion means that individuals need to disperse their attention resources and psychological energy in order to suppress habitual thinking tendencies and impulsive behavioral responses (Dewall et al., 2008), which are considered the root causes of subsequent self-control failure and self-management dilemmas. Individuals process information related to stress sources according to their own cognitive state, and they generate perceptions of hostility to the organizational atmosphere and the implications of poor interpersonal relations (Du et al., 2017). Poor interpersonal communication in the organizational environment therefore leads to the formation of uncertain and unsafe evaluation and judgment in employees, and this then negatively influences their emotional state by way of ego depletion (Pan et al., 2017).

The individual forms negative emotions in a stressful situation through the process of ego depletion, and this in turn endangers task performance. Individuals with high state anxiety reduce their cognitive range based on their own low emotional stability, and so are more likely to present a lack of organization role performance and to avoid the formation of organizational citizenship behavior. This may seriously damage in-role behavior, present a workplace deviant behavior of immoral or anti-normative action (Mawritz et al., 2017), and feed back into a low safety climate for the organization or result in upgrading interpersonal conflict. While low ego depletion can maintain interpersonal relationships

and standardized production behavior motivation (Zhang and Zhang, 2017), individuals may try to maintain a normalized performance level with less adaptive avoidance due to their extreme emotions.

Workplace Bullying, Trait Anxiety, and Cognitive Balance

According to the theory discussed above, an increase of state anxiety may result in non-direct, counterproductive work behaviors, such as work slowdown, reduced productivity, and reduced performance. However, scholars have not distinguished the dimensions of anxiety. In the absence of this distinction, the effects of anxiety on performance may be highly variable. Job performance has, broadly, three dimensions: organizational citizenship behavior, in-role behavior, and workplace deviant behavior (Hoel et al., 2001). Although empirical studies link increases in the level of anxiety and decline of organizational citizenship behavior, in-role behavior, and growth of workplace abnormal behavior (Mawritz et al., 2017), other theoretical and empirical research conflicts with these conclusions, arguing that correlation between anxiety level and performance results is not proved (Eysenck, 2010). The relationship between workplace bullying and performance results is similarly disputed (Liu, 2016; Magee et al., 2017). In view of these differences, this study argues that the key factors of individual ego depletion not only depend on stress intensity but also involve the individual's acquired personality and coping style.

Spielberger (1985) described trait anxiety as a relatively permanent personality characteristic. So individuals can perceive a wide range of external stimulation with a fixed emotional response and frequency, and show a consistent response in various environments. Trait anxiety represents a kind of long-term emotional experience, whose level depends on the individual's personality characteristics formed in the socialization process. Individuals have relatively complete and unique potential emotional tendencies toward external stimulus events, and they are not easily influenced by stress factors to initiate emotional feelings. They can thus maintain relatively stable sensory and cognitive feedback in different periods or situations. High trait anxiety individuals show unique recognition, processing orientation, and obstacle removal for hazardous information, and maintain a high level of vigilance for realistic clues to these (Graham and Shin, 2018). They thus show emotional consistency and make conservative decisions when processing external information.

Trait anxiety is a construct distinct from state anxiety. The level of state anxiety depends on the intensity of the stressor – the event – and individual sensitivity, which can be measured by external stimuli or fluctuating emotions of relatively short duration (Spielberger et al., 1983). However, trait anxiety is a stable personality attribute, which can be distinguished by its consistent emotional characteristics. It is not related to the level of state anxiety. Individuals may generally understand external work events and internal psychological experience as a danger signal in daily life, and gradually form a locking pattern related to a risk's cognitive content. This is accompanied by psychological discomfort such as sensitivity and worry. The cognitive style and structural components of trait anxiety can distinguish under what conditions the individual's anxiety consciousness will present as a sustained and stable mechanism that is only weakly related to the stress situation and the nervous implication of the stimulus event. Considering that the measurement of trait anxiety is directly determined by the individual characteristics and psychological structure of the anxiety disorder that will directly affect the development and channeling of emotions under the pressure source, it is more suitable for use in theoretical research to test whether trait anxiety can play an important role in the moderation of stress-related state anxiety.

Cognitive balance represents the coexistence without pressure of individuals' self-perception and emotional experience in objective situations. In this study, the premise of cognitive balance is that the external stimuli perceived by an individual in a stressful situation can be consistent with the individual's conventional thinking mode, so that the individual's inner mind can operate rationally. As a special source of anxiety experience in the anxiety cognitive system, trait anxiety can be considered a benchmark for individuals in seeking cognitive balance in a context of stress (Zhu, 1989). Individuals with high trait anxiety rely on their original cognitive experience to associate reasoning and stimulate the cognitive balance system by matching external threat information. The balance between the work cognitive state and self-emotional awareness makes emotional detection more automatic. Under such circumstances, individuals can carry out effective emotional control and processing (Moriya, 2018), without causing themselves extreme emotional fluctuations and negative emotional disclosure, and avoiding the serious consequences caused by cognitive dissonance (Zhao et al., 2016). Individuals with high trait anxiety therefore agree with their self-consciousness through feedback of cognitive content, which buffers the negative effect of negative information on emotions in a stressful situation and alleviates the loss process of self-control resources. The cognitive habits of individuals with low trait anxiety are far below the stress line, and the unfair treatment they suffer is incompatible with their cognitive structure, thus leading to formation of a kind of emotional labor, which has more obvious hindering effects on emotional relief.

Individual differences play a key moderating role in determining emotional experience and behavioral response after bullying. Not all people show adverse consequences for performance after being bullied. Trait anxiety, as an important influencing factor of individual emotional stability and behavior change under stress, can adjust the effect of workplace bullying on individual behavior performance through state anxiety. According to cognitive balance theory, individuals evaluate workplace bullying events based on their own trait anxiety, activate their cognitive evaluation system consistent with trait anxiety, and respond to perceived negative balance with tacit psychology and compliant behavior after seeking for an inner match (Lee et al., 2018).

The anxiety experience of high trait anxiety individuals is a persistent psychological cognition. Bullying events in

organizational situations can be consistent with their stable anxiety experience. They alleviate their sensitive response to negative information based on internal pressure, reduce state anxiety by reducing ego depletion, and reduce the negative effect on behavioral performance, so that they are more persistent with their goals and tasks (Moriya, 2018). Individuals with low trait anxiety have lower immune limits to stress stimulation, and most identify the external environment as having an objective existence of low risk. However, the cognitive difference between the meaning of hostile attack through workplace bullying and the original psychological pattern induces intense discomfort, and subsequent ego depletion strengthens the individual's inner sense of situational anxiety, undermines behavioral motivation (Magee et al., 2017), and involves deteriorating performance.

Summary

Feng (2016) reports that workplace bullying leads to increased state anxiety. This finding agrees with the main argument of ego depletion theory, which states that such bullying can generate attitudes and behaviors consistent with negative psychological burdens in the face of situational and temporary emotional responses (Hofmann et al., 2009). The passive resistance that results reduces organizational citizenship behavior and in-role behavior, and increases workplace deviant behavior (Mawritz et al., 2017). State anxiety can mediate the negative impact of workplace bullying on job performance, but the anxiety experience at this point does not have personality characteristics. Cognitive processing depends on an individual's stable trait level (Zhu, 1989). High trait anxiety individuals' accurate prediction of stress situations improves their stress resistance and tolerance to bullying events, and reduces self-control resource loss and situational anxiety experience (Moriya, 2018): individuals seek to "swallow the insult" and strive to maintain normal behavior performance (Lee et al., 2018). This theoretical framework thus explains the relationship between workplace bullying and behavior and when those with trait anxiety choose "passive resistance" and when they choose to "swallowing the insult." This decision can be integrated into a moderated, mediating model to explain the effect of workplace bullying on job performance through state anxiety, such that the mediating effect of state anxiety under the influence of different levels of trait anxiety may be stronger or weaker (Edwards and Lambert, 2007).

Based on this discussion, this paper proposes the following hypotheses:

Hypothesis 1: Workplace bullying has a positive effect on state anxiety.

Hypothesis 2: Trait anxiety negatively moderates the relationship between workplace bullying and state anxiety.

Hypothesis 3: Trait anxiety negatively moderates the mediating effect of the relationship between workplace bullying and organizational citizenship behavior, in-role behavior, and workplace deviant behavior.

RESEARCH METHOD

Investigation Procedures

In this study, twenty organizations and institutions in Tianjin, Jiangsu, and Hainan were investigated through online questionnaires. Organization type included public institutions, state-owned enterprises, joint ventures, and private enterprises. Prior to the survey, we contacted relevant human resource department managers and secured their consent and help, then issued questionnaires based on the email addresses they provided. The investigation required the subjects to participate with their direct supervisor. The specific procedures were described to subjects prior to commencement. We also informed them that data collected were only to be used for academic research. Hence, this research manipulated the process in terms of normative question-and-answer procedures and anonymous answers. Participants were asked questions related to their own demographic information, workplace bullying, and trait anxiety, and then their level of state anxiety was assessed a month later. At this latter time, the direct supervisor also needed to evaluate the organizational citizenship behavior, in-role behavior, and workplace deviation behavior of the subjects.

Because the study involved human participants, it was reviewed and approved by the ethics committee in the School of Finance and Economics of Jiangsu University, Zhenjiang, China. Written informed consent was not required, in accordance with national legislation and institutional requirements. Consent was inferred through completion of the survey.

We issued 300 questionnaires. Fifty-two pairs of samples from seven organizations were excluded due to refusal to participate, withdrawal, or invalid completion of the questionnaire, leaving 248 pairs with complete data (an effective response rate of 82.67%). The proportion of males was 57.66% (SD = 0.50), the average age was 33.61 years (SD = 7.44), and the average working experience was 12.76 years (SD = 8.21). Respondents held different grades of position: junior, 28.63%; intermediate, 44.35%; assistant senior, 14.52%; and senior, 12.50%.

Variable Measurement

All English scales were translated and back-translated, following Brislin (1980). Questionnaires were scored with a five-level Likert evaluation.

Workplace Bullying

The negative behavior questionnaire compiled by Einarsen et al. (2009), revised by Jiang et al. (2011), requires subjects to answer four questions. An example item is "someone is telling tales, making or spreading rumors about you." In this study, the Cronbach's alpha reliability coefficient was 0.797.

State Anxiety

Using the state-trait anxiety questionnaire revised by Spielberger et al. (1983), four items in the state anxiety sub-table were extracted, and the subjects were asked to conduct self-evaluation. An example item is "you feel calm." Cronbach's alpha was 0.735.

Job Performance

The 21 scales of Williams and Anderson (2016) were selected to evaluate the organizational citizenship behavior and in-role behavior of the subjects. Of these, two items were selected to measure interpersonal organizational citizenship behavior, two to measure organizational citizenship behavior, and four to measure in-role behavior. Four items in Bennett and Robinson (2000) scale were selected to measure interpersonal-oriented deviation and organizational-oriented deviation, respectively. The subject's direct supervisor evaluated the subject's behavior. Example items were "you assist colleagues," "you can complete job duties," and "you will use authority to seek personal benefits." Cronbach's alpha coefficients were 0.687, 0.699, and 0.829, respectively.

Trait Anxiety

The revised State-Trait Anxiety Scale (Spielberger et al., 1983) of Li and Qian (1995) was used to measure the anxiety tendency of the subjects' personality traits. Two positive items and two negative items were selected. An example item is "you hope to be as happy as others." Cronbach's alpha was 0.817.

Data Analysis

Edwards and Lambert (2007) show that the moderated mediator hypothesis can be verified by checking whether the moderating effect exists and whether the mediating effect changes correspondingly because of different levels of the moderating variable. In this study, two multiple regression models were used to test the moderated mediating hypothesis (Ng et al., 2008): first, to examine whether workplace bullying affects state anxiety, and second, whether standardized treatment of workplace bullying and trait anxiety eliminates multicollinearity, and then to examine the effect of its interaction items on state anxiety.

By integrating the regression model, the direct effect of workplace bullying on state anxiety and the mediating effect of state anxiety at different trait anxiety levels can be obtained. Then, through the bootstrap method, the significance test of the direct effect and indirect effect, and the difference value of the regression model were conducted.

Reliability Test and Validity Test

Exploratory factor analysis results showed that the KMO value was 0.875, the chi-square from Bartlett's spherical test value was 2895.106, the significance level was less than 0.001, and the data matrix was correlated. In the absence of rotation, six factors with characteristic value greater than 1 were generated; the accumulated interpretation of variance variation was 65.015%. The variance variation degree of the first factor was 34.938%, which was 40% lower than the empirical standard value. Six principal components are extracted from the factor loading matrix, which is consistent with the number of variables set in this paper, and the absolute value of factor loading for each item is higher than the recommended standard of 0.5.

Since the main variables used in this study include multidimensional variables, confirmatory factor analysis is required to test their validity. We used the AMOS software package to perform the confirmatory factor analysis. The results are shown in **Table 1**: data-fitting indicators of workplace bullying, state anxiety, job performance, and trait anxiety all reach a reasonable range, and each variable has good aggregation validity.

Descriptive Statistics and Correlation Analysis

The mean value, SD, Cronbach's alpha, and correlation coefficient of the variables are shown in **Table 2**: workplace bullying is significantly correlated with state anxiety ($r = 0.58$, $p < 0.001$); status anxiety is significantly correlated with organizational citizenship behavior ($r = -0.36$, $p < 0.001$), in-role behavior ($r = -0.56$, $p < 0.001$), and workplace deviance behavior ($r = 0.059$, $p < 0.001$); trait anxiety is significantly correlated with state anxiety ($r = -0.32$, $p < 0.001$); and trait anxiety is significantly associated with organizational citizenship behavior ($r = 0.38$, $p < 0.001$), in-role behavior ($r = 0.39$, $p < 0.001$), and workplace deviance behavior ($r = -0.47$, $p < 0.001$). These results preliminarily support the subsequent regression analysis.

Moderated Mediating Effects

We use hierarchical linear regression to test our research hypotheses. As shown in **Table 3**, workplace bullying has a significant positive impact on state anxiety ($\beta = 0.470$, $p < 0.001$). Hypothesis 1 is supported. The interaction items of workplace bullying and trait anxiety have a significant negative impact on state anxiety ($\beta = -0.168$, $p < 0.001$). This is different from the direction of state anxiety affected by workplace bullying and can explain the 4.40% of variation of state anxiety. This supports Hypothesis 2.

Subsequently, in order to test the moderated mediating effects, the effect values under different trait anxiety levels were calculated by the bootstrap method (Ng et al., 2008). Analysis of the data shows that the strength of the relationship between workplace bullying and state anxiety depends on the individual's trait anxiety level. Under the condition of low trait anxiety, workplace bullying has a stronger predictive power for state anxiety ($P = 0.599$, $p < 0.001$), and its difference is significant ($[0.321] - [0.599] = -0.277$, $p < 0.01$).

Figure 2 shows the direction and trend of the relationship between workplace bullying and state anxiety at different trait anxiety levels. The positive correlation between these was stronger and higher at lower levels of trait anxiety and is expressed graphically in **Figure 2**.

In view of the moderating effect of trait anxiety of workplace bullying on status anxiety, it is necessary to test whether the indirect effect of workplace bullying on job performance also depends on trait anxiety level. **Table 4** shows that, under the condition of low trait anxiety, the indirect effect of workplace bullying on organizational citizenship behavior ($P = 0.032$, $p < 0.01$), in-role behavior ($P = 0.150$, $p < 0.001$), and workplace deviant behavior ($P = 0.213$, $p < 0.001$) is stronger, and the indirect effect intensity is significantly dependent on trait anxiety level ($[0.026] - [0.032] = 0.006$, $p < 0.05$; $[-0.094] - [-0.150] = 0.056$, $p < 0.05$; $[0.117] - [0.213] = -0.096$, $p < 0.05$). **Figures 3–5**, respectively, show the indirect effects of workplace bullying on organizational citizenship behavior, in-role behavior,

TABLE 1 | Confirmatory factor analysis.

Variable	χ^2	df	χ^2/df	RMSEA	CFI	IFI	RMR	TLI
Workplace bullying	6.996	2	3.498	0.101	0.985	0.985	0.031	0.955
State anxiety	3.953	2	1.976	0.063	0.992	0.992	0.026	0.977
Job performance	156.735	27	3.073	0.092	0.904	0.905	0.049	0.876
Trait anxiety	3.132	2	1.566	0.048	0.997	0.997	0.012	0.990

RMSEA, root mean square error of approximation; CFI, comparative fit index; IFI, incremental fit index; RMR, root mean square residual; and TLI, Tucker Lewis Index.

TABLE 2 | Descriptive statistics and correlation analysis.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	0.42	0.50	–										
2. Age	33.61	7.44	0.25***	–									
3. Working experience	12.76	8.21	0.22**	0.89***	–								
4. Position	2.11	0.96	0.28***	0.16*	0.22***	–							
5. Organization	2.79	0.96	−0.06	−0.11	−0.16*	0.24***	–						
6. Workplace bullying	3.66	0.89	−0.06	0.01	0.01	−0.13*	−0.25***	0.797					
7. State anxiety	3.62	0.77	0.12	−0.09	−0.08	−0.10	−0.32***	0.58***	0.735				
8. Organizational citizenship behavior	2.37	0.71	−0.13*	−0.05	−0.03	0.02	0.01	−0.45***	−0.36***	0.687			
9. In-role behavior	2.57	0.59	0.01	−0.06	−0.05	0.06	0.10	−0.47***	−0.56***	0.39***	0.699		
10. Workplace deviant behavior	3.47	0.83	0.02	0.02	0.01	0.01	−0.14*	0.55***	0.059***	−0.47***	−0.60***	0.829	
11. Trait anxiety	3.07	0.69	−0.05	0.24***	0.21**	−0.02	−0.12	−0.27***	−0.32***	0.38***	0.39***	−0.47***	0.817

*Note: *p < 0.05, **p < 0.01, ***p < 0.001.*

TABLE 3 | Moderating effect of trait anxiety.

	State anxiety			
	Model 1	Model 2	Model 3	Model 4
Gender	0.217*	0.266**	0.223**	0.192*
Age	−0.006	−0.008	−0.002	0.001
Working experience	−0.010	−0.008	−0.010	−0.010
Position	−0.021	0.003	0.002	−0.009
Organization	−0.260***	−0.153**	−0.182***	−0.179***
Workplace bullying		0.470***	0.417***	0.312***
Trait anxiety			−0.212***	−0.169**
Workplace bullying × trait anxiety				−0.168***
R square	0.136	0.411	0.441	0.484
Adjust R square	0.118	0.396	0.424	0.467
R square changes	0.136	0.275	0.029	0.044
F	7.629***	28.047***	27.004***	28.052***

*Note: *p < 0.05, **p < 0.01, ***p < 0.001.*

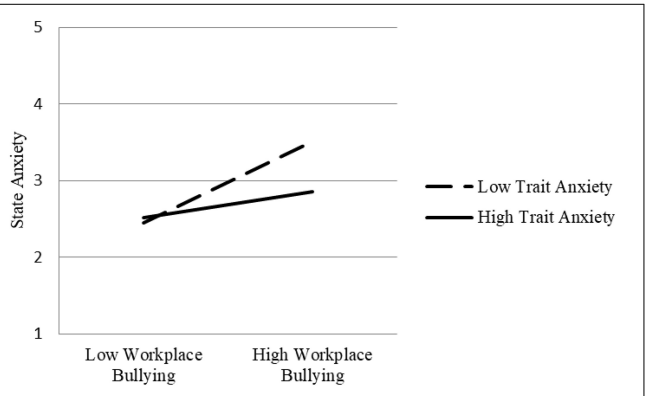

FIGURE 2 | Schematic diagram of interaction effect (state anxiety).

and workplace deviant behavior under different trait anxiety conditions. When the trait anxiety level is low, the indirect effect is stronger. The results support Hypothesis 3.

DISCUSSION, IMPLICATIONS, AND LIMITATIONS

This study reviewed the results of workplace bullying and its negative influence, and the theoretical basis for staff in choosing between "passive resistance" or "swallowing the insult" when faced with workplace bullying. The study posited trait anxiety and state anxiety as mediating variables of workplace bullying effects, and proposed a moderated mediation model in order to better understand the mechanism of workplace bullying effects on job performance. The results of the data analysis reveal the mediating mechanism and moderating mechanism of workplace bullying effects. Hence, the hypothesized model constructed in this study not only can enhance the theoretical relationships between workplace bullying, anxiety, ego depletion theory, and the theory of cognitive balance, but can also provide a theoretical basis for promoting changes in practice.

TABLE 4 | Moderated mediating effects.

	Trait anxiety	Direct effect	Stage 1	Stage 2	Indirect effect	Total effect
Organizational citizenship behavior	High	−0.064	0.321***	−0.081	−0.026**	−0.090
	Low	−0.440***	0.599***	−0.053	−0.032**	−0.471***
	Difference	0.376***	−0.277**	−0.028	0.006*	0.381***
In-role behavior	High	0.000	0.321***	−0.294***	−0.094***	−0.094
	Low	−0.241***	0.599***	−0.251***	−0.150***	−0.391***
	Difference	0.241***	−0.277**	−0.043	0.056*	0.297***
Workplace deviant behavior	High	0.021	0.321***	0.363***	0.117***	0.138
	Low	0.494***	0.599***	0.355***	0.213***	0.706***
	Difference	−0.473***	−0.277**	0.007	−0.096*	−0.569***

*Note: *p < 0.05, **p < 0.01, ***p < 0.001.*

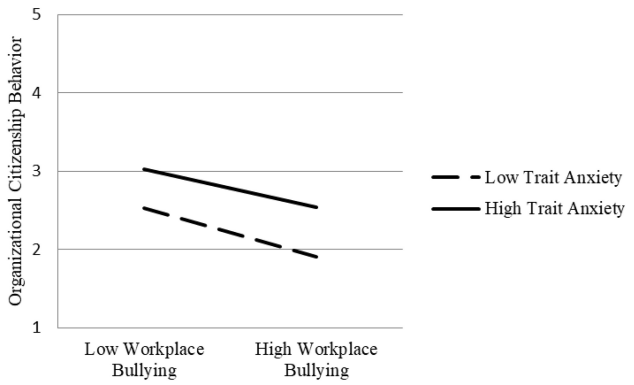

FIGURE 3 | Schematic diagram of interaction effect (organizational citizenship behavior).

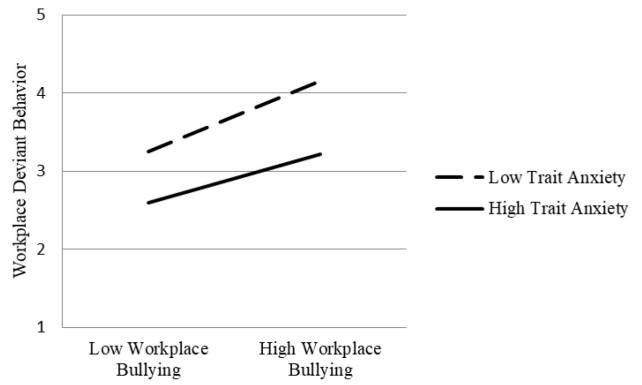

FIGURE 5 | Schematic diagram of interaction effect (workplace deviant behavior).

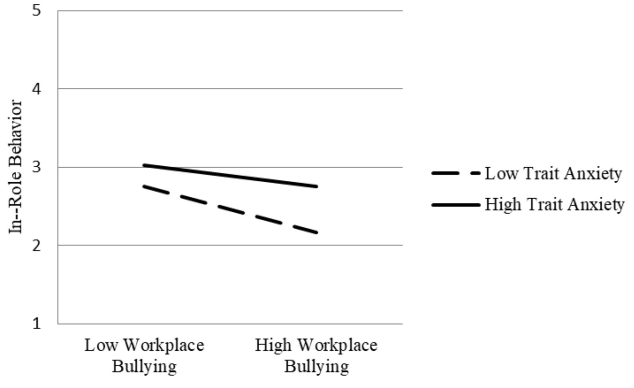

FIGURE 4 | Schematic diagram of interaction effect (in-role behavior).

Theoretical Implications

The theoretical framework of this paper explains the impact of workplace bullying on job performance. It can thus explain how negative interpersonal behavior affects job performance in general situations. Current studies on workplace bullying are based more on the ego depletion process and see anxiety as an outcome variable, while negative interpersonal behaviors generally involve interpersonal disputes or work-related friction and conflict (Du et al., 2017). Anxiety is therefore an inevitable result of negative interpersonal treatment. This paper describes the potential explanatory power of the theoretical model and provides a common framework for understanding how negative interpersonal behavior affects organizational results. The research findings on negative interpersonal behavior are complex, and hence, this paper integrates them into a "threat of ego depletion" model through the common points in the structure.

The findings in this paper also enrich the literature on anxiety. The theoretical findings about choosing between "passive resistance" and living with adverse behavior ("swallowing the insult") have been a controversial topic in the field of organizational behavior. However, our study points out that cognitive balance is an important motivation for individuals to maintain their job performance. This indicates that the "passive resistance" proposition derived from the theory of ego depletion may be flawed. This paper argues that such confusion results from the failure to distinguish state anxiety and trait anxiety in the model. When the anxiety held by an individual is in fact clinical anxiety, it feeds back into the ego depletion process by reducing work investment. When the anxiety held by individuals is personality anxiety, individuals do not respond to stress situations by adjusting their organizational behavior, but maintain their previous behavior pattern. Therefore, based

on the ego depletion theory and the cognitive balance theory, this paper proposes a boundary model to describe the influences on the individual's behavioral motivation. The individual's choice of strategies – in effect, resistance or acceptance (our "passive resistance" or "swallowing the insult") – should be referred to the moderating effect of the individual's trait anxiety. Follow-up research on this choice can continue to take trait anxiety into account and build a more scientific and rational model.

The conclusions of this paper can also supplement the weak links in study results related to trait anxiety. In general, studies on trait anxiety pay more attention to possible adverse effects: the negative feedback related to trait anxiety gradually becomes fragile physical and mental harm (Wei, 2016), causing more serious behavioral disorders. However, this paper points out the more positive side of trait anxiety: individuals can avoid excessive ego depletion in accordance with the cognitive balance of the stress situation and develop psychological peace within themselves. Combined with previous research findings, we can conclude that the moderating effect of trait anxiety may differ according to differing outcome variables: although high trait anxiety can buffer economic or social pressures in the short term, it enables employees to continue to work and meet organizational performance standards. However, surface control effects based on emotional reasoning are likely to be achieved at the expense of individual long-term sacrifice (Yu et al., 2016), and they deteriorate in the context of economic crisis (Mucci et al., 2016; Ketilsdottir et al., 2019). Subsequent studies can integrate organizational and individual results into the same model for further validation.

Practical Implications

Conceptualizing the impact of workplace bullying on job performance through the mediated model can also provide a reference for organizational practices. First, by understanding the mediating mechanism of the impact of workplace bullying, we can better understand how workplace bullying affects job performance. Given that state anxiety has been shown to be associated with stress situations, negative information and events are likely to elicit individual anxiety responses (Kakarika et al., 2017). Hence, the organization can eliminate state anxiety caused by potential organizational problems through action and policy and thereby reduce the negative impact on work investment. Strategies might include, for example, implementing anti-bullying policies and severely sanctioning bullies, encouraging diversity and inclusiveness in the workplace, and creating a good organizational climate to improve employee psychological adaptability, ensuring healthy working hours, giving employees appropriate work autonomy and incentives, reducing self-control resource consumption, and guiding employees to keep their goals in focus.

Second, by outlining the moderating mechanisms that work on workplace bullying, we can better understand the boundary conditions under which workplace bullying affects job performance. In the context of workplace bullying, individuals with low trait anxiety experience a dramatic reduction in job performance. As a result, organizations may want to select employees with higher trait anxiety. However, high trait anxiety can also cause serious damage to individuals and the whole organization, such as damage to the mental state and physical health of employees (Wei, 2016). In view of the insufficiency of current research results, more careful discussion is still needed before making specific recommendations to organizational managers in this regard.

Research Limitations and Future Directions

Limitations should also be considered. Are our data analysis results representative (Highhouse and Gillespie, 2009)? The research and sample collecting method in this paper is single, and cultural differences and expression habits also affect employee understanding of the content of the scale. Thus subjectivity and homology cannot be avoided, and the data obtained cannot accurately test the hypotheses. For example, while this article concludes that trait anxiety can mitigate the effects of workplace bullying on state anxiety, the implications of trait anxiety also agree with other views. On the one hand, perceptions of workplace bullying can lead to changes in state anxiety without affecting trait anxiety. But, over time, repeated emotional fluctuations can also potentially form idiosyncratic states of anxiety. On the other hand, high trait anxiety cognitions are consistent with bullying situations, buffering the positive effects on state anxiety. However, according to the trait activation model, individuals with a predisposition to anxiety are more likely to develop recognition bias for danger signals and processing bias for emotional information (Van Bockstaele et al., 2014), thereby consuming additional control resources and reporting more negative perceptions. In the future, we should try to select a wide range of subjects and seek to generalize the research conclusions by combining research methods.

The second limitation is that, based on the appropriate theoretical basis and data analysis results, this paper recognizes a causal relationship between workplace bullying and job performance, but poor job performance is also potentially damaging to interpersonal relations (Hutchinson, 2012). Although empirical studies can be used to clarify the above causal relationship, individuals can conceal the negative emotions brought about by the rupture of the psychological contract and try to show their role performance in a way that is disproportionate to the objective crisis. It is therefore difficult to accurately test the behavior results of "passive resistance" in the cases of state anxiety.

One potential research direction in the future is to integrate previous theoretical models, which is the relationship between workplace bullying and state anxiety and the perspective of trait anxiety. Relevant literature on trait anxiety shows that trait anxiety can be reflected in the individual's situation and existing experience (Spielberger, 1985), suggesting that the influence of workplace bullying on state anxiety is also likely to be moderated by interpersonal relationship positioning. The current research mainly focuses on the direct impact of workplace bullying on state anxiety, but individuals with low interpersonal sensitivity

may not be affected too much by negative interpersonal treatment, and they may not show a strong increase in state anxiety even after workplace bullying.

A second area of future research is exploring other ways in which workplace bullying affects job performance. Although this paper has outlined the indirect influence path of workplace bullying on job performance through the mediation of state anxiety and the moderation of trait anxiety, there are other theoretical models to explain the influence of workplace bullying on work performance. For example, task interdependence can aggravate the negative impact of workplace bullying on job performance: when an individual's task performance depends on the work input from other organizational members, the negative effect of workplace bullying on job performance will be more serious.

Finally, although the research emphasis of this paper focused on the individual difference variables that affect behavioral reaction after facing bullying, the current research has shown that a transformed situation perspective, such as promoting positive employee self-evaluation and self-view by encouraging feedback, and keeping a positive and optimistic state of mind (Wu, 2011), can also adjust negative perception of workplace bullying, prompting employees to do better in subsequent tasks. Thus, even in individuals with low trait anxiety, negative behavioral responses to workplace bullying may be neutralized through situational interventions.

CONCLUSION

This study combined and reviewed results of workplace bullying, its negative influence, and the theoretical basis for staff behavior in the face of workplace bullying in choosing between "passive resistance" or "swallowing the insult." It has proposed a moderated mediation model in order to better understand the mechanism of workplace bullying effects on job performance. The results of the data analysis reveal the mediating mechanism and moderating mechanism of those effects. Hence, the hypothesized model in this study may not only enhance the theoretical dialogue between workplace bullying, anxiety, ego depletion theory, and the theory of cognitive balance, but may also provide a relevant theoretical basis for promoting the development of practice.

DATA AVAILABILITY STATEMENT

All datasets generated for this study are included in the article/supplementary material.

ETHICS STATEMENT

The study involving human participants were reviewed and approved by the ethical committee in School of Finance and Economics of Jiangsu University, Zhenjiang China. Written informed consent was not required in this study in accordance with the national legislation and institutional requirements. Also, the consent was inferred through the completion of the survey.

AUTHOR CONTRIBUTIONS

MW bring the idea. QH and MI completed all data collection. QH wrote the manuscript. MW, JF, and MI provided thoughtful feedback on the manuscript. All authors contributed to the design of the study and approved of this version of the manuscript.

FUNDING

We acknowledge the financial support for this research by the National Natural Science Fund (71572071), China Postdoctoral Science Foundation – funded project (2015M571708), Research and Practice Project of Teaching Reform of Graduate Education in Jiangsu Province (JGZZ1_056), Advanced Talent Project of Jiangsu University (09JDG050 and 14JDG202), and National Social Science Foundation (19BGL127).

ACKNOWLEDGMENTS

We are grateful to the Editor of Frontiers in Psychology, MM, and Prof. Jeffery for reviewing and editing our final manuscript. We are also grateful to the two reviewers for providing us with insightful suggestions and comments to make this work more valuable.

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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: 25 February 2020
doi: 10.3389/fpsyg.2020.00285

Working Excessively and Burnout Among Nurses in the Context of Sick Leaves

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Introduction: Nurses are particularly at risk of being affected by professional burnout because of the unique patient – caregiver relationship, which requires strong emotional involvement.

Aim: In this study, we decided to examine the mutual correlations of working excessively and burnout – two basic occurrences affecting the mental well-being of employees – and their relationship with sick leave.

Materials and Methods: The study was conducted among 460 nurses working in 3 hospitals in Poland. The polish version of Maslach Burnout Inventory and the Working Excessively Questionnaire developed by Paluchowski were used to conduct the survey. All the demographic data and data on sick leaves were obtained from surveys in the form of respondents' self-reports.

Results: The constructed regression model shows that the tendency to work excessively, as assessed by loss of control over work (LCW), perfectionist work style (PWS), and perceived oppressiveness of the organization (OOP) measures, explains 12.4% of the variation in burnout levels. This confirms that overburden with work can be a factor contributing to the increase in burnout measures. The constructed logistic regression model showed that increase in the level of occupational burnout by 1 point, the chance of nurse having at least three sick leaves per year increases 1.029 times (i.e., by about 2.9%). None of working excessively measures affected the frequency of sick leaves.

Conclusion: (1) Excessive workload increases burnout symptoms, which in turn encourages nurses to take sick leave more frequently. (2) The tendency for nurses to overburden themselves with work may be seen by hospital managers as a positive phenomenon, but, based on this study, it is clear that this can only be done in the short term, whereas in the long term it will be clearly detrimental to the organization of hospitals and the quality of care.

Keywords: burnout, nurse, working excessively, sick leave, mental health, hospital management

OPEN ACCESS

Edited by:
María del Mar Molero, University of Almería, Spain

Reviewed by:
Luigi Isaia Lecca, University of Cagliari, Italy
Dragan Mijakoski, Institute of Occupational Health, North Macedonia

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

Received: *23 October 2019*
Accepted: *06 February 2020*
Published: *25 February 2020*

Citation:
Kowalczuk K, Krajewska-Kułak E and Sobolewski M (2020) Working Excessively and Burnout Among Nurses in the Context of Sick Leaves. Front. Psychol. 11:285. doi: 10.3389/fpsyg.2020.00285

INTRODUCTION

A shortage of nursing personnel severely affects the quality of medical services. This problem has been trending in most countries around the world (Buerhaus et al., 2007; Haddad and Toney-Butler, 2019; Haegdorens et al., 2019). Poland, however, has one of the lowest indicators of practicing nurses per 1000 residents among the OECD countries. This, in 2015, was only 5.2. For comparison, the highest indicator was in Switzerland at 18.0; and in neighboring countries it was: Denmark – 16.7, Germany – 13.3, Sweden – 11.1, Czechia – 8.0, and Lithuania – 7.7. Moreover, the average for 35 OECD countries was 9.0 (OECD, 2017). According to the data from the Polish Supreme Council of Nurses and Midwives report, the same indicator of practicing nurses in 2015 was only 3.9 in the Podlaskie Voivodeship. This was the lowest in the country. This report also points out a decrease in the number of practicing nurses in Poland in recent years and predicts a continuation of this trend in the following years (Supreme Chamber of Nurses and Midwives, 2017).

The successive decrease in the number of professionally active nurses is affected by such issues as: lack of employment in the profession despite obtained qualifications, financially-motivated emigration, and leaving the profession. The scientific literature has identified a number of factors that are the most frequent reasons for nurses leaving the profession. Among them, low wages, too many responsibilities, health problems, psychosocial burden in the workplace, and burnout are usually indicated (Li et al., 2011; Dall'Ora et al., 2015; de Oliveira et al., 2017).

As a professional group, nurses are highly subject to burnout due to the specific patient and caregiver relationship. This relationship requires emotional involvement, where the caregiver must deal with various possible situations, including the patients' suffering, fear, aggression, or lack of respect for their work (Leiter and Maslach, 2009; Lewandowska and Litwin, 2009; Nayeri et al., 2009).

Burnout was first defined in Freudenberger (1974) as a state characterized by a sense of physical and mental exhaustion, excessive irritability, impatience combined with cynicism, a tendency to isolate oneself, suppressing the emotions, and feelings of chronic boredom. Burnout is the body's response to long-term overload with obligations, too many responsibilities and difficult tasks, as well as exhausting, monotonous and boring work, and most of all, to chronic work-related stress. Maslach, the author of the Maslach Burnout Inventory (MBI) that we used in our research, defines burnout as "a syndrome of emotional exhaustion, depersonalization, and a reduced sense of personal achievement that can occur in people working with others in a certain way." Emotional exhaustion is a feeling of emptiness and depletion of strength caused by excessive psychological and emotional requirements made by the job, or the employee himself/herself by having unrealistic requirements toward his/her own abilities. Depersonalization is a sense of heartlessness, detachment and cynicism toward others, and a lowered sensitivity toward other employees. In contrast, a lowered evaluation of personal achievement is a feeling of wasting time and effort at the workplace (Maslach and Leiter, 2005; Maslach et al., 2009, 2012).

Working excessively is defined as an imbalance between work and home, leisure time, and social relationships (Schaufeli et al., 2009a; Molino et al., 2012). The authors of the Working Excessively Questionnaire (WEQ), which we used in our study, define working excessively as a dysfunctionality that affects the entire life. Accordingly, working excessively is not defined by the intensity of work, but that the work is unnecessary. Working excessively occurs in four aspects: a perfectionist work style, loss of control over work, general views about work, and the perceived oppressiveness of the organization. The perfectionist work style is characterized by an excessive passion for order and an exaggerated pursuit of excellence in performing the entrusted responsibilities. General views about work show to what extent the employee agrees with the normative reasons justifying hard work. The perceived oppressiveness of the organization shows to what extent working excessively results from an economic necessity and fear of losing one's job or acting in accordance with the organization's culture. Loss of control over work shows the degree of dependence on work (Paluchowski et al., 2014).

Working excessively is often indicated as one of the symptoms of workaholism (Taris et al., 2005; Schaufeli et al., 2008; Van Beek et al., 2012). However, the scientific literature cites many other reasons that could lead to workaholism. Wrzesniewski described three different ways of relating to work: orientation toward activity, where the main expectation of work is money; orientation toward career, where achieving prestige is the main expectation; and vocation, meaning work in the name of aims beyond the individual (Wrzesniewski and Dutton, 2001). Nursing is not perceived as a prestigious profession in Poland, therefore, in the case of nurses, the first and third occur the most often.

Research by the Supreme Council of Nurses and Midwives indicates that nurses in Poland are overworked. This is primarily due to the fact that the minimum employment standards are set based on the registered health services, the number of beds and the type of ward, rather than the actual needs of the hospital. This results in, among others, one nurse only working a night shift and less personnel on the floor on Sundays and holidays, leading to a greater workload due to an increased number of responsibilities per person. Still, nurses often take on extra shifts to work for absent colleagues because they have a sense of mission about their profession that does not allow them to leave patients unattended, while at the same time they take on additional employment because they are underpaid (Wyderka and Niedzielska, 2016; Supreme Chamber of Nurses and Midwives, 2017).

In this study, we decided to examine the mutual correlations of working excessively and burnout – two fundamental occurrences affecting the mental well-being of employees – and their relationship with sick leave. The aim of such a study was to compare the level of measures of excessive work and burnout among nurses grouped by frequency of using sick leave, and, consequently, the effect of burnout and excessive work on nurses' sick leave. The results of such an examination should be useful to hospital managers and enable them to take measures to reduce overburdening the nursing personnel with professional responsibilities and to prevent the intensification of burnout. Nurses' burnout and working excessively are known in the scientific literature, but the interplay of these events

from the perspective of sick leave had, until now, not been studied in Poland.

MATERIALS AND METHODS

The cross-sectional study was conducted from September 28, 2017 to April 30, 2018, in Poland, in the Podlaskie Voivodeship. It included registered nurses working in three inpatient hospitals and in nine departments. Participation in the study was voluntary, and all procedures were approved by the Institutional Review Board of the Medical University of Białystok, ref. no. R-I-002/296/2017.

Study Group Selection

The selection of respondents to the study group was based on the register of associated nurses in the District Chamber of Nurses and Midwives in Białystok. The total number of registered nurses was 6085 persons (5990 women and 95 men). The selection criterion was employment based on employment contract in a hospital, in the psychiatric, internal medicine, surgical and emergency departments. Nurses working part-time, elsewhere than hospital and on other than employment contract were excluded. The three largest hospitals in the voivodeship employing 10% of the total workforce were selected to conduct the study.

Study Procedure

The study used was conducted using paper-based questionnaires. The questionnaires were distributed by researchers to the nurses during their work time. All invited hospitals agreed to the participation of their employees in the study, and to it being conducted during working hours. Participation was voluntary. Before the study, each nurse was informed about the anonymity of the conducted research, and about the possibility of withdrawing from the study without stating a reason. They were asked to complete the surveys in their free time within 2 weeks and send the completed questionnaires in a sealed envelope to the investigators' address. There were 600 questionnaire surveys distributed, out of which 460 correctly completed questionnaires were obtained. Acceptance rate was 77%. There are no known reasons why 140 respondents did not participate in the study. All the demographic data and data on sick leaves were obtained from surveys in the form of respondents' self-reports. No incentives were used to encourage participation in the study.

Study Group

The research group consisted of 460 nurses. The vast majority of the respondents were women (92.4%). The mean age for the studied group was 37.4 ± 12.3 years, with a slightly lower median equal to 34 years. The youngest employee was 22 years old and the oldest was 65. Every fourth person surveyed was not more than 26 years old and every fourth person was not less than 48 years old. Over 65% of the respondents had completed higher nursing education, 20% had secondary education with a specialization and 12.2% had secondary education. The majority of the respondents (80% of all respondents) worked as unit nurses, and 10% as surgical nurses.

Description of the Questionnaire and the Applied Measures

The research tool was the Polish adaptation of the MBI developed by Pasikowski and Sęk (Maslach and Leiter, 2005; Pasikowski, 2009), and the Working Excessively Questionnaire (WEQ) developed by Paluchowski et al. (2014).

The Maslach Burnout Inventory measures three dimensions of occupational burnout: emotional exhaustion, depersonalization, personal accomplishment and overall score, which is the average of the detailed measures. These measures are standardized by the authors of the questionnaire for a range of 0–100 points (thus, the results can be compared between measures). The higher the values of these measures, the higher the level of occupational burnout. The MBI original and Polish version both have been extensively validated and both have clear scoring guidelines (Pasikowski, 2009).

The Working Excessively Questionnaire (WEQ) used in the study is the latest version of the questionnaire developed by the Paluchowski team between 2004 and 2013. The WEQ has been extensively validated and has clear scoring guidelines (Paluchowski et al., 2014). The questionnaire consists of 65 questions grouped into 4 numerical scores, measuring the signs of excessive workload: Loss of Control over Work (LCW), Perfectionist Work Style (PWS), General Views about Work (GVW), Oppressiveness of the Organization as Perceived (OOP). These measures have not been standardized by the authors of the questionnaire, therefore, their results cannot be compared.

The internal compatibility of the questionnaires was assessed in the examined group of 460 people, with the following Cronbach's alpha coefficients obtained. For MBI: emotional exhaustion – 0.94, depersonalization – 0.87, lack of work satisfaction – 0.82, general measure – 0.92. For WEQ: loss of control over work – 0.77, perfectionist work style – 0.84, general views about work – 0.87, oppressiveness of the organization – 0.58. The psychometric properties of the questionnaires used are satisfactory – the only exception is the low Cronbach's alpha value for the last WEQ measure.

Statistical Methods

Correlations between the measures of working excessively and occupational burnout were analyzed at the level of the entire population using Spearman's rank correlation coefficient. To examine the occurrence of statistically significant differences in burnout and working excessively measures between groups of nurses with different numbers of sick leaves, the Kruskal–Wallis test was used. The selection of non-parametric methods in these analyzes resulted from the lack of normality in the distribution of MBI and WEQ measures, which was verified using the Shapiro–Wilk test. These correlations were analyzed in pairs (e.g., WEQ with MBI, WEQ with sick leaves, MBI with sick leaves) to receive results that can be compared with other research conducted separately with MBI or WEQ measures. Linear regression analysis was applied to present the combined effect of WEQ components on the overall burnout index. Logistic regression model was constructed to show the impact of MBI and WEQ measures on frequency of sick leaves. Based on the nurse's

responses, they were placed within three groups as shown in **Table 1**.

RESULTS

First, the occurrence of occupational burnout and excessive workload in the studied population was analyzed. The average levels of occupational burnout measures range from 32.7 to 38.6% of the maximum value. Herein, it is important to note that 25% of the most burned-out people have a result above 50.7% of the maximum value in the case of the general measure, and even above 66.7% in the case of dissatisfaction with work. The results of job satisfaction loss are the least favorable among the three components of occupational burnout (**Table 2**).

Next, the levels of measures for excessive workload were analyzed. As in the case of occupational burnout, the results confirm the existence of the excessive workload phenomenon in the study group (**Table 3**). The biggest burden is the perfectionist work style, where the mean value was 72.3% of the maximum result, and 25% of the most burdened people had a result exceeding 81.1% of the maximum value. The lowest burden turned out to be general views on work, where the average was 48.9% of the maximum result, and 25% of the most burdened people had a result above 57.9% of the maximum value.

Confirmation of occupational burnout and excessive workload presence in the studied population allowed an examination of the correlation between these syndromes. The analysis was performed using the Spearman rank correlation coefficient.

TABLE 1 | Distribution of number of sick leaves.

Sick leaves during the year	Number	Percentage	Mean age (years)
None	218	47.4	35.1
1–2 times	175	38.0	37.5
3 times or more	67	14.6	44.7

TABLE 2 | Occupational burnout measures.

Burnout measures	$\bar{x}$	Me	S	c_{25}	c_{75}	Minimum	Maximum
Emotional exhaustion	34,8	33,3	30,5	11,1	55,6	0	100
Depersonalization	32,7	20,0	32,0	0,0	60,0	0	100
Lack of work satisfaction	38,6	33,3	30,1	16,7	66,7	0	100
General measure	35,4	32,6	23,6	16,7	50,7	0	100

TABLE 3 | Working excessively measures.

WEQ measures	$\bar{x}$	Me	S	c_{25}	c_{75}	Minimum	Maximum
Loss of control over work LCW	41,3	42	10,1	34	48	16	77
Perfectionist work style PWS	65,1	65	11,0	57	73	28	90
General views about work GVW	46,5	47	12,8	37	55	19	95
Oppressiveness of the organization OOP	33,4	34	6,7	29	38	15	56

As can be seen from the summary presented in **Table 4**, the three measures of excessive workload (LCW, GVW, and OOP) are statistically significantly positively correlated with two components of occupational burnout: emotional exhaustion and depersonalization, and with the general measure. Lack of occupational satisfaction shows a statistically significant negative correlation only with the perfectionist work style.

Summing up this part of the analysis, it should be mentioned that the correlations between the measures calculated from the MBI and WEQ questionnaires have low statistical strength.

Burnout has an impact on the health of nurses. An analysis of the correlations between measures of MBI and WEQ and the frequency of sick leave use was conducted.

Table 5 summarizes the values of descriptive statistics for MBI measures in terms of being on sick leave. MBI measures (except the lack of work satisfaction) show statistically significant differences between groups of nurses with different levels of absenteeism. The average level of these measures in the first two groups differs from the MBI values in the group of nurses with at least three redundancies per year.

Table 6 summarizes the values of descriptive statistics for WEQ measures in terms of being on sick leave. WEQ measures (except PWS) show statistically significant differences between groups of nurses with different levels of absenteeism. The average level of these measures is very similar in the first two groups, which differs from the WEQ values in the group of nurses with at least three redundancies per year.

Using regression analysis tools, we constructed a model that would enable to describe the combined impact of WEQ components on the overall burnout measure. Herein, the overall burnout rate as a dependent variable and four WEQ components as independent factors were entered into the initial model. Since GVW, as an independent factor, did not have a significant impact on burnout level ($p = 0.7224$), the model parameters underwent re-estimation after the exclusion of this factor. The final version of the model, shown in **Table 7**, was thus obtained.

The constructed regression model shows that the tendency to work excessively, as assessed by LCW, PWS, and OOP measures, explains 12.4% of the variation in burnout levels. This is not an extremely strong result, yet it does confirm that overburden with work can be a factor contributing to the increase in burnout rates. Accordingly, higher LCW and OOP values correspond to an increase in burnout – 1 LCW point is on average an increase in burnout by 0.595 points, and 1 OOP point is an increase in burnout by 0.466 points. Furthermore, the more a perfectionist work style is followed, the lower the occupational burnout level – an increase in PWS by 1 point translates into a drop in the burnout level by 0.427 points.

The last stage of statistical analysis was to investigate the simultaneous impact of MBI and WEQ measures on the frequency of nurses taking sick leave. The logistic regression model was used. In the constructed model, the number of sick leaves greater than or equal to three times a year relative to the number of sick leaves at the maximum level of 2 was assumed as a dependent variable of dichotomous nature. The independent variables were MBI and WEQ measures and age as a factor affecting the frequency of absenteeism (**Table 1**). A model with only statistically significant factors was constructed using the

TABLE 4 | MBI measures vs. WEQ measures.

WEQ measures	MBI measures			
	Emotional exhaustion	Depersonalization	Lack of work satisfaction	General measure
Loss of control over work LCW	0.28 ($p < 0.001$***)	0.23 ($p < 0.001$***)	0.08 ($p = 0.0988$)	0.26 ($p = 0.0000$***)
Perfectionist work style PWS	−0.02 ($p = 0.5989$)	−0.03 ($p = 0.4993$)	−0.27 ($p < 0.001$***)	−0.14 ($p = 0.0031$**)
General views about work GVW	0.19 ($p < 0.001$***)	0.15 ($p = 0.0009$***)	−0.04 ($p = 0.3525$)	0.14 ($p = 0.0025$**)
Oppressiveness of the organization OOP	0.27 ($p < 0.001$***)	0.19 ($p = 0.0001$***)	0.09 ($p = 0.0670$)	0.24 ($p < 0.001$***)

** *statistically highly significant correlation,* *** *statistically very highly significant correlation.*

TABLE 5 | MBI burnout measures and sick leaves.

MBI burout measures	Number of sick leaves during the year									*p*
	None (*N* = 218)			1–2 times (*N* = 175)			3 or more (*N* = 67)			
	$\bar{x}$	Me	*s*	$\bar{x}$	Me	*s*	$\bar{x}$	Me	*s*	
Emotional exhaustion	27.4	22.2	27.0	36.4	33.3	30.0	54.6	66.7	33.8	<0.001***
Depersonalization	26.8	20.0	29.7	33.5	20.0	30.6	49.9	60.0	36.6	<0.001***
Lack of work satisfaction	36.6	33.3	29.6	37.5	33.3	28.1	48.0	50.0	35.2	0.0584
General measure	30.3	27.0	20.9	35.8	32.2	22.2	50.8	49.6	28.4	<0.001***

*** *statistically very highly significant correlation.*

TABLE 6 | WEQ working excessively measures and sick leaves.

WEQ	Number of sick leaves during the year									*p*
	None (*N* = 218)			1–2 times (*N* = 175)			3 or more (*N* = 67)			
	$\bar{x}$	Me	*s*	$\bar{x}$	Me	*S*	$\bar{x}$	Me	*s*	
Loss of control over work (LCW)	40.4	40	9.7	41.4	42	10.5	44.1	45	9.7	0.0116*
Perfectionist work style (PWS)	65.2	66	10.5	65.5	66	11.0	63.2	62	12.2	0.1660
General views about work (GVW)	45.4	45	12.8	46.4	47	12.2	50.5	51	13.5	0.0153*
Oppressiveness of the organization (SOO)	33.0	33	6.7	33.1	34	6.5	35.4	36	6.7	0.0268*

* *statistically significant correlation.*

progressive step regression procedure. Factors that statistically significantly affect the probability of frequent absenteeism at work are age and the overall measure of occupational burnout. WEQ measures were statistically insignificant and were not used in the final model. The final model is presented in **Table 8**.

The chance that a nurse will have at least three sick leaves increases with age (by 5.1% each year). An increase in the level of occupational burnout according to the overall MBI measure by 1 point translates into an increase in the chance of frequent absences by 2.9%.

TABLE 7 | Working excessively measures and overall burnout measure.

Working excessively measures (WEQ)	Overall burnout measure R^2 = 12.4% *F* = 21.4 *p* = 0.0000***		
	B	*p*	β
Loss of control over work (LCW)	0.595	0.0000***	0.254
Perfectionist work style (PWS)	−0.427	0.0000***	−0.198
Oppressiveness of the organization (OOP)	0.466	0.0054**	0.132

** *statistically highly significant correlation,* *** *statistically very highly significant correlation.*

DISCUSSION

The phenomena of excessive workload and burnout are the subject of many studies, and nurses stand out as one of the most vulnerable occupational groups at risk of burnout. This

TABLE 8 | Impact of MBI and WEQ on frequent sick leaves – logistic regression model.

Independent variables	Number of sick leaves during the year (≥3 vs. <3)	
	OR (95% c.i.)	*p*
Overall burnout measure [pts]	1.029 (1.017–1.041)	0.0000***
Age [years]	1.051 (1.028–1.075)	0.0000***

OR, odds ratio (with 95% confidence interval). *** *statistically very highly significant correlation.*

was found, among others, in studies conducted in Poland where nurses and civil servants were compared (Jaracz et al., 2017) and in Taiwan (Chou et al., 2014), where different groups of healthcare workers were examined.

According to a study conducted on the Polish nursing profession (Znańska-Kozłowska, 2013), age and duration of service do not significantly affect the incidence of occupational burnout. This confirms the need to search for the causes of this phenomenon in other areas. A hypothesis has been made that excessive workload is a factor in the increase of burnout among nurses, because it is recognized that nurses in Poland are overloaded with work. This is evidenced not only by the results of our research, but also by that of the study of Kunecka (2015). This shows that only 6.5% of the examined nurses spend their time in accordance with the accepted standards on breaks at work.

There are many studies available among the various occupational groups showing association between signs of workaholism (Schaufeli et al., 2009b; Jenaabadi et al., 2016, 2017) (a phenomenon in which one of the two pillars is excessive workload) and burnout, usually presented as a general measure. The results of studies conducted among other occupational groups particularly exposed to occupational burnout, such as doctors and teachers, confirm the positive correlation between the components of workaholism and occupational burnout (Taris et al., 2005; Schaufeli et al., 2008). In particular, research conducted among university lecturers in Iran has shown that excessive workload, as part of workaholism, can be a factor predicting the occurrence of each of the three dimensions of burnout defined by Maslach (Hamidizadeh et al., 2014). These results indicate that correlations of these phenomena may also occur in other occupational groups identified as particularly vulnerable to burnout syndrome, including nurses.

The influence of individual manifestations of excessive workload on occupational burnout among nurses has not been comprehensively analyzed so far (Manzano-García and Ayala, 2017). The regression model we developed allowed us to describe the effects of individual components of excessive workload (WEQ) on the overall occupational burnout rate. Based on this, it was concluded that the tendency to overburden oneself with work as indicated by LCW, PWS, OOP measures allows to explain 12.4% of all variability in the level of professional burnout. This is not an extremely "strong" result, but enables a conclusion to be made that being overburdened with work is a predictor of professional burnout. For comparison, the regression model constructed by Spanish researchers explains the variability of the burnout rate only in 4% (Gil-Monte, 2008).

According to our results, higher values of LCW and OOP measures translate into an increase in occupational burnout. In contrast, the more perfectionistic the work style, the lower the professional burnout level. Most studies carried out in this area confirm the existence of certain correlations between these phenomena. A study conducted on a group of Italian nurses by Nonnis has shown that excessive workload affects emotional exhaustion, which is one of the occupational burnout manifestations (Nonnis et al., 2018). Furthermore, the study conducted by Włodarczyk confirmed the negative influence of perfectionism on the formation of occupational burnout (Włodarczyk and Obacz, 2013). Nurses in Iran have also been surveyed, confirming a positive correlation between the overall workload rate and emotional exhaustion, depersonalization, and professional dissatisfaction (Bemana et al., 2013; Asgari et al., 2016). What is more, studies carried out in Italian hospitals have shown the direct effect of workload on burnout, particularly on emotional exhaustion (Portoghese et al., 2014). In addition, researches in Portugal indicate that work overload is one of the predisposing factors of burnout (Queiros et al., 2013). Finally, research conducted in Iran has shown that nurses from departments more exposed to workloads, such as emergency services, are more likely to become victims of occupational burnout (Ahmadi et al., 2014).

Health problems of nurses often originate in psychosocial burdens in the workplace. This is confirmed in numerous scientific studies on the general impact of stress on the physical and mental health of employees as well as in detailed research, e.g., confirming the unequivocally negative impact of bullying on psycho-emotional aspects of nurse health, and indirectly as one of the factors causing burnout on the general condition health of nurses (Arcangeli et al., 2014; Giorgi et al., 2016; Cullati et al., 2017; Nielsen et al., 2019).

The results of our research have shown that occupational burnout among nurses measured by the overall rate is strongly positively correlated with the frequency of taking sick leaves. A similar result was obtained for two components: depersonalization and emotional exhaustion. The lack of correlation with the job satisfaction loss is an exception. Similar results were obtained by researchers in a group of nurses in Greece, where a direct correlation between the physical health of workers and symptoms of burnout was found (Bellali et al., 2007).

Another hypothesis was that occupational burnout and excessive workload increase the probability of the sickness absenteeism of nurses. The subjects of particular interest were nurses, who had to take advantage of the dismissal at least three times a year, because such frequent absences can disrupt the functioning of hospitals. This group constitutes about 15% of the entire population and is about 8–9 years older than nurses with less sickness absence. The logistic regression model we have developed has confirmed the strong effect of general measure of burnout on the frequency of sick leaves taken by nurses. An increase in the overall burnout rate of the MBI questionnaire by 1 point increases the probability that an employee will take at least three sick leaves per year by 2.9%. Similar correlation between burnout and absenteeism was found in the United States (Dyrbye et al., 2019) and Brazil (Da Silva and Diaz Merino, 2017), but no regression model presenting detailed correlation parameters was developed. A Danish team of researchers, however, identified occupational burnout as a predictor of sickness absence among human service workers (Borritz et al., 2010).

The hypotheses made to achieve the aim presented in the introduction have been confirmed by the study results. The negative effect of excessive workload on the burnout syndrome has been confirmed. Thus, increase in professional burnout is conducive to the sickness absenteeism of nurses.

We would like to draw attention to one more obvious correlation. The absence of nurses due to health reasons results

in an additional workload for their colleagues remaining in the workplace. Staff shortages mean that nurses replace absent workers, with excessive workloads or additional on-call time. Sometimes they stay in the hospital and fill the shortage of staff in the next shift, immediately after working for one duty shift. They do so either out of inner sense of responsibility that does not allow them to leave patients unattended or they use it as an opportunity to earn extra remuneration. Additional duties naturally contribute to an increase in the workload, which, in turn, has effect on burnout and thus creates a cyclical self-perpetuating mechanism.

METHODOLICAL LIMITATIONS

The sample used, study design (cross-sectional study), lack of adjustment for possible confounders and low Cronbach's alpha value for "oppressiveness of the organization" measure in WEQ questionaire are significant limitations of the study. The research was conducted only in three hospitals located in a single region of Poland. The financial situation of a country influences the health and workability of workers (Giorgi et al., 2015). Mucci et al. (2016) found that the economic crisis was an important stressor that had a negative impact on workers' mental health and sickness absence rates. As the economic crisis bypassed Poland, direct comparisons with findings from other studies should be done with caution.

Number of sick leaves were self-reported by the respondents and are influenced by problems that are common to self-report methodology. The reasons for not taking part in the study by 23% of invited persons are unknown due to the manner the study was conducted. It is also unknown whether the nurses who did not participate in the study were more burdened with work than those who participated in the study, and similarly with regard to occupational burnout syndrome.

CONCLUSION

(1) Excessive workload and burnout symptoms among nurses interact in such a way that excessive workload increases burnout symptoms, which in turn encourages nurses to take sick leave more frequently. In this way, the resulting sickness absenteeism is a factor that increases the workload for nurses who are obliged to work as replacements for their absent colleagues. Additional duties naturally contribute to an increase in the workload, which in turn has effect on burnout and thus creates a cyclical self-perpetuating mechanism.

(2) The tendency for nurses to overburden themselves with work may be seen by hospital managers as a positive phenomenon, but, based on this study, it is clear that this can only be done in the short term, whereas in the long term it will be clearly detrimental to the organization of hospitals and the quality of care. All the necessary measures must be taken to prevent nurses from becoming excessively overloaded with work.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Institutional Review Board of the Medical University of Białystok, ref. no. R-I-002/296/2017. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

KK: concept of the research, design of article structure, conducting of the research, review of the literature, results analysis, and writing the article. EK-K: review of the literature and review of article drafts. MS: statistical analysis.

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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 March 2020
doi: 10.3389/fpsyg.2020.00232

Psychological Empowerment and Work Engagement as Mediating Roles Between Trait Emotional Intelligence and Job Satisfaction

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The majority of research indicates that trait emotional intelligence (EI) plays a crucial role in personal well being; however, the deeper mechanisms of this link remain unclear. The study explored the impact of psychological empowerment and work engagement in the link between trait EI and job satisfaction. Female nurses (370) completed the EI Scale, the Psychological Empowerment Scale, the Utrecht Work Engagement Scale, and the Brief Index of Affective Job Satisfaction. The results of structural equation modeling demonstrated that work engagement partially mediated the association between trait EI and job satisfaction. Moreover, the serial one mediator model revealed that trait EI could influence job satisfaction via the serial mediating impact of "psychological empowerment–work engagement." These results help to a better understanding of the association between these variables and demonstrate that high trait EI may improve occupational well being from emotional perspectives.

Keywords: trait emotional intelligence, psychological empowerment, work engagement, job satisfaction, occupational well being

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Shinichiro Ishii, Jichi Medical University, Japan
Natalio Extremera, University of Malaga, Spain

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

Received: *12 November 2019*
Accepted: *31 January 2020*
Published: *06 March 2020*

Citation:
Gong Y, Wu Y, Huang P, Yan X and Luo Z (2020) Psychological Empowerment and Work Engagement as Mediating Roles Between Trait Emotional Intelligence and Job Satisfaction. Front. Psychol. 11:232. doi: 10.3389/fpsyg.2020.00232

INTRODUCTION

Creating healthy organizations has become a focal point for organizations in improving employees' health and well being (Warr, 2007; Di Fabio, 2017). Satisfaction with job has been widely considered as an important element or indicator of personal well being (Warr, 2007; Judge et al., 2017; Mérida-López et al., 2019). Job satisfaction was introduced by Weiss (2002) as a positive and pleasurable evaluative state that an individual makes about his/her job experience, which consists of affective and cognitive components (Judge and Kammeyer-Mueller, 2012; Judge et al., 2017). Moreover, affective job satisfaction and cognitive job satisfaction were considered as the positive experience in a job (Lyubomirsky et al., 2005) and job-related well being (Judge et al., 2002; Rothausen and Henderson, 2019). Therefore, job satisfaction is thought of as a crucial and relevant indicator of subjective well being. Extant literature has demonstrated that both dispositional and situational factors predict satisfaction with job (Hosseinian et al., 2008; Keller and Semmer, 2013; Khany and Tazik, 2015; Mérida-López et al., 2019). This investigation relies on the affective events theory (AET) (Weiss and Cropanzano, 1996) as a framework for elaborating the influence of trait EI on job satisfaction, seeking to explore the deeper mechanism underlying this relationship in one study from emotional perspectives (i.e. work engagement and psychological empowerment).

Trait Emotional Intelligence and Job Satisfaction

Emotional intelligence (EI) has become an important upsurge in recent years. The two types of EI refer to trait EI and ability EI. Mayer and Salovey (1997) demonstrated that ability EI focuses on the core competencies of to recognizing, processing, and using emotion-laden information, which is measured using a maximum performance test. Trait EI refers to individuals' perceptions of their emotions, which is assessed with self-report questionnaires (Petrides and Furnham, 2001) and indicates the emotionally related self-perception (Petrides et al., 2007). Our study paid close attention to trait EI assessed via a self-report questionnaire. A substantial body of research has demonstrated that trait EI is essential and important for job-related well being (Zampetakis and Moustakis, 2010; Fu, 2014; Schutte and Loi, 2014; Petrides et al., 2016; Clarke and Mahadi, 2017; Sun et al., 2017). Moreover, a meta-analysis study revealed that EI was positively correlated with job satisfaction (Miao et al., 2016, 2017). Prior studies have demonstrated that the positive influence of EI on job satisfaction is well proven; however, the deeper mechanism of this association is unclear. Thus, we attempted to elucidate the effects of psychological empowerment and work engagement on this mechanism in one study from emotional perspectives on the basis of the AET (Weiss and Cropanzano, 1996).

The AET contributes to elaborating how employees with high trait EI could influence on job satisfaction. AET demonstrates that occurrences with their work may enhance or decrease their positive or negative experience, and our study focuses on motivation and positive experience (psychological empowerment and work engagement) as the interpretive variables for the influence of trait EI on employees' satisfaction with their job. Motivation and positive experience are important in AET because of their influence on work attitudes (Weiss and Cropanzano, 1996), that is, positive experience (work engagement and psychological empowerment) mediates the association between trait EI and work outcomes (e.g. job satisfaction). Therefore, we assume a mediation model that employees with high trait EI may enhance the perceptions of psychological empowerment and work engagement, which in turn could positively influence job satisfaction.

Trait Emotional Intelligence, Psychological Empowerment, and Job Satisfaction

Extant literatures showed that psychological empowerment may be a vital mediator between trait EI and job satisfaction. Psychological empowerment represents the motivational construct of an intrinsic task, including four cognitions that reveal a personal orientation: competence, meaning, self-determination, and impact and demonstrates cognitive orientations about their job role (Spreitzer, 1995). Psychological empowerment demonstrated an important motivational resource that may enhance employees' engagement with their work (Ugwu et al., 2014). Previous researches has revealed that personality was considered an important role in psychological empowerment, such as core self-evaluations (Seibert et al., 2011) and self-esteem (Wang et al., 2013). Thus, we propose that trait EI would act as an important antecedent of psychological empowerment. Research also demonstrated that psychological empowerment plays a positive influence on job satisfaction (Dewettinck and van Ameijde, 2011; Amundsen and Martinsen, 2015; Nikpour, 2018) and have a strong predictive influence on work engagement (Bhatnagar, 2012). A meta-analysis (Seibert et al., 2011) reveals that empowerment is a critical antecedent for work outcomes (e.g. job satisfaction and work innovation). Psychologically empowered followers experience more intrinsic need fulfillment through their job and, thus, acquire more satisfaction with their job. Research also revealed that psychological empowerment act as a mediator of the effect of work context and outcomes (Frazier and Fainshmidt, 2012; Schermuly et al., 2013; Fong and Snape, 2015). On the basis of this reason, we propose that psychological empowerment plays a mediator impact on the association between trait EI and job satisfaction.

Trait Emotional Intelligence, Work Engagement, and Job Satisfaction

An extensive body of research has revealed that work engagement is considered as a potential mediating variable of the link between trait EI and job satisfaction. Work engagement represents a persistent and pervasive affective–cognitive state that consists of three dimensions: vigor, dedication, and absorption (Schaufeli et al., 2002). Many research have demonstrated that the positive effect of EI on work engagement (Ravichandran et al., 2011; Brunetto et al., 2012; Zhu et al., 2015; Extremera et al., 2018). Moreover, personal resources are crucial antecedent of work engagement on the basis of theory of Job Demands–Resources model (Schaufeli et al., 2002; Bakker and Demerouti, 2014). We explore trait EI, one of the personal resources, which accounted for work engagement. Engaged followers could experience more positive emotions including happiness, satisfaction, and enthusiasm. Several researches have revealed that work engagement is correlated to a positive outcome (Schaufeli and Salanova, 2007; Caesens et al., 2014). Work engagement also was considered as antecedents of job satisfaction (Moura et al., 2014). Studies have also demonstrated that work engagement has acted as a mediator between personality and organizational outcomes, including job performance, career satisfaction, and job (Bakker et al., 2012; Jawahar and Liu, 2016; Ngo and Hui, 2018). In addition, AET posits that dispositions will influence their affective experiences at their work, which in turn, influences job attitudes including job satisfaction (Weiss and Cropanzano, 1996). Thus, we propose that work engagement acts as a mediator on the association between trait EI and job satisfaction.

In summary, the purpose of this study was to investigate the mechanisms underlying the link between trait EI and job satisfaction among Chinese nurses. On the basis of the theoretical rationale above, we expected to demonstrate the following: (1) evidence that psychological empowerment psychological empowerment serves as a mediator between trait EI and job satisfaction and (2) evidence that work engagement mediates the link between trait EI and job satisfaction.

MATERIALS AND METHODS

Participants and Procedure

According to the principle of the academic ethics committee of the Fourth Military Medical University, the sample included 370 (response rate is 96.6%) female participants attending three hospitals in Shaanxi. Nursing occupation was chosen because of their occupational ideals and engagement. Importantly, they help others and do a challenging job. Participants ranged in age between 22 and 46 (M = 29.63, SD = 3.74). Paper-and-pencil surveys were administered during the class by the researcher after nurses were provided with necessary information about the study. Participants were voluntary and anonymous and gave a written consent. They completed the measures associated with trait EI, psychological empowerment, work engagement, and job satisfaction.

Measures

Trait Emotional Intelligence

The Wong and Law Emotional Intelligence Scale (WLEIS; Wong and Law, 2002) was used to assess trait EI, which comprises 16 items. The WLEIS contains four subscales: self-emotion appraisals (SEA, e.g. "I really understand what I feel."), others' emotion appraisal (OEA, e.g. "I am a good observer of others' emotions."), use of emotions (UOE, e.g. "I always tell myself I am a competent person."), and regulation of emotion (ROE, e.g. "I have good control of my own emotions."). Each item was assessed on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This measure has revealed good levels of reliability and validity in different cultures (Wong and Law, 2002; Kafetsios and Zampetakis, 2008; Ishii and Horikawa, 2019). In this study, the Cronbach's alpha coefficient of SEA, OEA, UOE, and ROE was 0.86, 0.85, 0.84, and 0.90, respectively. The internal consistency of the total WLEIS was 0.91.

Psychological Empowerment

Psychological empowerment was assessed with a 12-item scale (Spreitzer, 1995) to assess individual perceptions of psychological empowerment. This scale contains four subscales: meaning (e.g. "The work I do is meaningful to me."), competence (e.g. "I have the skills necessary for my job."), self-determination (e.g. "I can decide on my own how to go about doing my work."), and impact (e.g. "I have significant influence over what happens in my department."). Participants responded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This measure has revealed good levels of reliability and validity (Joo and Lim, 2013; Amundsen and Martinsen, 2015; Dust et al., 2018). In this study, the Cronbach's alpha coefficient of self-determination, competence, meaning, and impact were 0.86, 0.85, 0.84, and 0.93, respectively. The internal consistency of the total psychological empowerment was 0.90.

Work Engagement

Work engagement was assessed with the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006). The UWES-9 covers three dimensions: vigor (VI, e.g. "at my work, I feel that I am bursting with energy."), dedication (DE, e.g. "I am proud of the work that I do."), and absorption (AB, e.g. "I get carried away when I am working."). Nurses respond using a seven-point scale from 1 (Never) to 7 (Always every day). This measure has revealed good levels of reliability and validity (Gutermann et al., 2017; Van Wingerden et al., 2017). In this study, the Cronbach's alpha coefficient of VI, DE, and AB were 0.61, 0.79, and 0.82, respectively. The internal consistency of the total WE was 0.89.

Job Satisfaction

Job satisfaction was assessed using a Brief Index of Affective Job Satisfaction (BIAJS) questionnaire, a four-item measure of affective job satisfaction (Thompson and Phua, 2012). All items were rated on a five-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). A sample item was, "Most days, I am enthusiastic about my job." This scale has revealed a good reliability and validity (Hirschi, 2014). In this study, the internal consistency of BIAJS was 0.87.

Analytical Procedure

A two-step procedure was adopted to analyze the mediation effects (Anderson and Gerbing, 1988). The measurement model was tested to estimate the extent to which each latent variable was represented by its indicators. Then, the structural model was examined if the measurement model was accepted, using the maximum-likelihood estimation in Mplus7.4. The following several indices were adopted to assess the overall fit of the model (Hu and Bentler, 1999; Kline, 2011): chi-square statistic (χ^2), df, the standardized root mean square residual (SRMR) $\leq$ 0.08, the root mean square error of approximation (RMSEA) $\leq$ 0.08, the comparative fit index (CFI) $\geq$ 0.90, and the Tucker–Lewis index (TLI) $\geq$ 0.90, revealing a good fit.

RESULTS

Descriptive Statistics

Table 1 displays the intercorrelations among the study variables and indicates that all variables are highly positively associated with one another.

Measurement Model

There are four latent factor (trait EI, psychological empowerment, work engagement, and job satisfaction) and 15 observed variables in the measurement model. Four models are compared to distinguish study variables including

TABLE 1 | Descriptive statistics and Pearson correlations among study variables (N = 370).

	M	SD	1	2	3	4
1TEI	4.05	0.47				
2PE	4.17	0.54	0.56**			
3WE	6.02	0.88	0.44**	0.51**		
4JS	3.95	0.67	0.46**	0.42**	0.56**	

***p < 0.01. TEI, trait emotional intelligence; PE, psychological empowerment; WE, work engagement; JS, job satisfaction.*

TABLE 2 | Fit indices for the measurement models (N = 370).

	χ^2	df	RMSEA [90% CI]	CFI	TLI	SRMR
One factor	860.605	90	0.152 [0.143, 0.161]	0.702	0.652	0.091
Two factors	581.807	89	0.122 [0.113, 0.132]	0.809	0.775	0.070
Three factors	290.530	87	0.080 [0.070, 0.090]	0.921	0.905	0.050
Four factors	194.421	84	0.060 [0.049, 0.071]	0.957	0.947	0.041

trait EI, psychological empowerment, work engagement, and job satisfaction using CFA. We compared one-factor model (all observed variables loaded on a single factor), two-factor model (trait EI and psychological empowerment as one factor and work engagement and job satisfaction as the other), three-factor model (trait EI and psychological empowerment as one factor and work engagement and job satisfaction as separate factors), and four-factor model (trait EI, psychological empowerment, work engagement, and job satisfaction as separate factors). CFA results revealed that the four-factor model demonstrated the better fit as shown in **Table 2**. This measurement model showed an excellent fit: χ^2 (84, N = 370) = 194.421, $P < 0.01$; RMSEA = 0.060 [90% confidence interval (CI) = 0.049–0.071], CFI = 0.957, TLI = 0.947, and SRMR = 0.041.

Structural Model

Multiple mediation model (Model 1) with two mediators (psychological empowerment and work engagement) indicated a good fit to the data: χ^2 (85, N = 370) = 214.158, $P < 0.01$; RMSEA = 0.064 (90% CI = 0.053–0.075), CFI = 0.950, TLI = 0.938, and SRMR = 0.052. However, the standardized path coefficient from psychological empowerment to job satisfaction was not significant (β = 0.02). Therefore, this path was excluded. Model 2 revealed an adequate fit to the data: χ^2 (86, N = 370) = 214.185, $P < 0.01$; RMSEA = 0.063 (90% CI = 0.053 to 0.074), CFI = 0.950, TLI = 0.939, and SRMR = 0.052. To explore an optimal model, the chain mediation model (Model 3) added one path on the basis of model 2: from psychological empowerment to work engagement. This model fit indexes seemed to be better: χ^2 (85, N = 370) = 194.438, $P < 0.01$; RMSEA = 0.059 (90% CI = 0.048–0.070), CFI = 0.958, TLI = 0.948, and SRMR = 0.041. When comparing Model 3 with Model 2, the results indicated the following: $\Delta\chi^2$ = 19.72, Δdf = 1, $P < 0.01$. Therefore, the chain mediation model (Model 3) was proven in our final model (**Figure 1**). Model 3 revealed that trait EI had indirect effects on job satisfaction, and work engagement partially mediated the relation between trait EI and job satisfaction. In addition, trait EI could influence job satisfaction via the series-mediating impact of "psychological empowerment–work engagement."

To further investigate the mediation effects, bootstrap analysis was adopted to further investigate the significance of the mediation effects of psychological empowerment and work engagement in the link between trait EI and job satisfaction (Tarrés et al., 2010). Bootstrap samples (5,000) were generated from the original sample set (N = 370) through random sampling. The absence of zero in the 95% CI for the estimates indicated that the mediation effects were significant. **Table 3** demonstrates the mediating effects of work engagement and psychological empowerment and their associated 95% CIs. As indicated in **Table 3**, work engagement exerted significant indirect effects on the association between trait EI and job satisfaction. Moreover,

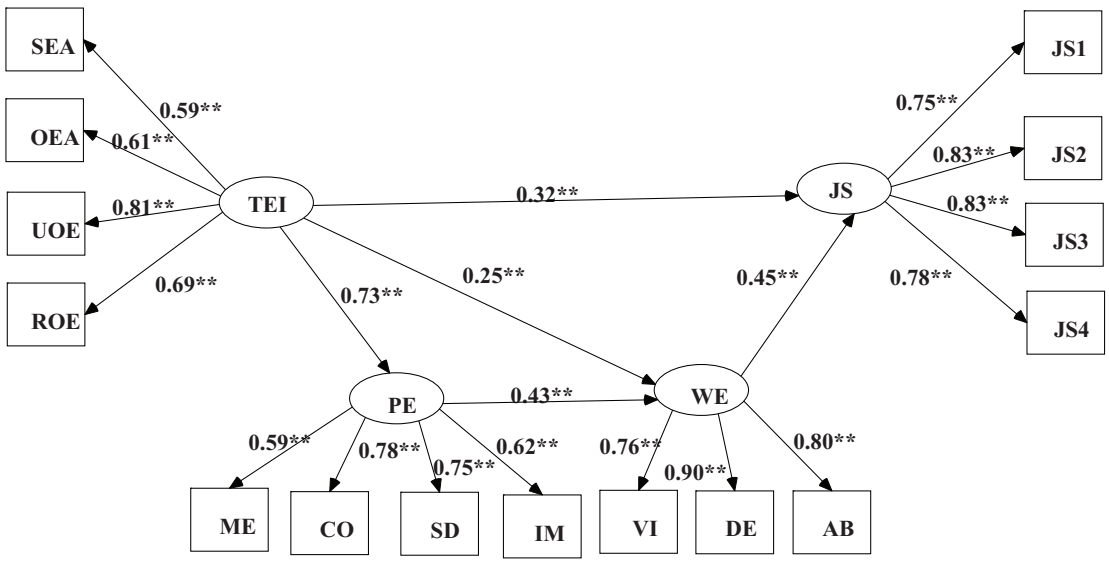

FIGURE 1 | The final model demonstrating effects of trait EI on job satisfaction via psychological empowerment and work engagement. Factor loadings are standardized. SEA, self-emotion appraisals; ROE, regulation of emotion; UOE, use of emotion; OEA, others' emotion appraisal; ME, meaning; CO, competence; SD, self-determination; IM, impact; VI, vigor; DE, dedication; AB, absorption; JS1–JS4 are four items of job satisfaction. All the path coefficients are significant at the 0.01 level.

TABLE 3 | Standardized indirect effects of trait emotional intelligence on job satisfaction through psychological empowerment and work engagement (N = 370).

Model pathways	Estimated effects	95% CI	
		Lower	Upper
TEI → WE → JS	0.1l[a]	0.03	0.20
TEI → PE → WE → JS	0.14[a]	0.06	0.22

[a]*Empirical 95% confidence interval does not overlap with zero. CI, confidence intervals; TEL, trait emotional intelligence; PE, psychological empowerment; WE, work engagement; JS, job satisfaction.*

the chain-mediating impact of "psychological empowerment–work engagement" in the association trait EI–job satisfaction was significant.

DISCUSSION

The main aims of the current study were to investigate the association between trait EI and job satisfaction and examine the mediating effect of psychological empowerment and work engagement in this association. Relying on AET, the results demonstrated that work engagement partially mediated the link between trait EI and job satisfaction, and psychological empowerment do not mediate the association between trait EI and job satisfaction. Moreover, the final model revealed that trait EI could influence job satisfaction via the chain-mediating effect of "psychological empowerment–work engagement." In summary, these results help to a better understanding of these mechanisms between these variables and indicate that trait EI may impact job satisfaction from emotional perspectives.

The main results are that the indirect impact of trait EI on job satisfaction through work engagement is significant. Work engagement partially and independently mediates the link between trait EI and job satisfaction. In other words, trait EI is associated with job satisfaction via work engagement, which revealed that followers with high trait EI are likely to exhibit greater work engagement and then experience more satisfaction with their jobs. These results are in line with previous studies demonstrating that work engagement is positively associated with job satisfaction and partially mediate the link between proactive personality and job satisfaction (Jawahar and Liu, 2016). Together, these results demonstrate that work engagement has a crucial role in the link between trait EI and job satisfaction. Overall, these findings demonstrated the importance of trait EI in nurses' work engagement and job satisfaction.

The results demonstrated that the specific indirect impact of trait EI on job satisfaction via psychological empowerment was not supported, which indicates that psychological empowerment does not mediate the association between trait EI and job satisfaction. These findings indicated that to improve employees' job satisfaction, we should stress increasing their engagement to their work, compared with those solely aiming at improving perceptions of empowerment and demonstrate that the beneficial impact of trait EI on job satisfaction is not simply due to a perception of improving psychological empowerment. Instead, followers with higher trait EI may enhance their job satisfaction through the sequential mediating effect of psychological empowerment and work engagement. In addition, results also demonstrated that trait EI could elaborate job satisfaction via the chain-mediating impact of "psychological empowerment–work engagement." Hence, followers with higher trait EI could perceive more psychological empowerment and then exhibit more work engagement than those with lower trait EI, and thus contribute to an enhancement satisfaction with their jobs. These findings may be due to the perception that psychological empowerment and showing rich work engagement are quite crucial in enhancing satisfaction with their jobs (Karatepe, 2011; Seibert et al., 2011; Amundsen and Martinsen, 2015; Khany and Tazik, 2015; Jawahar and Liu, 2016; Nikpour, 2018). Taken together, these finds reveal that perception of psychological empowerment and work engagement might be two crucial factors for trait EI followers to enhance occupational well being.

Some limitations of our study should be mentioned. First, causal effects among these variables cannot be concluded due to the cross-sectional approach for our study. Thus, experimental or longitudinal research was adopted to elaborate the causal relationships among these variables. Second, the research relied solely on a sample consisting of nurses working in a hospital and will explore the moderated mediation model of work engagement in this association. Third, our study relies on the total score of trait EI, empowerment, or engagement. Future research will investigate the facts of these variables in these associations. Fourth, future research will explore the other different personal characteristics (such as proactive personality) in trait EI and job satisfaction.

CONCLUSION

Our study contributes a deeper understanding of the association between trait EI and job satisfaction and demonstrates that high trait EI may improve occupational well being through the chain-mediating effects of "psychological empowerment–work engagement."

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Committee of the Fourth Military Medical University. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

XY, ZL, and PH designed the study. YG and XY collected and analyzed the data. YG, YW, and PH wrote the manuscript. ZL supervised the study and edited the draft of the manuscript.

FUNDING

This study was funded by grants from the Major Project of Medicine Science and Technology of PLA (AWS17J012).

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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 March 2020
doi: 10.3389/fpsyg.2020.00240

Correlating Emotional Intelligence With Job Satisfaction: Evidence From a Cross-Sectional Study Among Secondary School Heads in Khyber Pakhtunkhwa, Pakistan

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Emotional intelligence is extremely indispensable in functioning leadership positions as leaders wish everybody to fulfill his/her responsibilities and obligations effectively while job satisfaction has a direct association with the productivity and efficiency of an organization and also to individuals' success. Therefore, this cross-sectional study examined the relationship between emotional intelligence and job satisfaction among secondary schools heads in Khyber Pakhtunkhwa. For this investigation, a total of 402 out of 884 secondary school heads were taken as a sample using a multistage sampling technique. The study was correlative, descriptive, and quantitative in nature, and survey research designed was used for collecting information from the participants. Statistical tools, i.e. mean, standard deviation, Pearson's product-moment correlation, multiple linear regression, and analysis of variance, were applied. The findings showed that there was a moderate positive correlation between emotional intelligence and job satisfaction. Additionally, there was a moderate positive correlation between all the subdimensions of emotional intelligence and job satisfaction except emotional stability, where the correlation was also positive and the effect size weak. Furthermore, five dimensions of emotional intelligence such as managing relations, emotional stability, self-development, integrity, and altruistic behavior were found significant predictors of job satisfaction. Therefore, it is imperative to concentrate on those practices that promote emotional intelligence among secondary school heads.

Keywords: cross-sectional study, emotional intelligence, job satisfaction, relationship, secondary school heads

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Ashfaq Ahmad Shah, National University of Sciences and Technology, Pakistan
Nieves Fátima Oropesa Ruiz, University of Almería, Spain

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

Received: *25 June 2019*
Accepted: *31 January 2020*
Published: *13 March 2020*

Citation:
Suleman Q, Syed MA, Mahmood Z and Hussain I (2020) Correlating Emotional Intelligence With Job Satisfaction: Evidence From a Cross-Sectional Study Among Secondary School Heads in Khyber Pakhtunkhwa, Pakistan. Front. Psychol. 11:240. doi: 10.3389/fpsyg.2020.00240

INTRODUCTION

Effective leadership is extremely indispensable for the accomplishment of organizational goals through effective management of material as well as human resources. Effective leadership has long been viewed as extremely essential for the outstanding performance of educational institutions by ensuring a vibrant, encouraging, and conducive environment; making available sufficient resources; and promoting good interpersonal relationships and improving students' achievement (Marzano et al., 2005; Kythreotis et al., 2010). Successful leaders know their feelings, weaknesses, and

strengths, and they possess a powerful sagacity of self-respect and self-esteem. Prolific leadership exhibits discipline, controls undesirable sentiments, maintains integrity, and shows flexibility. A school head is required to apply emotional and general intelligence to fulfill these obligations and commitment to ensure efficiently the mandates of a nation and also fulfill the mission of educational institutions effectively (Pashiardis, 2011). A successful leader can accomplish the organizational goals effectively, smooths a way to accomplish collective and individual goals, distributing and utilizing inadequate resources to fulfill the fundamental requirements and demands of the public through effective handling of resources. Leaders should have the capability to manage emotional situations effectively, to fabricate trust and understanding rapidly, to listen well, and to motivate the subordinates (Arinze, 2011). Therefore, effective leadership is extensively believed to be an essential organizational constituent and performing an outstanding contributory role in promoting individuals' well-being as well as organizational efficiency. Leaders are incapable to execute their responsibilities efficiently provided they are knowledgeable, emotionally intelligent, satisfied, and safe in a workplace (Pellitteri, 2002). It clearly indicates that leaders with problems may contribute to many displeasing and disagreeable issues for the organization and its employees which damagingly influence the organizational performance on the whole. Therefore, emotional intelligence and job satisfaction of individuals are the most leading and dominant variables responsible for outstanding performance.

Emotional intelligence has been recognized to be the most important conceptualization that is progressively recognized in social psychology. Recently, emotional intelligence has been given much concentration in research especially in psychological research. It is regarded as one of the crucial elements of a successful life as well as psychological well-being (Bar-On, 2001). It was primarily explained by Salovey et al. (1990) who expressed that emotional intelligence is a competency to possess emotional knowledge, to perceive and control emotions well, and to stimulate intellectual and emotional growth. Afterward, the authors presented a revised and comprehensive description of emotional intelligence as the capability to observe feelings, coordinate feelings to encourage thoughts, and understand and control feelings to stimulate self-improvement (Mayer and Salovey, 1997). Mayer et al. (1990) were familiar with their incredible contribution to the rise of emotional intelligence. Afterward, in 1995, the development of emotional intelligence construct commenced with the work of Daniel Goleman having an incredible contribution. Goleman (1995) characterizes emotional intelligence as an assortment of skills or capabilities, i.e. having the capability to propel oneself and continue despite hindrances, to deal with impulse and dissatisfaction, to manage one's mindsets, to keep sufferings from influencing the capability to think, to sympathize, and to be hopeful. Goleman's methodology is perceived as a mixed model of emotional intelligence, which depicts a series of abilities and competencies comprising in five key areas: self-awareness, self-regulation, social skills, motivation, and empathy (Goleman, 1998). According to Bar-On (1997), emotional intelligence refers to a variety of non-intellectual competencies, capabilities, and skills which have an impact on one's capability to do well with regard to the management of environmental demands and pressures. Bar-On (1997) classified emotional intelligence into five key parts, i.e. intrapersonal, adaptability, interpersonal, stress management, and general mood.

Emotional intelligence may be characterized as the capability to identify, persist, and control driving forces; communicate clearly; make incredible decisions; tackle issues; and perform with other individuals in such a way that makes companions and achievement (Stone et al., 1998). These competencies enable an individual to observe and control emotions, ensure poise and dignity, formulate objectives, promote empathy, ensure conflict resolutions, and promote competencies necessary for leadership and successful group participation (Elias, 2004). Bradberry and Greaves (2009) expressed that emotional intelligence is the individual's ability, aptitude, recognition assignment, accurate appraisal, and management of his senses against other individuals and gatherings. The theories of emotional intelligence have been classified into two groups and models. The first group is known as the ability model describing that emotional intelligence is a particular sort of intellectual ability as well as a part of cognition intelligence. The second group is the mixed model in which the philosophers blend the abilities of intelligence with some personality attributes, for example, being optimistic. Emotional intelligence includes interpersonal intelligence and intrapersonal intelligence. Interpersonal intelligence is the external intelligence which an individual utilizes to understand and maintain relations with the other individuals. It is imperative for promoting characteristics like sympathy, empathy, and strengthening powerful relationships. On the other hand, intrapersonal intelligence is the internal intelligence that is used by an individual to understand himself which is necessary for self-awareness, self-inspiration, and self-regulation. The management of intrapersonal as well as interpersonal emotions is important for individuals' academic and professional accomplishments. Individuals having a higher emotional intelligence are more expected to regulate, understand, and control emotions excellently in themselves as well as in the other individuals (Wijekoon et al., 2017).

Emotional intelligence is extremely indispensable in functioning leadership positions as leaders wish everybody to fulfill his/her responsibilities and obligations as brilliantly as would be prudent. Research reveals that emotional intelligence has significant influences on the leadership roles and success of employment, and it is the prime variable for a successful life that contributes to better individuals' performance (Zijlmans et al., 2011). The leaders with an outstanding level of emotional intelligence apply their social capacities to move others, ensure durable relations with workers, and act as influential motivators by managing their emotions and perceiving their inadequacies (Chastukhina, 2012). Leaders with an outstanding degree of emotional intelligence may be increasingly able to achieve more productivity from less manpower. Emotionally intelligent leaders can unexpectedly make and promote emotionally intelligent teams due to social many-sided nature of the present-day organizations (Goleman, 2002).

Within the paradigm of emotional intelligence, three theories are considered the fundamentals of emotional intelligence (Goleman, 1995; Mayer and Salovey, 1997; Goleman, 1998; Bar-On, 2000; Mayer et al., 2000). These theories have been presented in the last decade as an endeavor to describe the capabilities, attributes, and skills related to emotional intelligence. Mayer and Salovey (1997) built up an emotional intelligence model concentrating on those areas that stimulate intelligence through the understanding of emotions. In their model, emotional intelligence determines the potential for achieving the proficiency of certain abilities in the field of emotional intelligence. Bar-On (2000) presented a trait model of emotional intelligence that gauges emotional intelligence through five domains, i.e. intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood. Interpersonal skills include the management of relationships with other individuals. Intrapersonal skills stress on individuals' concentration and commitment and also the capability to make planning and complete independent ventures. Stress management abilities involve a person's capability to remain calm, use constructive managing strategies, and promote power supportive systems. Adaptability skills comprise of significant problem-solving aptitudes, flexibility, and the capability to reframe issues and their resolutions. The general mood is a pointer of hopefulness, optimism, and flexibility. Bar-On (1997) expressed that emotionally intelligent individuals are commonly optimistic, adaptable, realistic, and effective in resolving issues and facing stressful situations without losing control. Goleman's model of emotional intelligence is a competency model that concentrates on the competencies of emotional intelligence that enable an individual to achieve accomplishment in the working place (Goleman, 1995; Goleman, 1998). Goleman's mixed model demonstrates the facets of an individual's personality in addition to the capability to stimulate oneself in social and emotional conditions (Goleman, 1995; Goleman, 1998). Likewise, Bar-On's mixed model of emotional intelligence also indicates the role of interpersonal relationships on emotion, as well as skills endorsing adaptability and stress management (Bar-On and Parker, 2000). On the other hand, Mayer and Salovey's skill model focuses on the abilities related to the processing of emotional information (Mayer and Salovey, 1997). Goleman (2002) found that leaders who utilize emotional intelligence skills may maintain loyalty and organizational productivity. Goleman (1998) additionally focused on emotional intelligence that comprises five parts: identifying one's emotions (self-awareness), managing them, inspiring self, knowing emotions in other individuals (empathy), and maintaining relations.

Job satisfaction has a direct association with the productivity and efficiency of an organization and also to individuals' success. It is the basic component that acts as a contributory factor to advancement, productivity, appreciation, income, development, and achievement, causing a feeling of fulfillment (Kaliski, 2007). It reflects the enthusiasm and gratification of an individual with his/her work. It is described as the feeling that is experienced at the end of accomplishing an assignment and might be desirable or undesirable reliant on the results of the task endeavored (Saiyadain, 2007). It is a many-sided and multifaceted phenomenon that portrays diverse things to different persons. It is generally associated with motivation, but the mode of association is not comprehensible. Satisfaction is different from motivation (Mullins, 2005). It is also described as a pleasant enthusiastic situation initiating from the occupational assessment, it represents a viable response to one's profession as well as attitudes, the significant characteristics of employment gratification that are generally determined through organizations by means of the rating scale, workers' responses (Kumari and Pandey, 2011).

Job satisfaction involves emotional, intellectual, and behavioral variables. The emotional variable refers to emotions with regard to employment, for example, exhaustion, tension, or pleasure. The cognitive or intellectual variable refers to beliefs as to one's occupation, i.e. feeling that one's profession is reasonably challenging and difficult. Lastly, the behavioral variable is comprised of employees' practices related to their employment comprising of coming and remaining late, or appearing as sick, etc. Job satisfaction may affect capability, productivity, absenteeism, turnover, employees' resignation, and finally employees' prosperity (Usop et al., 2013). Dissatisfied individuals have a tendency to withdraw from organizations, whereas satisfied personnel are in good well-being and have a tendency to remain for a longer period in the organizations. Job satisfaction has various negative impacts such as despondency, uneasiness, and poor physiological and psychological prosperity influencing workers' absenteeism, turnover, obligation, and commitment. Job satisfaction impacts individuals' personal lives and therefore influences turnover and other essential business-related dispositions as well as demeanors. It acts as an outstanding turnover predictor and may influence learners' judgment regarding the quality of services offered by the organization. Nevertheless, employees may be displeased with their occupation and ultimately, they have the intentions to leave the profession due to some reasons, for example, poor communication with contemporaries, high stress, lack of opportunities for advancement, and lack of recognition, etc. (Ucho et al., 2012).

In this technologically advanced era, every organization needs to accomplish outstanding achievement by means of productivity. Nevertheless, the accomplishment of this dream requires substantial satisfaction of workforces because they endeavor to increase more efforts to perform effectively to accomplish the stated goals. Likewise, the organizational achievement relies upon effective and creative individual execution (Kwateng et al., 2014). Currall et al. (2005) expressed that organizational profitability relies upon the execution of its workforces, and therefore, a high level of occupation fulfillment is essential for the outstanding execution of employees. Likewise, Meyer confirmed that job dissatisfaction unpleasantly affects the workers' commitment which ultimately hampers the attainment of organizational goals and performance. Therefore, handsome and attractive packages are required for retaining higher performers (Meyer, 2014). Employment fulfillment helps in promising increasingly resourceful workforces and progressively organizational accomplishments. Those employees feeling satisfaction with their job are supposed to have

outstanding excellence of work life when contrasted with those employees who are disappointed and their requirements are not fulfilled. Every employee in the working environment needs to perform a vital part for the progression and development of an organization and consequently, knowing employees' occupational gratification is necessary for the change of execution and organizational efficiency (Nyanga et al., 2012).

According to Herzberg et al. (1959), there are five factors, namely, achievement, responsibility, work itself, recognition, and advancement, which act as strong predictors of job satisfaction. Other predictors are supervision, company policies, administration policies, compensation, working conditions, and interpersonal relationship. According to Lester (1987), the main components of job satisfaction are supervision, working conditions, colleagues, work itself, pay, responsibility, security, recognition, and advancement. Similarly, Sonmezer and Eryaman (2008) described that salary, advancement, ability utilization, social status, conducive working conditions, good relations, security, and creativity are the important elements of job satisfaction of the personnel of education. Treputtharat and Tayiam (2014) expressed that responsibility, performance standards, reward, unity, leadership, and success are the six components of the organizational setting which affect employees' job satisfaction. According to Helms (2006), pay and money are the prime gorgeous factors of employees' job satisfaction and motivation. Pay includes financial recognition for accomplishments. It is one of the tools to improve employee job satisfaction (Ketsela, 2017). Nyange (2013) expressed that advancement opportunities enable individuals to move toward advancement and growth which stimulate employees' morale and inspire them to perform efficiently and more successfully. Subsequently, this builds organizational profitability and proficiency and stimulates the level of job satisfaction. Luthans (1998) affirmed that under favorable working conditions, e.g. a clean and fascinating environment, employees will perform their job effectively and successfully. Conversely, within an unpleasant working environment, like a hot and noisy environment, employees will not complete their work and subsequently experience dissatisfaction. Carrell et al. (1998) expressed that satisfaction is encouraged under effective supervision and the employees perceive their supervisor as sympathetic, cooperative, capable, and successful. Ineffective supervision comprises discriminating treatment of the supervisor and inability to correspond to workers' problems, which thusly contribute to job dissatisfaction (Chung, 1977). Waqas et al. (2014) concluded that recognition, reward, and workplace environment are powerful influential factors affecting job satisfaction. But on the contrary, the involvement in the decision-making process has an insignificant association with job satisfaction.

Various research studies have been conducted to evaluate the association between emotional intelligence and job satisfaction locally and globally in various settings. After going through the findings of these studies, it has come to light that there is a substantial association between emotional intelligence and job satisfaction. Khanzada et al. (2018) found that there was a substantial positive relationship between emotional intelligence and job performance of the employees. The mediation outcomes revealed that job satisfaction moderately mediates between employees' emotional intelligence and their job performance and reinforced the relationship. Rahman and Haleem (2018) found that emotional intelligence had a considerable positive influence on job satisfaction. Similarly, Khan et al. (2017) concluded that all the dimensions of emotional intelligence significantly predict job satisfaction. Additionally, their results indicated that among the indicators, self-assessment was found to be the most powerful predictor, whereas optimism was found to be the weakest predictor of job satisfaction. Naz and Liaquat (2015) found that emotional intelligence significantly impacts on employees' job satisfaction and psychological ownership. Income level substantially impacts job satisfaction and psychological ownership positively. Conversely, it does not impact the emotional intelligence of the employees. Ashraf et al. (2014) found that there was sufficient evidence of a substantial association between emotional intelligence and job satisfaction with marital status as well as employment experience affecting it significantly. Hussain et al. (2014) investigated the association among three different variables related to secondary school teachers, and these variables are emotional intelligence, job satisfaction, and organizational commitment. Moreover, the study investigated the influence of gender and age in determining these aspects among the sample teachers. The outcomes indicate that there was a significant positive relationship between the three variables, i.e. emotional intelligence, job satisfaction, and organizational commitment.

Rationale of the Study

After going through the literature, it was realized that emotional intelligence and job satisfaction are the two fundamental components for organizational advancement as well as for the overall individual prosperity. An extensive body of research has investigated the connection between emotional intelligence and job satisfaction globally in different fields (Gunavathy and Ayswarya, 2011; Çekmecelioğlu et al., 2012; Ealias and George, 2012; Lee and Ok, 2012; Zakieh and Aminilari, 2013; Ghoreishi et al., 2014; Masrek et al., 2014; Alnidawy, 2015; El-Badawy and Magdy, 2015; Mardanpour and Makvandi, 2015; Tabatabaei and Farzadmehr, 2015; Yusoff et al., 2016; Khanzada et al., 2018; Rahman and Haleem, 2018). A literature review revealed that in Pakistan, some related research studies have been conducted on teaching workforces as well as employees of other departments (Ashraf et al., 2014; Hussain et al., 2014; Naz and Liaquat, 2015; Khan et al., 2017; Khanzada et al., 2018; Rahman and Haleem, 2018), but unfortunately, the heads of the secondary schools have been badly ignored in this connection which shows the negligence of the educational researchers in Pakistan especially in the province of Khyber Pakhtunkhwa. No research study on educational leaders at the secondary level has been conducted previously in the province of Khyber Pakhtunkhwa with these variables. The role of a head in leading an institution toward advancement has become increasingly multifaceted and complex, and heads with problems may contribute to various undesirable and pessimistic consequences for educational institutes, as well

as teaching and non-teaching workforces which damagingly and pessimistically influence the overall performance of the educational institutions. Without a competent and satisfied head, an educational institution cannot succeed in getting the right direction toward success and prosperity. In addition, he cannot perform his duties and responsibilities effectively for the welfare and prosperity of the institution until he is intelligent emotionally, capable, contented, and secured in the workplace. Therefore, it is necessary to make his job more respected, attractive, satisfying, and compensated. So, in this technologically advanced era, it is the intense need to conduct research on leading workforces with respect to these variables to make the educational institutions more advanced and progressive for quality education.

Study Hypotheses

The purpose of the study was to examine the relationship between emotional intelligence and job satisfaction among secondary school heads in Khyber Pakhtunkhwa; therefore, the following null hypotheses were tested to achieve the research outcomes:

Hypothesis 1. There is no significant correlation between emotional intelligence and job satisfaction among secondary school heads.

Hypothesis 2. There is no significant correlation between the subdimensions of emotional intelligence and job satisfaction among secondary school heads.

Hypothesis 3. Subdimensions of emotional intelligence have no significant contribution in predicting job satisfaction among secondary school heads.

Conceptual Framework of the Study

A conceptual framework is the researcher's idea which shows a proper direction in which the research study is going to be conducted. In this cross-sectional study, the conceptual framework is designed on the basis of Goleman's Model and Herzberg Two-Factor Theory (**Figure 1**). According to Goleman (2001), emotional intelligence is composed of four main constructs, i.e. self-awareness, self-management, social awareness, and relationship management. In this study, 10 subdimensions of emotional intelligence (**Figure 1**) derived from the Goleman Model were used (Goleman, 2001). Herzberg et al. (1959) presented the two-factor theory and expressed that certain factors that cause employees' job satisfaction are called motivators or satisfiers (i.e. achievement, recognition, career advancement, level of responsibility, etc.) while some other factors that lead to employees' job dissatisfaction are called hygiene factors or dissatisfiers (i.e. organizational policies, salary, supervision, job security, working conditions, etc.) (Thomas, 2004).

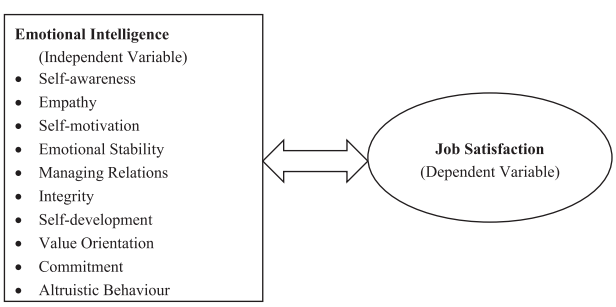

FIGURE 1 | Conceptual Framework of the Study: Demonstrating the correlation model between the subdimensions of emotional intelligence and job satisfaction among secondary school heads.

MATERIALS AND METHODS

Participants

This investigation was performed in the province Khyber Pakhtunkhwa which is situated in the northwestern region of Pakistan. It has been partitioned into seven divisions (such as Bannu Division, Kohat Division, Dera Ismail Khan Division, Hazara Division, Peshawar Division, Mardan Division, and Malakand Division) and 25 districts. Peshawar is the biggest metropolitan as well as the capital city of Khyber Pakhtunkhwa province. In the past, it was documented as North-West Frontier Province (NWFP). This investigation was done in 10 out of 25 districts because of financial constraints. In research, it is vital to confirm a precise representation of the population in terms of elements or subjects under examination, i.e. people, objects, associations, and so forth. In this investigation, all the secondary school heads in Khyber Pakhtunkhwa established the study population. There were a total of 2,108 secondary schools in the said province of Pakistan. In these schools, there were a total of 2,108 heads (male, n = 1,386; female, n = 722) (**Table 1**; EMIS, 2015).

In educational research, a multistage sampling procedure is broadly used worldwide because it is more precise, systematic, convenient, and reliable. In this cross-sectional study, a multistage sampling technique was used because the population

TABLE 1 | Population and sample size.

	Schools				Heads			
	Total		Sample		Total		Sample	
Districts	Male	Female	Male	Female	Male	Female	Male	Female
Nowshera	66	29	40	17	40	17	30	13
Kohat	47	27	28	16	28	16	21	12
Karak	56	26	37	16	37	16	28	12
Peshawar	85	55	51	33	51	33	38	25
Hangu	26	09	16	05	16	05	12	04
Charssadda	61	33	37	20	37	20	28	15
Abbottabad	69	45	41	27	41	27	31	20
Malakand	45	29	27	17	27	17	20	13
Bannu	59	40	35	24	35	24	26	18
Lakki Marwat	56	21	34	13	34	13	26	10
Total	570	314	346	188	346	188	260	142

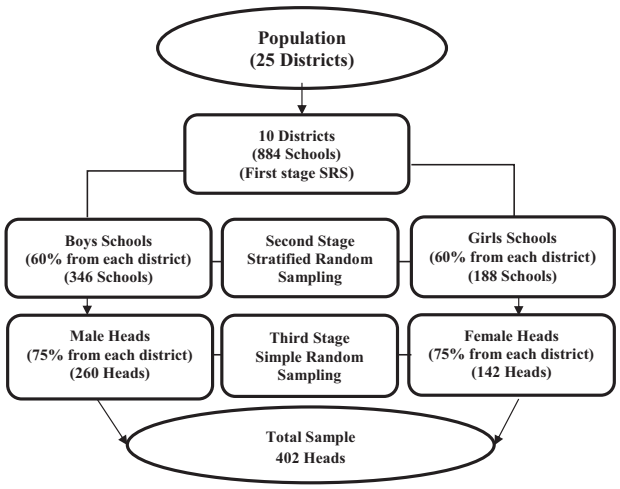

FIGURE 2 | Multistage Sampling Model: Indicating the diagrammatical presentation of drawing the sample from the population. At the first stage, 10 out of 25 districts were selected through simple random sampling (SRS) technique. At the second stage, 60% Boys and 60% Girls Secondary Schools were selected through a stratified random sampling technique, and at the third stage, 75% male and 75% female secondary school heads were selected through SRS technique from each stratum.

was widely scattered. So, at the first stage, 10 out of 25 districts, i.e. Karak, Kohat, Abbottabad, Peshawar, Bannu, Nowshera, Lakki Marwat, Malakand, Charssada, and Hangu, were selected through a simple random sampling technique. At the second stage, 346 (60%) boys' and 188 (60%) girls' secondary schools were taken through a stratified sampling technique because the population was heterogeneous due to gender. In this way, two strata were made, i.e. boys' schools and girls' schools. At the third stage, 260 (75%) male and 142 (75%) female heads were chosen randomly from each stratum. In this manner, a sample of 402 secondary school heads (male, n = 260; female, n = 142) was chosen (**Figure 2** and **Table 1**).

Participants' Demographic Characteristics

In order to conduct this cross-sectional study successfully, 402 participants joined after getting their permission. Among these participants, 260 were males and 142 were females. The demographic characteristics of the participants were analyzed on the basis of a simple percentage. **Table 2** portrays that among the participants, 64.68% were males, and 35.32% were females. Regarding the age, only 6.71% of the participants were in the age group 30–34 years, 12.19% were grouped in 35–39 years, 18.90% were grouped in 40–44 years, and a high proportion of the participants (62.19%) were found having age 45 years and above. In terms of experience, 46.77% of the participants had 1–4 years' experience, 25.62% had 5–9 years' experience, 17.16% had 10–14 years' experience, and 10.45% had 15 years and above of experience. With regard to academic qualification, 11.44% of participants were bachelor degree holders, 84.83% were master degree holders, 2.99% were M. Phil degree holders, and 0.75% were Ph.D. degree holders. Regarding professional qualification, 54.98% of the participants were bachelor degree holders, 41.79% were master degree holders, 2.74% were M. Phil degree holders, and 0.50% were Ph.D. degree holders. With respect to the locality, 22.39% of the participants belonged to urban localities, whereas 77.61% of the participants belonged to rural localities. In case of religion of the participants, 402 (100.0%) had Islamic religion, and no single participant was found having other religions than Islam.

TABLE 2 | Participants' demographic characteristics.

Characteristics	Categories	*n* (%)
Gender	Male	260 (64.68%)
	Female	142 (35.32%)
Age (in years)	30–34	27 (06.72%)
	35–39	49 (12.19%)
	40–44	76 (18.90%)
	45 and above	250 (62.19%)
Experience (in years)	01–04	188 (46.77%)
	05–09	103 (25.62%)
	10–14	69 (17.16%)
	15 and above	42 (10.45%)
Academic Qualification	BA/BSc	46 (11.44%)
	MA/MSc	341 (84.83%)
	MPhil	12 (02.99%)
	Ph.D.	3 (00.75%)
Professional Qualification	B. Ed	221 (54.98%)
	M. Ed	168 (41.79%)
	M. Phil (Edu)	11 (02.74%)
	Ph.D. (Edu)	02 (00.50%)
Locality	Urban	90 (22.39%)
	Rural	312 (77.61%)
Religion	Islam	402 (100.0%)
	Hinduism	00 (00.00%)
	Christianity	00 (00.00%)
	Others	00 (00.00%)

Research Design and Measurements

In research, the research design is a methodical and systematic arrangement that helps the researchers to relate the theoretical framework, main research questions, gathering of information, and ways of statistical investigation to achieve precise and authentic outcomes (Yin, 2009). This cross-sectional study was correlative, quantitative, and descriptive. To accumulate the desired information from the participants, a survey research design was applied as the population was broadly disseminated, and it was difficult to accumulate information through other research instruments. The survey is commonly practiced for collecting quantifiable information from the respondents to gauge, perceive, assess, summarize, and generalize the research results and is perceived as an efficient and systematic way of accumulating data quantitatively (Zikmund, 2003). In the current investigation, two standardized instruments, Emotional Intelligence Scale (EIS) and Minnesota Satisfaction Questionnaire (MSQ), were utilized for gathering

the required information. Both the instruments have been described as follows:

Emotional Intelligence Scale

In this cross-sectional study, the concept of emotional intelligence has been used which is proposed by Goleman. The EIS constructed by Hyde et al. (2002) was used for measuring emotional intelligence. This instrument has been designed in light of Goleman's Model of emotional intelligence to assess the emotional intelligence of secondary school heads. Initially, Hyde et al. built up a scale comprising 106 items in total, but 34 items were observed to be extremely significant after performing statistical analysis, and the remaining items were omitted. The reliability was affirmed through a sample of 200 participants by ascertaining the split-half reliability coefficient and was found as 0.88. The content validity of the scale was computed as 0.93. In order to validate the scale, it was distributed among the Indian executives, and the desired information was accumulated. Based on factor analysis, 10 factors were found which comprise the sub-measurements of the emotional intelligence scale. The 10 sub-measurements of emotional intelligence are emotional stability, self-awareness, integrity, empathy, managing relations, commitment, self-motivation, value orientation, self-development, and altruistic behavior. *Self-awareness* is the idea that one exists as an individual, isolated from other individuals, with personal considerations. *Empathy* is the ability to recognize or understand the emotions and mental states of others. *Self-motivation* is the capability to inspire and stimulate one's own self. *Emotional stability* is the capability of one's character to keep stable in even unfavorable and stressful environments. *Managing relations* is the aptitude to inspire, motivate, encourage, influence, and develop others in order to achieve effective and successful outcomes. *Integrity* includes perceived regularity and uniformity of actions, beliefs, approaches, measures, and principles. *Self-development* is assuming individual liability and responsibility for one's own learning and improvement through a process of appraisal, reflection, and taking action. *Value orientation* is the principles of good and bad that are acknowledged by an individual or a social gathering. *Commitment* intends to obligate or vow to something or somebody and can be alluded to personal duties and responsibilities. *Altruistic behavior* is being beneficial for other individuals. This scale was designed on five-point Likert scale, i.e. strongly agree to strongly disagree and was rated as 5 to 1 correspondingly (Jhaa and Singh, 2012).

Minnesota Satisfaction Questionnaire

The MSQ constructed by Weiss et al. (1977) is a well-known measuring tool used for gauging employees' job satisfaction. The original version of the MSQ is composed of 20 dimensions divided into intrinsic and extrinsic facets, and each dimension is comprised of five questions. Intrinsic facets consist of 13 dimensions while extrinsic facets are comprised of seven areas such as achievement, ability utilization, authority, activity, coworkers, responsibility, moral values, independence, recognition, creativity, social status, social service, variety, school policies and practices, advancement, compensation, supervision (HR), security, supervision (technical), working condition. Based on cultural and societal background, slight modifications were made in the MSQ, and each dimension was confined to four questions. The MSQ has been constructed on a five-point Likert scale, i.e. very dissatisfied = 1, dissatisfied = 2, neither (neither satisfied nor dissatisfied) = 3, satisfied = 4, and very satisfied = 5.

Pilot Testing

The pilot testing was performed to test the reliability and validity of the measuring instruments. It plays a contributing role in purifying the test and feasibility of the proposed study, to identify the possible issues with the proposed design, to refine the instrument, and to provide the investigators with a clear picture of the proposed study's respondents, setting, and research methodology (Yusoff et al., 2016). A pilot study is carried out to explore weaknesses in research design and instruments and to ensure the provision of data for selecting a probability sample (Blumberg et al., 2005). Sekaran (2003) expressed that a pilot study facilitates a researcher in identifying problems and mistakes in the research instrument. He claims that it does not matter how many times a research instrument is revised, it is considered an operational document if it has been tested successfully in the field.

In this cross-sectional study, both the measuring instruments Emotional Intelligence Scale and Minnesota Satisfaction Questionnaire were standardized instruments having exceptional validity and reliability which are widely employed by scholars globally. Both the instruments were translated from English into Urdu language for a better understanding of the respondents. Therefore, it was imperative to confirm their validity. So, the pilot study was conducted in 25 government secondary schools selected from various districts of Khyber Pakhtunkhwa. In this way, the researchers distributed the instruments among 25 participants (males, n = 15; females, n = 10), and their responses were recorded. Based on the analysis, some minor language mistakes were found which were rectified. Conclusively, both the instruments were found appropriate for the current research study.

Validity and Reliability

The validity and reliability are two basic components of a research study which should be kept in mind during proposing research design, statistical measurement, and assessment of the investigation (Patton, 2002). Validity is a basic key for viable and effective results of an investigation. Hence, without validating the research instruments, research is useless. Thus, validity is an essential condition for quantitative as well as qualitative research. The validity of quantitative data might be improved through precise sampling, reasonable research instrumentation, and appropriate analysis of data (Cohen et al., 2000). So, in addition to pilot testing, the validity and reliability were also confirmed in spite of the fact that these standardized instruments were exceedingly reliable and highly validated. The reason was their translation from English to Urdu language. So, the validity of EIS and MSQ was confirmed through five specialists having doctorate degrees and also having outstanding professionalism and experience.

TABLE 3 | Reliability analysis of the emotional intelligence scale (EIS).

Subscales of EIS	No. of items	Cronbach's alpha
Self-Awareness	4	0.897
Empathy	5	0.823
Emotional Stability	4	0.783
Self-Motivation	6	0.795
Managing Relations	4	0.813
Self-Development	2	0.896
Integrity	3	0.929
Commitment	2	0.836
Value Orientation	2	0.914
Altruistic Behavior	2	0.891
Mean	3.4	0.860

TABLE 4 | Reliability analysis of the minnesota satisfaction questionnaire (MSQ).

Main divisions of MSQ	Subscales of MSQ	No. of items	Cronbach's alpha
Intrinsic factors	Ability utilization	4	0.897
	Achievement	4	0.823
	Authority	4	0.783
	Activeness	4	0.795
	Creativity	4	0.929
	Coworkers	4	0.813
	Independence	4	0.896
	Moral values	4	0.914
	Social service	4	0.867
	Responsibility	4	0.917
	Recognition	4	0.836
	Social statues	4	0.764
	Variety	4	0.886
Extrinsic factors	Advancement	4	0.919
	Security	4	0.788
	Compensation	4	0.923
	Education policies and practices	4	0.837
	Supervision (Technical)	4	0.927
	Supervision (HR)	4	0.869
	Working condition	4	0.891
Mean		4	0.860

With the aim to confirm the reliability of these standardized instruments, the internal consistency reliability procedure (Cronbach's alpha reliability) was applied. After analysis, the average reliability coefficients of EIS and MSQ were found to be 0.86 and 0.86, respectively. The average internal consistency reliability of the subdimensions of the EIS shows that each dimension has a high reliability coefficient which confirms that EIS is a highly reliable research instrument (**Table 3**). Similarly, the average internal consistency reliability of the subdimensions of the MSQ indicates that each subdimension has a high reliability coefficient which proves that MSQ is an exceedingly reliable research instrument for data collection (**Table 4**).

Data Collection and Analysis

This cross-sectional study was formally approved by the Advanced Studies & Research Board (ASRB), Kohat University of Science & Technology (Pakistan), in its 39th meeting held on July 27, 2016. The main purpose of this approval was to discuss and confirm the various aspects of the study including the feasibility as well as the applicability of the research study, the significance of the study, the ethical aspects, and other related aspects. The process of data collection was initiated on September 15, 2016, and completed on February 15, 2017. Data from the participants of government high schools were collected through personal visits in four districts, namely, Karak, Kohat, Lakki Marwat, and Hangu. However, data were also gathered through mail from the participants serving in government high schools located in remote areas. That is why questionnaires were sent to participants on their institutional addresses in six districts, i.e. Abbottabad, Malakand, Charssadda, Peshawar, Nowshera, and Bannu. Respondents were furnished with a covering letter clarifying the aim of this investigation. They were told that their information will be kept top secret and would be utilized just for research purposes. Also, they were guaranteed that the information provided by them would be demolished after statistical analysis. In this way, after obtaining their informed consent, data were collected. Statistical tools such as mean, standard deviation, analysis of variance, Pearson's correlation, and multiple linear regression were employed for statistical analysis of the information.

RESULTS

Descriptive Analysis

Emotional Intelligence of Secondary School Heads

To analyze the emotional intelligence of the participants through descriptive statistics, different statistical tools were used such as mean, standard deviation, median, range, mode, skewness, and kurtosis. **Table 5** portrays that secondary school heads were emotionally intelligent with nine subdimensions of emotional intelligence. The most rated dimension of emotional intelligence was altruistic behavior (*mean* = 3.67, *SD* = 0.797, S^2 = 0.635) followed by self-awareness (*mean* = 3.58, *SD* = 0.682, S^2 = 0.466) and self-motivation (*mean* = 3.57, *SD* = 0.616, S^2 = 0.379). The other subdimensions of emotional intelligence were scored as integrity (*mean* = 3.54, *SD* = 0.717, S^2 = 0.594), self-development (*mean* = 3.53, *SD* = 0.818, S^2 = 0.669), value orientation (*mean* = 3.48, *SD* = 0.942, S^2 = 0.887), managing relations (*mean* = 3.47, *SD* = 0.6896, S^2 = 0.474), commitment (*mean* = 3.40, *SD* = 0.464, S^2 = 0.215), and empathy (*mean* = 3.06, *SD* = 0.381, S^2 = 0.464). In addition, it was revealed that secondary school heads were less emotionally intelligent regarding emotional stability (*mean* = 2.48, *SD* = 0.629, S^2 = 0.395).

Job Satisfaction of Secondary School Heads

In order to analyze the job satisfaction of the participants through descriptive statistics, various statistical tools such as mean, standard deviation, median, range, mode, skewness, and kurtosis were applied. As presented in **Table 6**, the descriptive statistics indicates that the secondary school heads showed satisfaction

TABLE 5 | Descriptive statistics of emotional intelligence among secondary school heads.

Variables	*N*	Min	Max	Mean ± SD	Range	Md	Mode	S^2	SEM	Skewness		Kurtosis	
										Statistic	SE	Statistic	SE
SA	402	1.50	5.00	3.58 ± 0.682	3.50	3.50	3.50	0.466	0.0340	−0.096	0.122	−0.241	0.243
E	402	1.40	5.00	3.06 ± 0.681	3.60	3.00	3.00	0.464	0.0339	−0.145	0.122	−0.229	0.243
SM	402	1.67	5.00	3.57 ± 0.616	3.33	3.50	3.67	0.379	0.0307	−0.067	0.122	0.067	0.243
ES	402	1.00	5.00	2.46 ± 0.629	4.00	2.50	2.50	0.395	0.0314	0.389	0.122	0.354	0.243
MR	402	1.50	5.00	3.47 ± 0.689	3.50	3.50	3.50	0.474	0.0344	−0.137	0.122	−0.168	0.243
I	402	1.33	5.00	3.54 ± 0.771	3.67	3.67	3.33	0.594	0.0384	−0.347	0.122	−0.141	0.243
SDT	402	1.00	5.00	3.53 ± 0.818	4.00	3.50	4.00	0.669	0.0408	−0.243	0.122	−0.473	0.243
VO	402	1.00	5.00	3.48 ± 0.942	4.00	3.50	3.00	0.887	0.0470	−0.201	0.122	−0.575	0.243
C	402	2.31	4.78	3.40 ± 0.464	2.47	3.45	3.43	0.215	0.0231	−0.146	0.122	−0.129	0.243
AB	402	1.50	5.00	3.67 ± 0.797	3.50	3.14	3.50	0.635	0.0398	−0.326	0.122	−0.319	0.243

Keys: Md, median; SD, standard deviation; S^2, variance; SEM, standard error of the mean; SE, standard error; SA, Self-Awareness; SM, Self-Motivation; E, Empathy; MR, Managing Relations; ES, Emotional Stability; SDT, Self-Development; I, Integrity; C, Commitment; VO, Value Orientation; AB, Altruistic Behavior.

TABLE 6 | Descriptive statistics of job satisfaction among secondary school heads.

Variables	*N*	Min	Max	Mean ± SD	*R*	Md	Mode	S^2	SEM	Skewness		Kurtosis	
										Statistic	SE	Statistic	SE
Ability Utilization	402	1.00	5.00	2.32 ± 0.833	4.00	2.25	2.50	0.693	0.042	0.567	0.122	−0.023	0.243
Achievement	402	1.25	5.00	3.62 ± 0.762	3.75	3.50	4.00	0.581	0.038	−0.261	0.122	−0.144	0.243
Activity	402	1.50	5.00	3.62 ± 0.772	3.50	3.50	4.00	0.596	0.039	−0.216	0.122	−0.410	0.243
Advancement	402	1.00	5.00	2.40 ± 0.956	4.00	2.00	1.75	0.914	0.048	0.578	0.122	−0.736	0.243
Authority	402	1.25	5.00	3.56 ± 0.848	3.75	3.50	3.25	0.719	0.042	−0.232	0.122	−0.400	0.243
School Policies and Practices	402	1.00	5.00	2.40 ± 0.806	4.00	2.25	2.00	0.650	0.040	0.968	0.122	0.528	0.243
Compensation	402	1.00	5.00	2.33 ± 0.790	4.00	2.00	2.00	0.623	0.039	1.029	0.122	1.002	0.243
Coworkers	402	1.75	5.00	3.59 ± 0.684	3.25	3.50	3.25	0.469	0.034	−0.097	0.122	−0.336	0.243
Creativity	402	1.00	5.00	2.77 ± 0.913	4.00	2.75	2.00	0.834	0.046	0.329	0.122	−0.548	0.243
Independence	402	2.00	5.00	3.67 ± 0.718	3.00	3.75	3.25	0.515	0.036	−0.018	0.122	−0.600	0.243
Moral Values	402	1.00	5.00	3.62 ± 0.836	4.00	3.50	3.50	0.700	0.042	−0.218	0.122	−0.531	0.243
Recognition	402	1.00	5.00	3.07 ± 0.858	4.00	3.00	3.25	0.736	0.043	−0.030	0.122	−0.472	0.243
Responsibility	402	1.75	5.00	3.74 ± 0.693	3.25	3.75	4.00	0.480	0.035	−0.168	0.122	−0.315	0.243
Security	402	1.50	5.00	3.67 ± 0.761	3.50	3.75	4.00	0.578	0.038	−0.236	0.122	−0.376	0.243
Social Services	402	1.50	5.00	3.65 ± 0.711	3.50	3.75	3.50	0.505	0.035	−0.186	0.122	−0.202	0.243
Social Status	402	1.75	5.00	3.73 ± 0.773	3.25	3.75	4.00	0.597	0.039	−0.204	0.122	−0.626	0.243
Supervision (HR)	402	1.00	5.00	2.40 ± 0.766	4.00	2.25	2.00	0.587	0.038	0.789	0.122	0.281	0.243
Supervision (Tech)	402	1.00	5.00	2.44 ± 0.890	4.00	2.25	2.00	0.791	0.044	0.750	0.122	0.009	0.243
Variety	402	1.00	5.00	3.44 ± 0.851	4.00	2.50	3.50	0.725	0.043	−0.235	0.122	−0.294	0.243
Working Conditions	402	1.00	5.00	2.38 ± 0.764	4.00	2.25	2.00	0.584	0.038	0.723	0.122	0.293	0.243

Keys: Md, median; SD, standard deviation; R, range; S^2, variance; SEM, standard error of the mean; SE, standard error.

with their job position with respect to 12 subdimensions of job satisfaction. The most rated dimension was responsibility (*mean* = 3.74, *SD* = 0.693, S^2 = 0.480) followed by social status (*mean* = 3.73, *SD* = 0.773, S^2 = 0.597), independence (*mean* = 3.67, *SD* = 0.718, S^2 = 0.515), security (*mean* = 3.67, *SD* = 0.761, S^2 = 0.578), and social services *(mean* = 3.65, *SD* = *0.711*, S^2 = 0.505). Other dimensions of job satisfaction were rated as achievement (*mean* = 3.62, *SD* = 0.762, S^2 = 0.581), activity (*mean* = 3.62, *SD* = 0.772, S^2 = 0.596), moral values (*mean* = 3.62, *SD* = 0.836, S^2 = 0.700), coworkers (*mean* = 3.59, *SD* = 0.684, S^2 = 0.469), authority (*mean* = 3.56, *SD* = 0.848, S^2 = 0.719), variety (*mean* = 3.44, *SD* = 0.851, S^2 = 0.725), and recognition (*mean* = 3.07, *SD* = 0.858, S^2 = 0.736). Conversely, secondary school heads were dissatisfied with eight dimensions, i.e. ability utilization (*mean* = 2.32, *SD* = 0.833, S^2 = 0.693), advancement (*mean* = 2.40, *SD* = 0.956, S^2 = 0.914), school policies and practices *(mean* = 2.40, *SD* = 0.806, S^2 = 0.650), compensation (*mean* = 2.33, *SD* = 0.790, S^2 = *0.623*), creativity (*mean* = 2.70, *SD* = 0.913, S^2 = 0.834), supervision (HR) (*mean* = 2.40, *SD* = 0.766, S^2 = 0.587), supervision technical (*mean* = 2.44, *SD* = 0.890, S^2 = 0.791), and working conditions (*mean* = 2.38, *SD* = 0.764, S^2 = 0.584).

TABLE 7 | Pearson's product-moment correlation (*r*) between the emotional intelligence and job satisfaction among the heads of secondary schools.

Variables	Emotional intelligence	Job satisfaction
Emotional Intelligence	1.00	0.609**
Job Satisfaction	0.609**	1.00

***Correlation is significant at 0.01 level (two-tailed). Correlation Strength: 0.01 ≤ r ≤ 0.29 = Weak; 0.30 ≤ r ≤ 0.69 = Moderate; r ≥ 0.70 = Strong.*

Inferential Analysis

Pearson's Correlation Analysis

Hypothesis 1. There is no significant correlation between emotional intelligence and job satisfaction among secondary school heads.

To test the research hypothesis, as reflected in **Table 7**, a bivariate Pearson's correlation was performed to examine the relationship between emotional intelligence and job satisfaction among secondary school heads. The value of r was calculated as 0.609 which undoubtedly shows a substantial ($p < 0.01$) positive relationship between emotional intelligence and job satisfaction. It plainly demonstrates that the higher the emotional intelligence of secondary school heads, then the higher will be their job satisfaction and vice versa. Therefore, the null hypothesis was rejected.

Hypothesis 2. There is no significant correlation between the subdimensions of emotional intelligence and job satisfaction among secondary school heads.

In order to test the research hypothesis, Pearson's product-moment correlation was run between the subdimensions of emotional intelligence and job satisfaction among the heads of public secondary schools. **Table 8** depicts that a moderate positive correlation was found between all the subdimensions of emotional intelligence and job satisfaction, i.e. emotional stability ($r = 0.175$), i.e. self-awareness ($r = 0.388$), empathy ($r = 0.390$), self-motivation ($r = 0.450$), managing relations ($r = 0.470$), integrity ($r = 0.449$), self-development ($r = 0.343$), value orientation ($r = 0.386$), commitment ($r = 0.341$), and altruistic behavior ($r = 0.445$). So, the research hypothesis was rejected. It means that emotionally intelligent heads will be satisfied with their employment.

Multiple Linear Regression Analysis

Hypothesis 3. Subdimensions of emotional intelligence have no significant contribution in predicting job satisfaction among secondary school heads.

In order to test the hypothesis, different statistical tools, i.e. analysis of variance, collinearity, Durbin–Watson, and multiple linear regression were run to explore the role of each dimension of emotional intelligence as a predictor of job satisfaction. As shown in **Table 9**, the model is statistically significant because the value of analysis of variance was calculated as 25.267, which indicates that the result is significant ($p < 0.05$) statistically. Additionally, the table reflects that the value of R square is 0.393, which demonstrates that 39% of the variance in job satisfaction is substantially represented by the dimensions of emotional intelligence in the model. The regression analysis uncovered that among the dimensions of emotional intelligence, five dimensions were found to be substantial predictors and have a substantial positive influence on job satisfaction. Among these predictors, managing relations (*Beta* = 0.210) was investigated as the strongest predictor followed by altruistic behavior (*Beta* = 0.202), integrity (*Beta* = 0.154), emotional stability (*Beta* = 0.120), and self-development (*Beta* = 0.107) in defining job satisfaction positively. Conversely, self-awareness (*Beta* = 0.041), empathy (*Beta* = 0.055), self-motivation (*Beta* = 0.038), value orientation (*Beta* = 0.045), commitment (*Beta* = 0.015) have no substantial positive influence on job satisfaction. It clearly indicates that managing relations, altruistic behavior, integrity, emotional stability, and self-development are the substantial predictors that positively influence job satisfaction among heads of public secondary schools. Conclusively, the hypothesis was partially accepted.

TABLE 8 | Pearson's product-moment correlation analysis between the subdimensions of emotional intelligence and job satisfaction.

Variables	SA	E	SM	ES	MR	I	SDT	VO	C	AB	JS
SA	1.00										
E	0.391**	1.00									
SM	0.552**	0.452**	1.00								
ES	0.031	0.115*	0.099*	1.00							
MR	0.381**	0.477**	0.447**	−0.008	1.00						
I	0.592**	0.398**	0.663**	0.125*	0.364**	1.00					
SDT	0.283**	0.336**	0.442**	0.147**	0.323**	0.325**	1.00				
VO	0.420**	0.420**	0.406**	−0.037	0.507**	0.378**	0.260**	1.00			
C	0.411**	0.436**	0.409**	0.040	0.389**	0.432**	0.239**	0.448**	1.00		
AB	0.368**	0.321**	0.421**	0.058	0.406**	0.368**	0.190**	0.446**	0.350**	1.00	
JS	0.388**	0.390**	0.450**	0.175**	0.470**	0.449**	0.343**	0.386**	0.341**	0.445**	1.00

**Correlation is significant at 0.05 level (two-tailed), **Correlation is significant at 0.01 level (2-tailed). Correlation strength: 0.01 ≤ r ≤ 0.29 = Weak; 0.30 ≤ r ≤ 0.69 = Moderate; r ≥ 0.70 = Strong. Key: SA, Self-Awareness; SM, Self-Motivation; E, Empathy; MR, Managing Relations; ES, Emotional Stability; SDT, Self-Development; I, Integrity; C, Commitment; VO, Value Orientation; AB, Altruistic Behavior; JS, Job Satisfaction.*

TABLE 9 | Multiple linear regression analysis to examine the role of independent variables (subdimensions of emotional intelligence) in predicting dependent variable (job satisfaction).

Model		Unstandardized coefficients		Standardized coefficients	*T*	*Sig.*	95% Confidence interval for B		Collinearity statistics		*R* Square	*F*	*Sig.*	Durbin–Watson
		B	SE	β			Lower	Upper	Tolerance	VIF				
Independent variables	(Constant)	1.649	0.116		14.271	0.000*	1.422	1.876						
	SA	0.019	0.025	0.041	0.780	0.436	−0.029	0.068	0.560	1.785				
	E	0.026	0.023	0.055	1.111	0.267	−0.020	0.072	0.630	1.587				
	SM	0.020	0.031	0.038	0.634	0.526	−0.041	0.081	0.438	2.284				
	ES	0.061	0.021	0.120*	2.955	0.003*	0.021	0.102	0.943	1.060				
	MR	0.098	0.024	0.210*	4.140	0.000*	0.052	0.145	0.601	1.663	0.393	25.27	0.00	1.38
	I	0.064	0.024	0.154*	2.665	0.008*	0.017	0.111	0.468	2.137				
	SDT	0.042	0.018	0.107*	2.367	0.018*	0.007	0.077	0.759	1.318				
	VO	0.015	0.017	0.045	0.884	0.377	−0.019	0.050	0.595	1.681				
	C	0.010	0.034	0.015	0.308	0.758	−0.056	0.076	0.662	1.510				
	AB	0.082	0.019	0.202*	4.283	0.000*	0.044	0.119	0.698	1.433				

**Significant predictors. Dependent variable: Job satisfaction. Independent Variables: SA, Self-Awareness; SM, Self-Motivation; E, Empathy; MR, Managing Relations; ES, Emotional Stability; SDT, Self-Development; I, Integrity; C, Commitment; VO, Value Orientation; AB, Altruistic Behavior.*

DISCUSSION

In this technologically advanced era, every organization needs to accomplish outstanding achievements in terms of productivity and efficiency. Nevertheless, the accomplishment of this dream requires substantial satisfaction of workforces as they endeavor to increase more efforts to perform effectively to achieve the organizational goals. In this connection, emotional intelligence performs a substantial role in achieving organizational goals. The association between emotional intelligence and job satisfaction has caught the consideration of the investigators as emotional intelligence is playing a vital role in envisaging employees' job satisfaction (Ghoreishi et al., 2014). Therefore, several research studies have been conducted to examine the association between emotional intelligence and job satisfaction (Anari, 2012; Çekmecelioğlu et al., 2012; Ealias and George, 2012; Lee and Ok, 2012; Zakieh and Aminilari, 2013). Likewise, this cross-sectional study also examined the relationship between emotional intelligence and job satisfaction. The results revealed that there is a moderate positive correlation between emotional intelligence and job satisfaction, which means that emotional intelligence is directly associated with job satisfaction. It is evident from this relationship that the higher the emotional intelligence of an individual, the higher will be his job satisfaction. Additionally, the results showed that there is a moderate correlation between all the subdimensions of emotional intelligence and job satisfaction, i.e. self-motivation, self-awareness, empathy, managing relations, emotional stability, integrity, value orientation, self-development, commitment, and altruistic behavior. It explicitly indicates that all these subdimensions of emotional intelligence have a substantial positive relationship with job satisfaction which shows that emotionally intelligent secondary school heads will perceive a higher level of job satisfaction. The findings of the study are consistent with the results of Anari (2012) who explored a significant positive correlation between emotional intelligence and job satisfaction. Likewise, Emdady and Bagheri (2013) found a substantial positive relationship between emotional intelligence and job satisfaction among workforces in Sama organization in Iran. According to Grund and Sliwka (2001), emotionally intelligent employees possess a higher level of job satisfaction because emotionally intelligent personnel can identify approaches to overcome the potential negative outcomes caused by stressful conditions. Conversely, those with less emotional intelligence are not capable to handle stressful situations effectively. The results are also supported by other previous research studies in which a substantial positive correlation between emotional intelligence and job satisfaction was reported (Lee and Ok, 2012; Mousavi et al., 2012; Trivellas et al., 2013; Alnidawy, 2015; Tagoe and Quarshie, 2016; Yusoff et al., 2016). It is evident from the findings that an individual having a high level of emotional intelligence will possess a high level of job satisfaction. On the other hand, surprisingly, Mandip et al. (2012), Ghoreishi et al. (2014), and El-Badawy and Magdy (2015) found no substantial association between emotional intelligence and job satisfaction.

In order to investigate the role of each subdimension of emotional intelligence as a predictor of job satisfaction, multiple linear regression analysis was performed. The outcomes showed that among the dimensions of emotional intelligence, five subdimensions were found substantial predictors of job satisfaction and have a considerable positive influence on job satisfaction, i.e. emotional stability, self-development, integrity, managing relations, and altruistic behavior. It plainly shows that job satisfaction will be positively affected by these subdimensions of emotional intelligence. On the contrary, self-awareness, empathy, self-motivation, value orientation, and commitment have no significant positive effect on job satisfaction. The findings of the study are in line to some extent with few research studies in which it was concluded that emotional intelligence predicts job satisfaction (Abraham, 2000; Livingstone, 2001; Thiebaut et al., 2005).

This study has some limitations. Firstly, only a quantitative research method has been used in this study. Therefore, a mixed-method research methodology, i.e. quantitative as well as a qualitative methodology may be used to investigate the same problem in future research. Secondly, the problem has been investigated through standardized tools, and there may be a slight difference in the findings if the problem may be investigated through self-developed measuring instruments. Thirdly, demographic variables, i.e. job experience, age, academic and professional qualification, locality, nature of the job, etc. may affect the results of the study, but these variables were not taken into consideration in this investigation. So, this limitation can be eliminated through a future research study by considering these demographic variables. Fourthly, this cross-sectional study was conducted in only 10 districts of Khyber Pakhtunkhwa. The results may differ to some extent if the same research study would be carried out in all districts of Khyber Pakhtunkhwa. So, the collection of data from all districts with a larger sample size will overcome this limitation.

CONCLUSION

Emotional intelligence is a basic variable that ensures job satisfaction of individuals and hence stimulates the overall productivity of an organization. A moderate positive association was found between emotional intelligence and job satisfaction. Emotional intelligence predicts job satisfaction, and five dimensions, i.e. integrity, emotional stability, self-development, managing relations, and altruistic behavior, were found to be substantial predictors of job satisfaction. It clearly shows that emotional intelligence is directly related to job satisfaction; the higher the emotional intelligence, the higher will be the level of their job satisfaction.

RECOMMENDATIONS

Emotional intelligence is closely linked with the efficiency and productivity of the workplace. Hence, it is imperative to emphasize those practices which subsidize to promote emotional intelligence and commitment among secondary school heads. In the recruitment process, preference should be given to those secondary school heads who are more emotionally intelligent. To boost up the level of emotional intelligence and job satisfaction of secondary school heads, workshops, seminars, and conferences should be held. As emotional stability, integrity, self-development, managing relations, and altruistic behavior proved to be the significant predictors of job satisfaction, therefore, secondary school heads should be developed with these dimensions of emotional intelligence through advanced professional training programs, seminars, and conferences. The curriculum of educational management and administration should be revised and modernized by including subjects on emotional intelligence and job satisfaction. Secondary school heads should be provided with handsome compensation and other incentives. The Ministry of Education should devise productive and effective education policies promising to the employees' prosperity and organizational productivity. All the stakeholders should be taken into confidence during the process of policy formulation particularly schools' heads and teachers for providing their valuable suggestions and experiences regarding school overall performance. Furthermore, necessary measures should be taken to implement education policies effectively. In addition, Elementary & Secondary Education Department Khyber Pakthunkhwa should have a collaboration with policy makers to formulate rewarding and comprehensive strategies for enhancing the level of job satisfaction of secondary school heads as well as making their job more attractive to stimulate their morale for yielding fruitful and productive outcomes. For future research studies, it is recommended that the same research study should be conducted at elementary, higher secondary, and tertiary levels in Khyber Pakhtunkhwa as well as in other provinces of Pakistan.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Department of Education & Psychology as well as Advance Studies and Research Board (ASRB), Kohat University of Science & Technology, Pakistan. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

QS wrote the original manuscript and contributed in conceptualization, introduction, investigation, methodology, and formal analysis. MS supervised the research work and contributed in methodology, reviewing and editing. ZM contributed in reviewing and editing, and methodology. IH supervised, reviewed, edited, and validated the research work.

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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: 25 March 2020
doi: 10.3389/fpsyg.2020.00432

Factors Related to the Differential Development of Inter-Professional Collaboration Abilities in Medicine and Nursing Students

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OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Rosaria Di Lorenzo, Azienda USL di Modena, Italy
Maria Cristina Petralia, Centro Neurolesi Bonino Pulejo (IRCCS), Italy

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

Received: *23 October 2019*
Accepted: *24 February 2020*
Published: *25 March 2020*

Citation:
Berduzco-Torres N, Choquenaira-Callañaupa B, Medina P, Chihuantito-Abal LA, Caballero S, Gallegos E, San-Martín M, Delgado Bolton RC and Vivanco L (2020) Factors Related to the Differential Development of Inter-Professional Collaboration Abilities in Medicine and Nursing Students. Front. Psychol. 11:432. doi: 10.3389/fpsyg.2020.00432

Introduction: For physicians and nurses, teamwork involves a set of communication and social skills, and specific training in interdisciplinary work in order to be able to work together cooperatively, sharing responsibilities, solving problems, and making decisions to carry out actions centered on patients' care. Recent studies demonstrate that in the absence of targeted interdisciplinary educational programs, the development of teamwork abilities is sensitive to the influence of the dominant work environment. The purpose of this study was to characterize the role that environmental and individual factors play in the development of teamwork in environments with a dominant hierarchical work model.

Methods: Questionnaires were distributed to 1,880 undergraduate students (980 medicine students and 900 nursing students) from three universities of Cusco city (Peru). The Jefferson Scale of Attitudes toward Physician–Nurse Collaboration was used as the main variable. The Jefferson Scales of Empathy and Lifelong Learning, the Social and Emotional Loneliness Scale for Adults, the Scale of Life Satisfaction, sex, discipline, age, and academic semester were used as explanatory variables. After calculating internal reliability and normality of the main measures, descriptive, comparative, and correlation analyses were performed to determine variables influencing the teamwork score.

Results: A total of 1,518 (81%) surveys were returned fully completed. Adequate reliability was confirmed in all instruments. In the sample, nursing students showed greater inter-professional collaborative abilities than medicine students ($p < 0.001$). This attitudinal gap was higher in advanced semesters. A three-way ANOVA indicated differences in teamwork were associated with discipline ($p < 0.001$), sex ($p < 0.01$), and university ($p < 0.001$). However, main effects were associated only with discipline ($\eta_p^2 = 0.14$). Teamwork showed an inverse correlation with loneliness ($\rho = -0.28$; $p < 0.001$) and a positive correlation with empathy ($\rho = +0.49$; $p < 0.001$) and lifelong

learning ($\rho = +0.48$; $p < 0.001$). Teamwork positively correlated with life satisfaction only in the medicine student group ($\rho = +0.15$; $p < 0.001$).

Conclusion: These findings bring new evidence to support the main effect that social environments, in the absence of targeted interdisciplinary educational programs, play in the development of teamwork.

Keywords: inter-professional collaboration, empathy, lifelong learning, loneliness, subjective well-being, medicine students, nursing students, professionalism

INTRODUCTION

In healthcare disciplines, especially in medicine and nursing, "professionalism refers to the set of skills and values that characterizes the essence of humanism of professionals who are in charge of patients' healthcare" (Vivanco and Delgado-Bolton, 2015). This concept includes a systematic distribution of professional qualities and skills that compose the quintessence of their professional conduct irrespective of their geographical, social, or cultural differences. For evaluation objectives, a definition from the medical education framework proposes that professionalism is attained by becoming proficient in three essential domains: clinical and technical skills, communication and social skills, and a proper understanding of the ethical and legal structure of professional behavior (Stern, 2006). However, regarding communication and social skills, this domain is not restricted to patients and their families. It additionally refers to other healthcare professionals who are part of the team in charge of patients' care. As stated by the World Health Organization [WHO] (2010), a positive inter-professional collaborative work, also called "teamwork," is described as a capability of "multiple healthcare workers from different professional backgrounds to provide comprehensive services by working with patients, their families, their professional careers, and the community, in order to deliver the highest quality of healthcare across settings." For physicians and nurses, teamwork ability involves not only communication and social skills but also specific training on interdisciplinary work in order to be able to work together cooperatively, sharing responsibilities, solving problems, and making decisions to carry out actions centered on patients' care (Hojat et al., 1999).

It has been reported that with the lack of any targeted interdisciplinary educational programs, important differences appear in the development of this ability between medicine and nursing (Onishi et al., 2013; Zheng et al., 2016; Tuirán-Gutiérrez et al., 2019). In addition, studies based on different training methodologies have demonstrated the important role that a targeted interdisciplinary educational program has in the development and improvement of this ability in medicine and nursing students (Raparla et al., 2017; Ferri et al., 2018; Tuirán-Gutiérrez et al., 2019). However, studies carried out in different cultural settings suggest that the cultural environment plays an important role of influence in an unbalanced development of this ability in healthcare professionals. Findings reported in Italy (Alcusky et al., 2016), Japan (Komi et al., 2011; Onishi et al., 2013), Singapore (Zheng et al., 2016), Mexico (Hojat et al., 2001), and Palestine (Elsous et al., 2017) indicate that nurses have a greater development of this ability in comparison with physicians, regardless of individual differences (such as personal or professional experiences). On the contrary, findings reported in the United States (Hojat et al., 1997, 2001, 2015; Hughes and Fitzpatrick, 2010) and in Israel (Hojat et al., 2003) were explained mainly by individual factors or factors associated with lack of training and professional experience. According to Veloski and Hojat (2006, p. 128), these cultural differences are associated with the fact that inter-professional relationships between medicine and nursing "tend to be hierarchical in societies where nurses have little autonomy and physicians dominate patient-care decisions. In contrast, inter-professional relationships tend to be 'complementary' in societies where physicians and nurses share power and where their roles and responsibilities are viewed as complementary." Their assumption is based on the "principle of least interest," initially proposed by Waller and Hill (1951) in family relationships, and on the "socialization role theory," applied to physicians' and nurses' work relationships (Austin et al., 1985).

This issue acquires special relevance taking in consideration the important role that developing a "complementary" work relationship has in a healthcare institution. Its benefits are visible not only in patients' care and clinical outcomes but also in core professional competences, such as: communication, innovation, creativity, decision-making, empathy, and lifelong learning abilities (Veloski and Hojat, 2006; Ceschi et al., 2014; Pedrazza et al., 2017; Tuirán-Gutiérrez et al., 2019). Furthermore, several studies have noticed the negative effects that a hierarchical work relationship has in nurses, such as: medical errors, burnout, cynicism, lack of autonomy, and motivation to work and learn (Muliira et al., 2012; Tang et al., 2013; Hakanen et al., 2014; Abdi et al., 2015; Hailu et al., 2016; San-Martín et al., 2017a).

In Latin America, the first study reporting the prevalence of a hierarchical work model between physicians and nurses was reported in Mexico (Hojat et al., 2001). Fifteen years later, two other studies evidenced that this attitudinal gap was present in other Latin American institutions (San-Martín et al., 2017a). More recently, another study in Mexico showed that this problem appears in the first year of undergraduate studies as a combined effect of the social environment in the university and the lack of a targeted interdisciplinary educational program (Tuirán-Gutiérrez et al., 2019). This educational gap is a pending task in Latin America, where an important part of the 6 years of medical training is done in public hospitals. Recent studies warn of a dominant hierarchical work culture in those public healthcare institutions (Rocha et al., 2014; San-Martín et al., 2017a; Rice et al., 2018). Finding out whether a long exposition

to a hierarchical environment influences how medicine students develop their attitudes toward inter-professional collaboration with nurses is an important educational concern (Fox et al., 2018). Regarding this issue, a recent study performed in five Peruvian public hospitals showed that abilities toward inter-professional collaborative work did not improve in medicine students after 3 months of clinical training in those hospitals, as could be initially expected (San-Martín et al., 2016). These preliminary findings suggest that, in the absence of targeted interdisciplinary educational programs, the social environment acquires an important role of influence in the development of inter-professional collaborative work abilities. These findings are in accordance with the proposal suggested by Täuber (2018) that the social environment strongly influences human relationships and social interactions. Then, it is understandable that under a long exposition to a certain social environment, attitudes toward work relationships become stronger, regardless of other influencing factors associated with individual characteristics.

Some of these individual characteristics are related to social and emotional skills, which help individuals to interact cooperatively in group or to be more empathetic with others. Being empathetic implies having interpersonal and communication skills and the ability to understand others' views, which facilitates a positive interaction with others (Greenberg et al., 2001). On the contrary, loneliness is defined as the perception that one lacks meaningful connections with others, indicating an absence of interpersonal skills (Hojat and Crandall, 1987) that is reflected in unsatisfactory human connections (DiTommaso and Spinner, 1997). Lonely individuals are likely to score low on measures of positive aspects of personality conducive to relationship building (Mellor et al., 2008). Lonely individuals are also less likely to trust others, suggesting that this experience is not conducive to forming empathetic relationships (Hojat, 1982). Such persons are therefore more prone to the self-fulfilling attributions that perpetuate loneliness, which in turn lead to less competent interactions (Spitzberg and Hunt, 1987). However, social and communication skills are not the only personal characteristics that could have an impact on the development of teamwork abilities. Lifelong learning and subjective well-being possibly play another role of influence. In the first case, lifelong learning is defined as "a concept involving a set of *self-initiated activities* (behavioral aspect) and *information-seeking skills* (capabilities) that are activated in individuals with a sustained *motivation* (predisposition) to learn and the ability to recognize their own learning needs" (Veloski and Hojat, 2006, p. 133). It is expected that individuals with high scores on lifelong learning measures could find in interdisciplinary environments an important opportunity for learning and improving their professional competences. In accordance with this, a positive association between lifelong learning and teamwork abilities has been reported in recent studies with physicians-in-training (San-Martín et al., 2017b) and with medical and nursing students (Tuirán-Gutiérrez et al., 2019). On the other hand, subjective well-being refers to individuals' emotional and cognitive evaluation of their lives (VanderWeele et al., 2012). It is demonstrated that people with lower subjective well-being are socially withdrawn, leading to higher level of loneliness. On the contrary, people with higher subjective well-being act more positively toward others, prompting a positive response and close social ties (Fredrickson and Joiner, 2002). In summary, having empathetic orientation, motivation to learn, and high self-esteem, or on the contrary, perceiving barriers to having satisfactory human connections, could influence the development of satisfactory social interactions at the workplace.

Based on this research framework, this study was performed in order to test the following hypothesis: the development of abilities toward inter-professional collaborative work (teamwork) starts at very early stages of undergraduate studies and is sensitive to the main influence of *environmental factors*, associated with formal learning (targeted interdisciplinary educational programs) and with non-formal learning (dominant work relationship models). Other aspects (*individual factors*), mainly related to social and emotional skills oriented to the capacity that individuals have to interact cooperatively in group with others, have a secondary role in this matter. Then, in the absence of formal learning, teamwork ability in undergraduate students is mainly influenced by non-formal learning. Under those circumstances, having social and emotional skills is not sufficient to compensate the environmental effect, when it is contrary to a collaborative work model.

With this purpose, this study pursued three goals: (i) to measure the development of teamwork abilities in a sample of undergraduate students of medicine and nursing; (ii) to determine whether some of the following variables – gender, age, loneliness (as a negative indicator of relationship building skills), subjective well-being (measured by life satisfaction), and empathy and lifelong learning (two other specific components of professionalism described as complementary competences of teamwork abilities) – play a role of influence (as individual factors) in the development of teamwork abilities; and (iii) to determine whether, in the absence of specific programs of training in teamwork abilities (formal learning), some of the following variables associated with informal learning—academic achievement (measured by the number of semesters completed), discipline studied (medicine or nursing), and type of university where the students were enrolled (public or private) – play a role of influence (as environmental factors) in the development of teamwork abilities.

MATERIALS AND METHODS

Participants

In the academic year 2018–2019, when this study was performed, the complete population of undergraduate students matriculated in the medical and nursing faculties of the three universities of Cusco city included 2,440 students (1,410 corresponded to two medical faculties and 1,030 to three nursing faculties). None of these five faculties offer in their curricula a specific course on inter-professional or interdisciplinary collaborative work abilities.

Due to geographical limitations of access, only undergraduate students attending academic activities in Cusco city were included. Those who were attending academic activities out of Cusco city by the time this study was performed, such as communitarian work in isolated rural communities and exchange

and internship programs in other institutions, were excluded from the study. Students who complied with the inclusion criteria were invited to participate voluntarily and anonymously.

Main Measures

To measure teamwork abilities, the Jefferson Scale of Attitudes toward Physician–Nurse Collaboration (JSAPNC) was used. The JSAPNC was developed in response to the need for a valid instrument to measure an important component of professionalism, namely, teamwork and inter-professional collaboration between physicians and nurses. According to the authors of the JSAPNC (Hojat et al., 1999), "physician–nurse collaboration is defined as an ability of nurses and physicians to work together cooperatively, sharing responsibilities for solving problems and making decisions to formulate and carry out plans for patient care." The 15 items of the JSAPNC is answered using a Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). This instrument has demonstrated a high reliability and validity among medical and nursing students in different cultural contexts (Ward et al., 2008; Hojat et al., 2015; Zakerimoghadam et al., 2015; Tuirán-Gutiérrez et al., 2019).

Two versions of the Jefferson Scale of Empathy (JSE) were applied to measure students' orientation toward empathetic relationships with patients (Hojat, 2016): the medicine student version (JSE-S) for medicine students and the healthcare student version (JSE-HPS) for nursing students. The 20 items of the JSE are answered on a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The difference between the two versions of the JSE used is in the rewording of those items where the terms "medicine" or "physician" appeared, in order to make it more applicable to students from other healthcare areas. A sample item of the JSE-S is: "Physicians should try to stand in their patients' shoes when providing care to them," while the same item in the JSE-HPS is reworded as follows: "Health care providers should try to stand in their patients' shoes when providing care to them." A higher score means that the student has a greater orientation or behavioral tendency toward empathic engagement in patient care (Hojat, 2016).

Two versions of the Jefferson Scale of Physician Lifelong Learning (JeffSPLL) were applied to measure attitudes toward lifelong learning: the medicine student version (JeffSPLL-MS), for medicine students (Wetzel et al., 2010) and the healthcare profession student version (JeffSPLL-HPS) for nursing students (Novak et al., 2014). The JeffSPLL was originally designed to measure the development of skills related to information gathering, the use of learning opportunities, and self-motivation (Hojat et al., 2009). The 14 items of the JeffSPLL are answered on a Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Similarly to the two versions of the empathy scale, the differences between the two versions of the JeffSPLL are in the rewording of those items where the term "medicine" is used, in order to make it more applicable to students from other healthcare areas. The JeffSPLL tool has demonstrated a high reliability and validity in both student groups in different cultural contexts (Muliira et al., 2012; San-Martín et al., 2016; Tuirán-Gutiérrez et al., 2019).

To measure loneliness perception, the short version of the Social and Emotional Loneliness Scale for Adults (SELSA-S) was used. The SELSA-S produces a global loneliness score, as well as scores for three dimensions of loneliness: "family," "romantic," and "social" (DiTommaso et al., 2004). The 15 items of the SELSA-S are answered on a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores indicate a higher perception of loneliness. The following are sample items from each of the SELSA-S dimensions: "I do not feel satisfied with the friends that I have" and "I feel part of a group of friends" (social dimension); "I have a romantic partner to whose happiness I contribute" and "I have someone who fulfils my emotional needs" (romantic dimension); and "I feel alone when I'm with my family" and "I feel close to my family" (family dimension). The SELSA-S has demonstrated good psychometric properties: concurrent and discriminant validity (DiTommaso et al., 2004). In studies with healthcare professionals and students of nursing, the SELSA-S has shown a high reliability, with coefficients closer to 0.90 (Domínguez et al., 2017; Marilaf-Caro et al., 2017).

Subjective well-being refers to the emotional and cognitive self-perception of one's personal life. In this study, the Satisfaction with Life Scale (SWLS) was used as measure of subjective well-being (Diener et al., 1985; VanderWeele et al., 2012). The SWLS is composed of five items that are answered using a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A high score on the SWLS is associated with high life satisfaction and subjective well-being. The SWLS has good discriminant and convergent validity, demonstrated in different cultural contexts (VanderWeele et al., 2012; Marilaf-Caro et al., 2017).

Complementary Form

Information regarding age, sex, discipline (medicine or nursing), academic achievement measured by semester enrolled (from 1 to 12 in the case of medicine studies and from 1 to 10 in the case of nursing studies), and type of university (public or private) was collected through a complementary form.

Procedures

Questionnaires including the instruments and the complementary forms were administered to medicine and nursing students. The questionnaires consisted of paper forms provided together with an information letter in enclosed envelopes that were returned to the local researchers following a general protocol previously approved by an independent ethics committee (Ref. CEICLAR PI 199). All participant universities provided administrative support to the process of distribution and collection of the questionnaires. The work was carried out in accordance with the ethical principles for medical research involving human subjects of the Declaration of Helsinki. There was no potential risk for participants, and anonymity was guaranteed throughout the process.

Statistical Assessment

Internal consistency reliability was calculated using Cronbach's alpha coefficient. Following the guidelines suggested by the American Educational Research Association, values higher than 0.7 were considered satisfactory.

Once the normality of the inter-professional collaborative work scores was studied, a variance analysis (three-way ANOVA)

based on discipline, sex, and university, as explanatory variables, was performed. Two-way interaction effects were also analyzed to determine if there were differences on inter-professional collaborative work measures defined by a combination of "sex by discipline," "discipline by university," and "sex by university." Furthermore, a three-way interaction was also analyzed to determine if there were differences in scores of teamwork due to a combination among "discipline by sex and by university." Finally, effect size was calculated using the eta-squared value in order to measure the ratio of variance explained in the dependent variable (teamwork) by each of the predictors studied while the others were controlled.

With the purpose of determining possible associations among inter-professional collaborative work abilities, two other components of professionalism (empathy and lifelong learning), academic achievement (measured by semester completed), loneliness, subjective well-being (measured by life satisfaction), and age, a correlation analysis using Spearman's coefficient was performed.

All analyses were performed using R statistical software, version 3.5.1 for Windows. The statistical analyses of the data also included *multilevel* (Bliese, 2013) and *apaTable* (Stanley and Spence, 2018) packages.

RESULTS

The entire number of questionnaires distributed in the three universities of Cusco with medical and nursing faculties was 1,880. From them, 1,518 were answered and returned (response rate of 81%).

The study sample was composed of 817 (54%) medicine students (348 men and 469 women) and 700 (46%) nursing students (72 men and 628 women). The mean age of the participants was 22 years old, with a 17–57 years old age range (SD = 4.63). With regard to universities, 460 respondents were students enrolled in one public university (237 in the faculty of medicine and 223 in the faculty of nursing). The other 1,054 respondents were recruited in the other two universities (both private). From them, 801 students corresponded to one university (580 in the faculty of medicine and 221 in the faculty of nursing), and the other 253 were nursing students of the other private university. According to academic achievement (measured by semester enrolled), the range of semesters covered in the entire sample corresponded with the complete undergraduate programs of medicine (12 semesters) and nursing (10 semesters) that are offered by Peruvian medical and nursing schools, respectively. The five instruments used showed adequate psychometric properties measured by Cronbach's coefficients higher than 0.70 in all cases. Since none of the five instruments used followed a normal distribution, non-parametric tests were performed in comparison and correlation analyses. The score distribution, descriptive statistics, and reliability for all instruments used in this study are described in **Table 1**.

With regard to the first goal related to differences between teamwork abilities between medical and nursing students, no differences were found between the two private nursing schools when the global scores on the JSAPNC were compared (p = 0.65). Based on these preliminary findings, both groups were treated as a unique group in subsequent analyses. In the entire sample, the comparison analysis showed that nursing students had higher scores (M = 50; Mdn = 52; SD = 9) in teamwork abilities than medicine students (M = 43; Mdn = 43; SD = 7), and this difference was statically significant ($p < 0.001$). Those differences not only appeared in all academic courses that are comparable (from 1 to 10); they also increased in accordance with students' academic achievement, as is shown in **Figure 1**.

Regarding the second and third goals, categorical variables (discipline, sex, and university) and numerical variables (scores of empathy, lifelong learning, loneliness, and life satisfaction; semesters completed; and age) were analyzed separately.

TABLE 1 | Descriptive statistics and psychometric reliability of scales of empathy, inter-professional collaboration, lifelong learning, loneliness, and life satisfaction (n = 1,518).

Statistics	JSAPNC	JSE	JeffSPLL	SELSA	SWLS
n	1,491	1,477	1,498	1,489	1,503
Possible range	15–60	20–140	14–56	15–105	5–25
Actual range	15–60	30–140	14–56	15–104	5–25
Mean	46	101	44	47	18
Standard deviation	9	19	7	15	5
Percentile					
25th	41	88	40	36	15
50th (median)	47	104	45	48	18
75th	53	115	49	58	21
Reliability	0.89	0.86	0.87	0.79	0.83

JSAPNC, Jefferson Scale of Attitudes toward Physician–Nurse Collaboration; JSE, Jefferson Scale of Empathy; JeffSPLL, Jefferson Scale of Physician Lifelong Learning; SELSA, Social and Emotional Loneliness Scale for Adults; SWLS, Satisfaction with Life Scale.

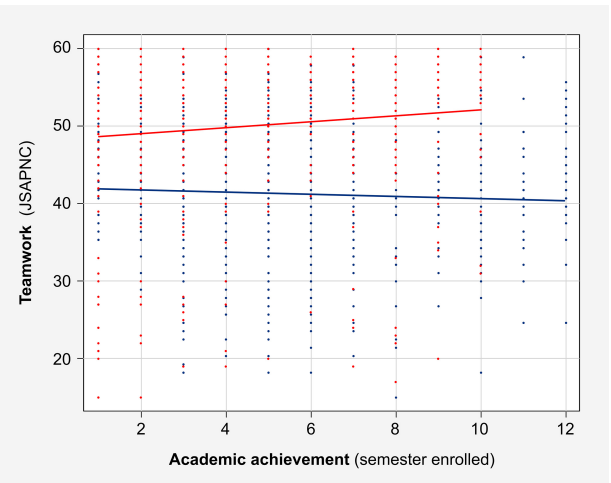

FIGURE 1 | Global scores of the Jefferson Scale of Attitudes toward Physician–Nurse Collaboration (JSAPNC) in medicine students group (blue) and nursing students group (red) according to their academic achievement, measured by semester enrolled.

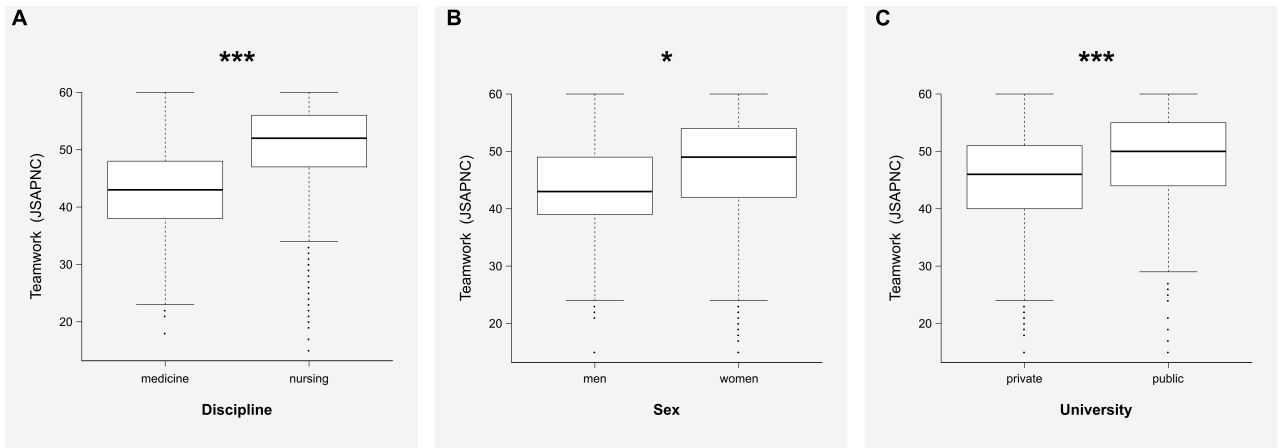

FIGURE 2 | Comparisons of the global scores on the JSAPNC in the entire sample in relation to discipline **(A)**, sex **(B)**, and university **(C)**. *$p = 0.01$; ***$p < 0.001$.

In the group of categorical variables, a three-way ANOVA was performed showing differences according to discipline, sex, and university (**Figure 2**). A similar difference also appeared in the interaction among all of them: "discipline by sex and by university," as is shown in **Table 2**. On the contrary, no differences appeared associated with the interaction of "sex by discipline" [$F_{(1,\ 1,478)} = 0.9$; $p = 0.34$], "sex by university" [$F_{(1,\ 1,478)} = 1.8$; $p = 0.17$], or "discipline by university" [$F_{(1,\ 1,478)} = 1.5$; $p = 0.22$]. However, when the size effects of all variables were measured, the analysis showed that only discipline had a large effect in the variance of JSAPNC ($\eta_p{}^2 = 0.14$), while the other variables with statistical significance showed small effects in the variance of JSAPNC, as is shown in **Table 2**.

In the group of numerical variables, correlation analysis confirmed the existence of a positive association between empathy and teamwork abilities ($\rho = +0.49$; $p < 0.001$) and between teamwork and lifelong learning abilities ($\rho = +0.48$; $p < 0.001$). These associations appear in both groups: medical and nursing student groups. However, when the interaction between academic achievement and teamwork abilities was studied, important differences appeared according to discipline. While in the medicine students' group, this association was inverse ($\rho = -0.08$; $p = 0.02$), in the nursing students' group, this association was positive ($\rho = +0.15$; $p < 0.001$). With regard to loneliness, teamwork abilities showed an inverse correlation only with the social dimension of loneliness perception ($\rho = -0.29$; $p < 0.001$) and the family dimension of loneliness perception ($\rho = -0.33$; $p < 0.001$). On the contrary, no association was observed between teamwork abilities and the romantic dimension of loneliness perception, either in the entire sample ($\rho = +0.03$; $p = 0.23$) or in any of both student groups. On the other hand, subjective well-being (measured by life satisfaction) showed a positive correlation with teamwork abilities but only in the case of medicine students ($\rho = +0.15$; $p < 0.001$). Finally, no association between teamwork and age was observed, either in medical ($\rho = -0.03$; $p = 0.41$) or nursing student groups ($\rho = -0.06$; $p = 0.11$). A summary of all these analyses is shown in **Table 3**.

TABLE 2 | Summary results of a three-way ANOVA of the scores of the inter-professional collaborative work by discipline, sex, and university (n = 1,518).

Source of variation	$F_{(1,\ 1,478)}$	η^2	$\eta_p{}^2$	p
Main effects				
Discipline (medicine vs. nursing)	247.9	0.13	0.14	<0.001
Sex (men vs. women)	6.4	0.003	0.004	0.01
University (public vs. private)	54.1	0.03	0.03	<0.001
Three-way interaction				
Discipline – sex – university	5.9	0.01	0.01	<0.001

F, F value; η^2, eta-squared; $\eta_p{}^2$, eta-partial-square; p, p-value.

DISCUSSION

The findings presented confirm the main hypothesis of this study that in the absence of a targeted interdisciplinary educational program, the development of teamwork abilities in undergraduate medical and nursing students can be limited, probably influenced by the socio-cultural environment. The factors of influence associated with the social environment depend on the professional role (to be a medical or a nursing student), the hierarchical culture (to be enrolled at the beginning or in advanced stages of undergraduate studies), and the elitist academic atmosphere (studying in a private or public university).

The outcomes observed in this study provide novel information regarding the attitudinal gap between medical and nursing students in Latin America, firstly reported in a recent study performed in Mexico (Tuirán-Gutiérrez et al., 2019). In this study, differences in teamwork abilities associated with discipline appear in a very early stage of undergraduate studies, similar to the one reported in Mexico. Furthermore, the novel information provided by this study indicates that those differences are bigger in advanced academic courses. In addition, differences associated with the type of university indicate that studying in a private university is related to a lower development of teamwork abilities. These three main findings are consistent with the negative effect that a hierarchical culture has in the

TABLE 3 | Spearman's correlation analysis among inter-professional collaborative abilities and measures of professionalism, academic achievements, loneliness, subjective well-being, and age (n = 1,518).

Variables	Entire sample		Medicine students		Nursing students	
	ρ	*p*	ρ	*p*	ρ	*p*
Professionalism components						
Empathy (JSE)	+0.49	<0.001	+0.45	<0.001	+0.59	<0.001
Lifelong learning (JeffSPLL)	+0.48	<0.001	+0.43	<0.001	+0.56	<0.001
Academic achievement						
Semester completed	−0.06	0.02	−0.08	0.02	+0.15	<0.001
Loneliness						
Global measure (SELSA-S)	−0.28	<0.001	−0.24	<0.001	−0.34	<0.001
Romantic dimension	+0.03	0.23	+0.04	0.25	+0.01	0.70
Social dimension	−0.29	<0.001	−0.26	<0.001	−0.34	<0.001
Family dimension	−0.33	<0.001	−0.27	<0.001	−0.38	<0.001
Subjective well-being						
Life satisfaction (SWLS)	+0.14	<0.001	+0.15	<0.001	+0.06	0.14
Age	+0.02	0.36	−0.03	0.41	−0.06	0.11

SELSA-S, Social and Emotional Loneliness Scale for Adults, short version; ρ, Spearman's coefficient. p, p-Value.

development of teamwork abilities, previously reported in Latin American healthcare professionals (Hojat et al., 2001; Hojat et al., 2003; San-Martín et al., 2017a). The abovementioned outcomes provide new evidence supporting the important role that social environment plays in the enhancement of this attitudinal gap between medical and nursing students, which is in consonance with a theoretical model (Täuber, 2018), previously proved in other social contexts, that associates social environment and social behavior. This is also in consonance with the previously described "principle of least interest" and "socialization role theory" proposed by Waller and Hill (1951) and Austin et al. (1985), respectively.

But in addition to the environment, there are also individual factors that play a role of influence in the development of teamwork abilities. In this study, sex, loneliness, empathetic orientation, lifelong learning abilities, and subjective well-being showed a role of influence on the development of teamwork abilities. However, in comparison with the environment, this effect is smaller, as has been shown by the measurement of the size effect.

In the case of loneliness, the inverse correlation observed in both groups, medical and nursing students, corroborates that the lack of personal ability for establishing human connections is associated with the difficulty to establish adequate work relationships, measured by teamwork abilities. In this study, loneliness was measured in three domains: family, social network, and romantic relationships. Associations were found in the first two domains that specifically imply interaction with others, while in the third one, no association was observed.

In contrast to loneliness, the positive correlation observed between empathy and teamwork measures are in consonance with the conceptualization that interpersonal skills and understanding patients' concerns are common denominators shared in empathetic engagement in patient care and in inter-professional collaborative care (Hojat et al., 2015). Findings indicate that being empathetic helps students to construct solid work relationships that are reflected in higher teamwork score measures, regardless of discipline. In the case of lifelong learning abilities, the positive correlation observed between these abilities and teamwork measures suggests that students with higher lifelong learning abilities find in interdisciplinary environments important possibilities to learn and improve their professional training. This finding is in accordance with the definition of lifelong learning as an attribute involving learning beliefs and motivations, attention to learning opportunities, and developing skills in seeking information (Wetzel et al., 2010).

Finally, findings observed in this study regarding subjective well-being, measured by life satisfaction, require especial attention. The outcomes observed in this study provide novel information regarding the role that subjective well-being plays in building collaborative work relationships. However, the difference observed between medical and nursing students also indicates that this effect could be mediated by the social environment. In a hierarchical work culture, medicine is associated with more managerial responsibilities, while nursing is associated with a subordinate role. This important difference in professional roles may drive medicine students with higher subjective well-being to be more motivated in acquiring abilities toward teamwork. Under the same circumstances, having higher scores in subjective well-being does not necessarily have similar effects in the development of nursing students' teamwork abilities.

In conclusion, this study provides information confirming the predominant role of influence that the socio-cultural environment plays in the development of teamwork abilities in the absence of targeted educational programs. In societies where medicine is placed above nursing, this role of influence acquires more relevance. Furthermore, this influence can be reinforced in academic institutions where the focus of medical training is mainly placed on technical and clinical aspects rather than in communication and social work abilities, while nursing studies are preferably focused on care, communication, social skills, and collaborative work abilities. Although empathy and lifelong learning appear as two important competences that could help develop teamwork abilities, their influence is not strong enough to compensate for the negative effect of the environment and a dominant hierarchical work culture. These findings warn of the urgent need to include targeted educational programs on interdisciplinary collaborative work in different stages of undergraduate studies for the acquisition of this ability.

LIMITATIONS

In this study, it was not possible to include students who were attending formative activities in small towns and rural communities of Cusco. These activities are performed (i) in settlements where social stereotypes associated with professional

roles are possibly stronger and (ii) in circumstances when the accumulated effect of the exposition to a hierarchical culture is greater (advanced courses). Without including this minority group, important differences were observed linking this attitudinal gap in interdisciplinary collaborative work between medical and nursing students with the socio-cultural environment and a hierarchical culture. However, further studies in students enrolled in those activities could bring new information in this matter. This study was performed in five schools located in one Peruvian city in the Andean region. Even though Cusco has a relevant importance in the Andean region of Latin America due to its strategical position and multicultural and multilingual social structure, further studies in other geographical and cultural contexts are required in order to determine the existence of possible similarities.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Comité Ético de Investigación de La Rioja (CEICLAR). Written informed consent from the participants' legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

LV was in charge of the study's overall design and drafting of the manuscript. MS-M and LV performed the statistical processing of data. NB-T, LC-A, SC, and EG were in charge of coordination with the participating institutions. BC-C and PM were in charge of surveys design, distribution, and data collection. LV and RD prepared manuscript drafts. All authors contributed to the presented work, participated during the interpretation process of the results, and approved the final manuscript.

FUNDING

This study was supported in Peru by the National Council of Science, Technology and Technological Innovation (CONCYTEC) and the National University San Antonio Abad del Cusco (UNSAAC), Ref. No. E041-2017-UNSAAC-02; and in Spain by the Institute of Health Carlos III (ISCIII), Ref. No. PI16/01934, and the Operational Program of the European Regional Development Fund (FEDER-LARIOJA), Ref. No. 6FRS-ABC-012.

ACKNOWLEDGMENTS

We would like to acknowledge the contribution of the Universidad Nacional San Antonio Abad del Cusco, Universidad Andina del Cusco, and Univeridad Tecnologica de los Andes, all in Cusco, for their institutional support in the development of this study. Finally, we would like to acknowledge all medical and nursing students who participated in this study.

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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: 02 April 2020
doi: 10.3389/fpsyg.2020.00591

Profiles of Burnout, Coping Strategies and Depressive Symptomatology

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Burnout syndrome is has been associated with mental health problems such as depression, anxiety, and stress. Given this fact, some teachers implement various coping strategies for emotional control that are not always functional to mitigate such difficulties. Accordingly, this study aimed to identify different burnout profiles that vary in the levels of the three underlying dimensions: depersonalization (DE), emotional exhaustion (EE), and personal accomplishment (PA). Further, this study aimed to examine whether there are significant differences in depressive symptomatology, coping strategies, and the quality of interpersonal relationships at school between teachers with varying burnout profiles. The Maslach Burnout Inventory (MBI), Zung Self-Rating Depression Scale (SDS), Coping with Stress Questionnaire, and a questionnaire that measured sociodemographic characteristics were administered to 215 teachers (men: 42.8%) who were recruited from various secondary schools. Cluster analysis identified three different burnout profiles: groups of teachers with a predominance of (a) low levels of EE and high levels of PA, (b) high levels of EE and DE, and (c) low levels of DE and PA. The results revealed that there were significant differences in coping strategies, depressive symptomatology, and the quality of interpersonal relationships at school between teachers with different burnout profiles. These results have important implications for educational professionals. Specifically, the findings underscore the need for prevention and intervention programs that enhance teachers' emotional skills, especially their ability to cope with exhaustion. These skills will alleviate their depression and consequently offer both teachers and students a conducive learning environment.

Keywords: emotions, psychological processes, organizational context, well-being, empirical evidence

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Ivan Herrera-Peco, Alfonso X El Sabio University, Spain
Antonio Baena Extremera, University of Granada, Spain

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

Received: *25 November 2019*
Accepted: *12 March 2020*
Published: *02 April 2020*

Citation:
Martínez JP, Méndez I, Ruiz-Esteban C, Fernández-Sogorb A and García-Fernández JM (2020) Profiles of Burnout, Coping Strategies and Depressive Symptomatology. Front. Psychol. 11:591. doi: 10.3389/fpsyg.2020.00591

INTRODUCTION

A negative work environment can cause physical, psychological, and occupational problems. Specifically, work exhaustion, occupational stress, and job burnout can have significant negative effects. Accordingly, in their systematic review, Salvagioni et al. (2017) noted that past studies have shown that burnout has several adverse effects on the well-being and health of employees. Specifically, burnout emerged as a significant predictor of several physical (e.g., hypercholesterolemia, type 2 diabetes, coronary heart disease, hospitalization for

cardiovascular disorders, musculoskeletal pain, prolonged fatigue, headaches, gastrointestinal issues, respiratory problems), psychological (e.g., insomnia, depressive symptoms, hospitalization for mental disorders, psychological ill-health symptoms), and occupational (e.g., job dissatisfaction, absenteeism, new disability pension, job demands) problems.

The term "burnout syndrome" was first coined by Freudenberger (1974). Currently, the International Classification of Diseases (ICD-11), which is published by the World Health Organization [WHO] (2019), considers burnout to be a syndrome that is related to chronic work stressors that have not been successfully handled. The symptoms of burnout include the following: exhaustion or a lack of energy, reduced professional efficiency, and negative or cynical feelings about work. Therefore, burnout is a three-dimensional syndrome that is experienced by professionals whose jobs require direct interactions with others. According to Maslach and Jackson (1986), this syndrome consists of three characteristic dimensions: emotional exhaustion (EE) (i.e., tiredness and fatigue, which can be manifested physically and psychologically), depersonalization (DE) (i.e., negative, cold, and distant attitudes toward the beneficiaries of work), and low levels of personal accomplishment (PA) (i.e., negative perceptions of oneself and one's work and poor work performance, which result from avoiding personal and professional relationships).

In Spain, according to data from the National Statistics Institute (2018), the average work stress for both sexes is 4.18 (SD = 1.69). In terms of the levels of job stress, Spain ranks third among European countries. Teaching is a stressful profession, especially for beginning teachers (Harmsen et al., 2019). Different groups of teaching professionals are exposed to different types of physical and psychological risks (Gallardo-López et al., 2019). Several studies have shown that the teacher-student relationship is associated with the well-being of teachers. Consequently, student problem behaviors are associated with greater exhaustion and decreased enthusiasm among teachers (Nizielski et al., 2013; Aldrup et al., 2018; Aparisi et al., 2019), which in turn can cause them to abandon the teaching profession (Skaalvik and Skaalvik, 2018; Chambers Mack et al., 2019). The stress that teachers experience can also have negative effects on students (e.g., low levels of student satisfaction) (Ramberg et al., 2019). DE can result in low levels of professional consciousness and PA and cause teachers to be irritable, cynical, and critical; these factors involve psychological problems that can adversely affect the teaching-learning process (Yin, 2015). EE is associated with work overload, interpersonal conflicts, negative feedback, and low levels of social support, autonomy, and job satisfaction (Carlotto and Câmara, 2019; Molero et al., 2019).

The question of whether burnout is a type of depression or a different phenomenon has been the subject of controversy, especially because the two conditions share similar characteristics (e.g., a loss of interest, impaired concentration). Accordingly, in their systematic review, Bianchi et al. (2015) noted that the final stage of burnout is typically correlated with depressive symptoms. Koutsimani et al. (2019) conducted a systematic review and meta-analysis and found that burnout and depression as well as burnout and anxiety are robust and independent constructs that (a) share a few common characteristics, (b) are interconnected, and (c) can develop in tandem. Therefore, burnout is associated with both depression and anxiety.

Coping strategies are used when the demands of a stressful situation exceed individual resources. These strategies entail behavioral and cognitive efforts that aim to reduce or help an individual tolerate specific internal and/or external demands (Lazarus and Folkman, 1984). An individual may use various adaptive and maladaptive strategies to cope with stress (Sandín and Chorot, 2003). There are two types of coping strategies: direct or action-focused coping (i.e., they focus on modifying the source of stress and solving problems) and indirect or emotion-centered coping (i.e., they focus on regulating the emotional response to stress, avoiding the problem situation by engaging in other distracting activities, and seeking social support strategies. The main coping strategies that have been identified by Lazarus and Folkman (1984) are as follows: confrontation, distancing, self-control, seeking social support, accepting responsibility, escape-avoidance, problem solving, and positive reappraisal.

Several studies have found that coping strategies are directly related to burnout among teachers (Guerrero, 2003; Doménech and Gómez, 2010; Sharplin et al., 2011; Carson et al., 2012; Shin et al., 2014; Martínez, 2015; García-Arroyo and Osca, 2017, 2019; Dalcin and Carlotto, 2018; Yin et al., 2018). Coping strategies have a direct influence on the consequences of burnout. Coping strategies are negatively related to EE and cynicism and positively related to PA (Yin et al., 2018; García-Arroyo and Osca, 2019). DE is associated with the use of denial, mental disconnection, and avoidance. Thus, avoidance is frequently used by individuals with burnout syndrome. Avoidance is related to distancing, which in turn is indicative of a lack of commitment among teachers, and consequently, poor educational quality (Morán, 2009; Martínez, 2015; Yin et al., 2018; García-Arroyo and Osca, 2019). Teachers who experience high levels of EE and DE use coping strategies that necessitate passive acceptance, and they do not search for effective solutions that can help them manage stressful situations in the workplace. A high degree of PA is associated with the frequent use of strategies such as planning, active coping, seeking instrumental and social support and positive reappraisal (Guerrero, 2003; Doménech and Gómez, 2010; Martínez, 2015).

This study aimed to identify different burnout profiles that vary in the levels of the three underlying dimensions (i.e., DE, EE, and PA). Further, we sought to examine if teachers with varying burnout profiles significantly differ in depressive symptomatology, coping strategies, and the quality of interpersonal relationships at school.

MATERIALS AND METHODS

Participants

A random sample of conglomerates (i.e., different geographical areas within the region of Murcia in Spain) was used. Specifically, an average of 15 participants was recruited from each of 20 randomly selected public and private/semiprivate educational institutions in rural and urban areas. The sample consisted of 300 teachers, and they taught grades 1–4 of Obligatory Secondary Education. However, 85 participants (28.33%)

were excluded either because they submitted questionnaires containing erroneous or missing responses or because they did not wish to participate in the study. The final sample consisted of 215 teachers who were recruited from different geographical areas within the Region of Murcia (public institutions = 73.5%, private/semi-private institutions = 26.5%). Their ages ranged from 30 to 65 years (M = 44.89, SD = 9.36), and 42.8% of them were men.

Design and Procedure

After we obtained the requisite permissions of the school authorities, we asked the teachers to complete the self-administered questionnaires within the school premises. The researchers informed them about the objectives of the study and the instruments that they would be required to respond to. They participated on a voluntary and anonymous basis, and their responses were kept confidential.

The study protocol was approved by the Ethic Committee for Clinic Investigations of the University of Murcia. This study was conducted in accordance with approved guidelines and the Declaration of Helsinki.

Instruments

Burnout was assessed using the Spanish adaptation (Seisdedos, 1997) of the Maslach Burnout Inventory (MBI), which has been developed by Maslach and Jackson (1986). It consists of 22 items, and responses are recorded on a rating scale (*0 = never, 6 = everyday*). The test consists of three dimensions: emotional exhaustion -EE- (e.g., I feel frustrated by my job), depersonalization –DE- (e.g., I don't really care about what happens to some recipients), and personal accomplishment –PA- (e.g., I deal very effectively with the problems of my recipients). The Cronbach's alpha coefficients of the EE, DE, and PA dimensions were 0.90, 0.79, and 0.71 in the original validation study, respectively (Maslach and Jackson, 1986). In this study, the alpha coefficient of the total scale was 0.76.

Stress-related coping strategies were assessed using the questionnaire that has been developed by Sandín and Chorot (2003). It consists of 42 items, each of which requires responses to be recorded on a rating scale (*0 = never, 4 = usually*). This assessment consists of seven subscales: seeking social support (e.g., I asked a relative or friend for advice to deal with the problem in a better manner), overt emotional expression (e.g., I behaved in a hostile way toward others), religion (e.g., I went to church to pray for the problem to be solved), problem solving (e.g., I tried to analyze the causes of the problem in order to address it), avoidance (e.g., I tried to not think about the problem), negative self-targeting (e.g., I realized that I could not do anything to solve the problem), and positive reappraisal (e.g., I tried to get something positive out of the problem). In the original validation study, the Cronbach's alpha coefficients of the seven subscales ranged from 0.64 to 0.92, and the average value was 0.79 (Sandín and Chorot, 2003). In this study, the alpha coefficient of the total scale was 0.81.

To measure the behavioral symptoms of depressive disorder, the Self-Rating Depression Scale (SDS) (Zung, 1965) was used. It consists of 20 items, each of which requires responses to be recorded on a rating scale *(1 = rarely or never, 4 = most of the time or always)*. The Cronbach's alpha coefficients of this scale have ranged from 0.79 to 0.92 (Zung, 1965). In this study, the scale' alpha coefficient was 0.83. The following is a sample scale item: "I feel downhearted and blue."

The following sociodemographic characteristics were also assessed: sex (male/female), age, type of school (public/private/semi-private), geographical location (urban/rural), the quality of interpersonal relationships at school (i.e., with students, teaching staff members, and the management team; response scale: *1 = rewarding, 4 = frustrating*), and salary satisfaction (yes/no).

Data Analysis

To identify burnout profiles, quick cluster analysis was conducted (Hair et al., 1998). The profiles were defined based on the differential combinations of the three dimensions that the MBI assesses: DE, EE, and PA. The following criterion was used to ascertain the optimal number of clusters: the maximization of intercluster differences so that the largest number of groups with differential combinations of the burnout dimensions are identified. In addition, the theoretical feasibility and psychological significance of each group that represented a specific burnout profile were also considered. After identifying different burnout profiles through cluster analysis, analysis of variance (ANOVA) was conducted to examine group differences in depressive symptomatology, stress-related coping strategies, and the quality of the interpersonal relationships at school. Partial eta squared (η_p^2) values were computed to ascertain the magnitude of the emergent group differences (i.e., effect size). *Post hoc* tests (i.e., Bonferroni method) were conducted to further identify the exact groups that were significantly different. Cohen's d was computed to ascertain the magnitude of the observed differences, and the values were interpreted as being indicative of a small ($0.20 \leq d \leq 0.49$), moderate ($0.50 \leq d \leq 0.79$), or large ($d \geq 0.80$) effect size (Cohen, 1988). The data were analyzed using Statistical Package for the Social Sciences version 23.0.

RESULTS

Figure 1 depicts the following three emergent clusters: a first group of 104 teachers (48.37%) characterized by low EE and high PA (group 1); a second group of 54 teachers (25.12%) characterized by high EE and DE (group 2); and a third group of 57 teachers (26.51%) characterized by low DE and PA (group 3).

Analysis of variances revealed that there were significant group differences in coping strategies, depressive symptomatology, and the quality of interpersonal relationships at school (see **Table 1**).

The *post hoc* comparisons revealed that group 1 (low EE and high PA) obtained significantly higher scores on the seeking social support subscale than group 3 (low DE and PA), and the effect size was small ($p < 0.05$; $d = 0.39$). Similarly, group 2 (high EE and DE) also obtained significantly higher subscale scores than group 3 (low DE and PA), and the effect size was small ($p < 0.05$; $d = 0.39$).

FIGURE 1 | Graphical representation of the three-cluster model. Cluster 1 (low EE and high PA), cluster 2 (high EE and high DE), and cluster 3 (low DP and low PA).

The *post hoc* comparisons revealed that group 1 (low EE and high PA) obtained significantly lower scores on the overt emotional expression subscale than group 2 (high EE and DE), and the effect size was small ($p < 0.05$; $d = 0.40$).

With regard to the religion and avoidance subscales, no significant group difference emerged.

The *post hoc* comparisons revealed that group 1 (low EE and high PA) obtained significantly higher scores on the problem solving subscale than group 2 (high EE and DE), and the effect size was small ($p < 0.05$; $d = 0.48$). In addition, group 1 (low EE and high PA) also obtained significantly higher subscale scores than group 3 (low DE and PA), and the effect size was moderate ($p < 0.001$; $d = 0.64$).

The *post hoc* comparisons revealed that group 1 (low EE and high PA) obtained significantly lower scores on the negative self-targeting subscale than group 2 (high EE and DE), and the effect size was moderate ($p < 0.001$; $d = 0.59$).

The *post hoc* comparisons revealed that group 1 (low EE and high PA) obtained significantly higher scores on the positive reappraisal subscale than group 2 (high EE and DE), and the effect size was small ($p < 0.05$; $d = 0.48$).

With regard to depressive symptomatology, *post hoc* comparisons revealed that group 2 (high EE and DE) obtained significantly higher scores than group 1 (low EE and high PA), and the effect size was large ($p < 0.001$; $d = 1.53$). Relatedly, group 3 (low DE and PA) scored significantly higher than group 1 (low EE and high PA), and the effect size was large ($p < 0.001$; $d = 0.90$). Finally, group 2 (high EE and DE) scored significantly higher than group 3 (low DE and PA), and a moderate effect size emerged for this group difference ($p < 0.001$; $d = 0.63$).

The *post hoc* comparisons of the quality of the relationships that teachers shared with students revealed that group 1 (low EE and high PA) obtained significantly lower scores than group 2 (high EE and DE), and the effect size was moderate ($p < 0.001$; $d = 0.74$). Similarly, group 1 (low EE and high PA) scored lower than group 3 (low DE and PA), and the effect size was small ($p < 0.05$; $d = 0.47$).

The *post hoc* comparisons of the quality of the relationships that teachers shared with other staff members revealed that group 1 (low EE and high PA) obtained significantly lower scores than group 2 (high EE and DE), and the effect size was small ($p < 0.05$; $d = 0.43$).

The *post hoc* comparisons of the quality of the relationships that teachers shared with the management team revealed that group 1 (low EE and high PA) scored significantly lower than group 2 (high EE and DE), and the effect size was moderate ($p < 0.001$; $d = 0.77$). Similarly, group 3 (low DE and PA) also obtained lower scores than group 2 (high EE and DE), and the effect size was moderate ($p < 0.05$; $d = 0.52$).

No significant group difference in salary satisfaction was found.

DISCUSSION

This study had two objectives. The first objective was to identify different burnout profiles that vary in the levels of the underlying dimensions (i.e., EE, DE, and PA). Using cluster analysis, three burnout profiles were identified: groups of teachers who were characterized by low EE and high PA (group 1), high EE and DE (group 2), and low DE and PA (group 3). With regard to the second objective, the results revealed that there were significant group differences in coping strategies, depressive symptomatology, and the quality of interpersonal relationships at school. These findings offer support to the contention that different burnout profiles exist. Further, the present findings enhance our understanding of the relationships that the three burnout profiles share with coping strategies, depressive symptomatology, and the quality of interpersonal relationships at school. Taken together, the results revealed that group 1 (low EE and high PA) obtained higher scores on the seeking social support (i.e., sharing feelings with family members or friends to feel reassured), problem solving (i.e., identifying the causes of the problem and developing an action plan), and positive reappraisal (i.e., focusing on the positive aspects of a negative situation and realizing that there are more important things in life) subscales than groups 2 and 3. On the other hand, group 2 (high EE and DE) obtained higher scores on the overt emotional expression (i.e., moodiness, bad behavior, or hostility) and negative self-targeting (i.e., self-doubt, resignation, or helplessness) subscales as well as measures of depressive symptomatology and the quality of interpersonal relationships at school (i.e., with students, teachers, and the management team) than groups 1 and group 3. These results concur with past findings that coping has a direct influence on the consequences of burnout (Guerrero, 2003; Doménech and Gómez, 2010; Sharplin et al., 2011; Carson et al., 2012; Shin et al., 2014; Martínez, 2015; García-Arroyo and Osca, 2017, 2019; Dalcin and Carlotto, 2018; Yin et al., 2018). Specifically, high levels of EE are positively associated with greater use of negative self-targeting and overt emotional expression. In addition, high levels of DE are also associated with greater use of negative self-targeting. Similarly, the use of coping strategies that focus on problem solving is related to lower levels of stress and higher levels of social support, and consequently, better physical and psychological health (Guerrero, 2003;

TABLE 1 | Means and standard deviations for the three groups differing in the dimensions of burnout and partial eta squared (ηp^2) values for each dimension of coping strategies, depressive symptomatology, and the quality of interpersonal relationships at school.

	Group 1		Group 2		Group 3		Significance		
Dimensions	***M***	***SD***	***M***	***SD***	***M***	***SD***	$F_{(2,121)}$	***P***	ηp^2
Search for social support	15.28	6.37	15.13	5.84	12.89	5.60	3.12	00.046	0.03
Overt emotional expression	6.53	3.31	7.83	3.17	7.19	2.92	3.08	00.048	0.03
Religion	6.37	6.80	5.78	6.35	5.32	6.41	0.48	00.614	0.01
Focus on solving the problem	18.09	3.90	16.17	4.21	15.58	3.96	8.56	<0.001	0.08
Avoidance	10.23	4.35	10.78	3.55	10.63	3.17	0.41	00.660	0.01
Negative self-targeting	6.14	3.70	8.30	3.65	7.53	3.42	6.98	00.001	0.06
Positive reappraisal	15.84	3.62	14.02	4.11	14.54	3.58	4.86	00.009	0.04
Depressive symptomatology	38.88	6.96	52.27	11.41	45.86	8.97	42.70	<0.001	0.29
Student relations	1.82	0.72	2.39	0.87	2.16	0.72	10.68	<0.001	0.09
Teacher relations	1.71	0.66	2.02	0.83	1.95	0.81	3.61	00.029	0.03
Relations with the management team	1.87	0.75	2.52	1.01	2.07	0.70	11.547	<0.001	0.10
Salary satisfaction	1.44	0.63	1.61	0.56	1.46	0.68	1.370	00.256	0.01

Cluster 1 (low EE and high PA), cluster 2 (high EE and high DE), and cluster 3 (low DP and low PA).

Doménech and Gómez, 2010; Martínez, 2015; Dalcin and Carlotto, 2018; Yin et al., 2018; García-Arroyo and Osca, 2019).

The present finding that burnout is associated with depression is consistent with Koutsimani et al. (2019) conclusions. Similarly, the findings that emerged for group 2 (and to some extent, group 3) underscore the need to subject the respective group members to a clinical evaluation so that their diagnosis can be confirmed after eliminating other possible conditions (e.g., anxiety; Koutsimani et al., 2019). This will play a particularly important role in the provision of timely interventions. Indeed, the members of group 2 were educational professionals, who are known to experience high levels of stress, which can impact the teaching and learning process and increase their likelihood of developing health problems or absenteeism (Carlotto and Câmara, 2019; Chambers Mack et al., 2019; Gallardo-López et al., 2019; Ramberg et al., 2019).

It is necessary to promote interpersonal relationships, social support networks, and emotion regulation among teachers with high EE and DE because they obtained high scores on the overt emotional expression (i.e., the expression of anger or rage) subscale. When taken together with the finding that this group of teachers reported greater frustration with their interpersonal relationships at school (with students, staff members, and the management team), it appears that their negative emotions were reinforced (i.e., negative self-targeting) by their inability to solve their problems; this in turn may have resulted in negative and even depressive feelings. In contrast, teachers with low EE and high PA were more likely to seek social support, and this allowed them to be a part of a support network within which they could feel supported and listened to when they encountered problems. This also helped them address the problem (i.e., focusing on problem solving) and either focus on the positive aspects of the negative situation or realize that there are more important things in life (i.e., positive reappraisal). In this manner, positive reappraisals can help teachers adaptively alter the outcomes of an otherwise negative situation (Guerrero, 2003; Morán, 2009; Martínez, 2015; Dalcin and Carlotto, 2018). These findings facilitate the identification of the coping strategies that should be nurtured among teachers.

It is essential to consider the important role that emotion regulation plays in coping with stressful situations. Indeed, past studies have shown that high levels of emotional intelligence predict better psychological and emotional adjustment among teachers (Lischetzke and Eid, 2003; Mearns and Cain, 2003; Biglan et al., 2013; Nizielski et al., 2013; Ghanizadeh and Royaei, 2015; Yin, 2015; Cabello and Fernández-Berrocal, 2016; Rey et al., 2016; Fernández-Berrocal et al., 2017; Grandey and Melloy, 2017; Yin et al., 2018; Schoeps et al., 2019). Teachers with poor emotional intelligence tend to report higher levels of EE, DE, anxiety, depression, and burnout (Martínez-Monteagudo et al., 2019). In this manner, improving emotion regulation is likely to be accompanied by an increase in the quality and number of social relationships at work, empathy, and job satisfaction (Brackett et al., 2010; Ghanizadeh and Royaei, 2015; Yin, 2015; Zysberg et al., 2017; Yin et al., 2018). Puertas Molero et al. (2019) conducted a systematic review of studies that have examined the role of emotional intelligence in stress among teachers and concluded that past findings underscore the importance of developing the emotional skills of educational professionals, including those who work in universities. Emotional skills can help them regulate their emotions and improve their day-to-day decision making within the school environment. These changes are likely to promote physical and mental health and consequently improve teaching practices, the institutional climate, and most importantly, the quality of education. Accordingly, it is necessary to enhance the emotional intelligence of teachers who belong to group 2 (high EE and DE) because superior emotional and self-regulation skills are essential to the alleviation of high degrees of exhaustion. Similarly, it is necessary to improve the following, especially among teachers who belong to group 2: the illusion at work (Dalcin and Carlotto, 2018); the perceived effectiveness of teachers (i.e., individual and collective) and job satisfaction (Guidetti et al., 2018; Minghui et al., 2018; Molero et al., 2019; Von Der Embse et al., 2019);

welfare and commitment (Skaalvik and Skaalvik, 2018); adaptive working conditions (Chambers Mack et al., 2019; Eurofound, 2019); the social support of coworkers; effective support to meet family demands and prevent role conflict between work and family demands (i.e., personal exhaustion that results from work overload can worsen the family situation; e.g., it can reduce the quality of care that is provided to family members); and time management skills (De Carlo et al., 2019; Eurofound, 2019; World Health Organization [WHO], 2019). It is also important to reduce role ambiguity by clarifying the responsibilities of each professional (Carlotto and Câmara, 2019; De Carlo et al., 2019; Eurofound, 2019; Molero et al., 2019) and minimize the tediousness of administrative procedures (Carlotto and Câmara, 2019). It is also essential to proactively identify and gratify student needs so that the emergence or worsening of problem situations can be prevented. Problem situations can cause stress (Nizielski et al., 2013; Kaya and Altınkurt, 2018), exhaustion, a loss of enthusiasm (Aldrup et al., 2018; Aparisi et al., 2019), or even the abandonment of the teaching profession (Skaalvik and Skaalvik, 2018; Chambers Mack et al., 2019) among teachers. Most importantly, it is essential for policy makers to reconceptualize the roles of teachers by realistically restructuring their workload and clarifying their responsibilities (Carlotto and Câmara, 2019; De Carlo et al., 2019; Molero et al., 2019).

Finally, since burnout has a wide range of effects on the well-being and health of employees (Salvagioni et al., 2017), the importance of good mental health should be emphasized by making it possible for individuals to realize their potential, cope with stress, and work productively According to the Mental Health Action Plan 2013–2020 (World Health Organization [WHO], 2013), it is necessary for global strategies that aim to promote mental health and prevent mental disorders in the workplace to focus on the establishment of healthy living and working conditions (e.g., organizational measures, stress management plans). It is also necessary to identify and treat disorders that are caused by the harmful effects of alcohol and drug intake (both psychoactive and non-psychoactive drugs) as well as prevent suicide. These measures will play an important role in improving mental health in the workplace.

One of the limitations of the present study pertains to the use of self-reported data; specifically, distorted and socially desirable responses may have biased the present findings. Future research studies should examine other variables such as addictions to new technologies or drugs, self-concept or self-esteem, prior physical and mental health status, and medication consumption (Bianchi et al., 2015) in relation to burnout. They should also adopt longitudinal research designs and investigate the neurobiological mechanisms that underlie burnout (Koutsimani et al., 2019).

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the study protocol and the Ethic Committee for Clinic Investigations of the University of Murcia (July 02, 2019). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

JM, IM, CR-E, AF-S, and JG-F contributed to the conception and design of the review. CR-E and AF-S applied the search strategy. All authors applied the selection criteria, completed the bias-risk assessment, analyzed and interpreted the data, wrote the manuscript, and edited this manuscript.

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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 May 2020
doi: 10.3389/fpsyg.2020.00875

Predicting Job Satisfaction in Military Organizations: Unpacking the Relationship Between Emotional Intelligence, Teamwork Communication, and Job Attitudes in Spanish Military Cadets

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OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Annalena Welp, Jacobs University, Germany
Marc Lochbaum, Texas Tech University, United States
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Specialty section:
This article was submitted to Organizational Psychology, a section of the journal Frontiers in Psychology

Received: *27 October 2019*
Accepted: *08 April 2020*
Published: *07 May 2020*

Citation:
Valor-Segura I, Navarro-Carrillo G, Extremera N, Lozano LM, García-Guiu C, Roldán-Bravo MI and Ruiz-Moreno A (2020) Predicting Job Satisfaction in Military Organizations: Unpacking the Relationship Between Emotional Intelligence, Teamwork Communication, and Job Attitudes in Spanish Military Cadets. Front. Psychol. 11:875. doi: 10.3389/fpsyg.2020.00875

Although prior research has extensively examined the association of emotional intelligence (EI) with various job attitudes (e.g., job satisfaction), empirical and systematic investigation of this link within military institutions has captured considerably less attention. The present research analyzed the relationship between EI, teamwork communication, and job satisfaction among Spanish military cadets. We tested the potential unique contribution of EI to job satisfaction over and above demographics (i.e., gender and age), proactive personality, and resilience. Moreover, we also examined whether EI was indirectly linked to job satisfaction via its relationship with teamwork communication. A sample of 363 cadet officers of the Spanish General Military Academy completed questionnaires assessing EI, teamwork communication, proactive personality, resilience, and job satisfaction. Hierarchical regression analysis revealed that EI exhibited incremental variance (ΔR^2 = 5.2%) in predicting job satisfaction (B = 0.539, 95% CI [0.306,0.771]) even after accounting for demographics, proactive personality, and resilience. Additionally, mediation analysis showed that the association of EI with job satisfaction was partially driven by enhanced teamwork communication. This research provides empirical evidence suggesting a pathway (i.e., effective teamwork communication) through which EI could help military cadets to experience higher job satisfaction. Implications for future academic programs including EI and teamwork communication to promote positive job attitudes among military personnel are discussed.

Keywords: emotional intelligence, job satisfaction, communication, military context, proactive personality, resilience

INTRODUCTION

Emotional intelligence (EI) has been conceptualized as an individual difference dimension that encompasses a set of abilities concerned with the processing of emotion-relevant information. According to Mayer and Salovey's (1997) theoretical approach, EI could be defined as "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer and Salovey, 1997, p. 5). In the last two decades, a significant body of research has documented the predictive validity of EI across a wide array of psychological domains. For instance, EI has been found to predict a set of health-related dimensions and behaviors (Martins et al., 2010; Fernández-Abascal and Martín-Díaz, 2015), subjective well-being (Sánchez-Álvarez et al., 2016), cognitive and affective academic engagement (Maguire et al., 2017), career decision making (Farnia et al., 2018), or social sharing motives (Bucich and MacCann, 2019), among others.

A promising avenue for future research is related to the examination of psychological processes involved between individuals' EI and critical work-related outcomes (e.g., O'Boyle et al., 2011; Miao et al., 2017a). Accordingly, given that people high in EI are more prone to successfully evaluating and regulating their emotional states (Peña-Sarrionandia et al., 2015), thereby deploying more appropriate strategies for coping with adverse circumstances, employees' EI is argued to play a fundamental role in the maintenance and development of positive individual and organizational outcomes. Indeed, higher EI has been consistently and positively associated with positive work outcomes, such as job satisfaction (Meisler and Vigoda-Gadot, 2014; Rezvani et al., 2016; Extremera et al., 2018), trust and project success (Rezvani et al., 2016), psychological ownership of the job (Kaur et al., 2013), or organizational commitment (Naderi Anari, 2012). Although the aforementioned studies substantially strengthen the idea that EI may promote desirable work outcomes, it is important to ascertain whether the effects of EI remained significant once established, well-known personality or work-related constructs are controlled in the analytical models. However, there is growing valuable research trying to demonstrate incremental validity of EI in predicting work attitudes and behavior. For example, Carmeli (2003) found that EI predicted a set of work outcomes (i.e., job performance, withdrawal intention, altruistic behavior, career commitment, affective commitment, work-family conflict, and job satisfaction) even after accounting for age, income, organizational size, and tenure in an organization. Further studies have also shown that EI uniquely predicted burnout levels (beyond demographic and work-related factors; Platsidou, 2010) and entrepreneurial self-efficacy (above and beyond demographics and personality traits; Mortan et al., 2014).

The potential unique connection of EI with various positive work outcomes has gained increasing attention from meta-analytic research in last years. In this vein, recent meta-analytic findings have indicated that EI exhibited incremental validity in the prediction of job satisfaction, organizational commitment, and turnover intentions above and beyond the Big Five personality factors (Miao et al., 2017a), thus suggesting the unique contribution of EI to these work attitudes. Moreover, Miao et al. (2017a) also explored potential theoretically related psychological mechanisms that might act as mediator variables in the association between EI and job satisfaction. In particular, their study demonstrated that both state affect and job performance mediated the EI–job satisfaction relationship. Similarly, in another meta-analysis aimed at exploring the effects of EI on job satisfaction it was also found that employees with higher EI reported greater job satisfaction (Miao et al., 2017b); notably, this relationship existed independently of numerous relevant employees' characteristics (i.e., gender, age, and tenure). In additional support of the unique contribution of EI to work outcomes, another recent meta-analysis of EI provided empirical evidence showing that EI has incremental validity in predicting both organizational citizenship behavior and counterproductive work behavior after controlling for classical variables, such as personality dimensions or general self-efficacy (Miao et al., 2017c).

Overall, the data above suggest that there is increasing convergence on the idea that EI represents a central individual characteristic for uniquely enhancing positive individual and work-related outcomes in organizational life. However, even though the positive effects of employees' EI on job satisfaction across organizational settings have received accumulating evidence, empirical and systematic investigation of such a relationship within military organizations has captured considerably less scholarly attention (Shi et al., 2015). Currently, military organizations are mainly hierarchical and large institutions where orders have a great impact on subordinate members (Ramthun and Matkin, 2014). Operating in complex socio-cultural (military forces are integrated in local populations), globalized (mass media and social platforms could trigger far-reaching incidents), and rapidly changing (a wide range of operations are performed, from maintaining security to fighting) environments represent a major challenge for the military culture and organization. Therefore, these institutions should ineluctably provide these cadet officers' abilities to perceive and regulate their emotions within the particularly complex military environment. For example, in a large cohort of North American military academy cadets, research confirmed the importance of cognitive and personality variables that could contribute to military competences and performance (Bartone et al., 2002). Nevertheless, EI was not specifically measured in that research. Thus, these authors suggest the need to explore additional factors that may influence military performance beyond reasoning, personality, and social skills. In this military context, an increasing number of authors uphold the importance of acknowledging the pivotal role of EI as a resource to be considered for selecting military leaders and training them to be more self-aware, flexible, adaptive, and transformative (Abrahams, 2007; Sewell, 2009; Deveci, 2016). Moreover, this approach is reinforced because the attributes and competences of Army officers have showed significant associations with EI (Taylor-Clark, 2015; Koh and O'Higgins, 2018). Although some studies have highlighted in a generic manner the importance of cognitive, emotional, and social-related factors within

educational and training military institutions (e.g., Devine, 2012), as well as robust connections between EI and positive job attitudes (Lam and O'Higgins, 2012), the examination of the implications of EI on job attitudes and the potential underlying psychological factors within educational military environments is still limited. It is therefore imperative to increase our empirical knowledge on the role of EI in this context and subsequently to understand the mediating mechanisms through which EI training programs are effective to foster positive job outcomes, and ways to widely disseminate research-based intervention into military schools.

Through this research, we intend to extend prior research findings on EI by elucidating the specific role of EI in job satisfaction—one of the central variables in the organizational field (Judge and Kammeyer-Mueller, 2012)—among military forces, while also controlling for the potential influence of further conceptually related personality constructs, such as individuals' levels of proactive personality and resilience. Although recent research has found that both proactive personality and resilience are positively correlated with EI and job satisfaction (Jafri et al., 2016; Di Fabio and Saklofske, 2018; Kašpárková et al., 2018; Kuo et al., 2019), no studies have analyzed whether EI predicts job satisfaction even after accounting for proactive personality and resilience.

Additionally, considering that the underlying psychological mechanisms of the EI–job satisfaction association are barely known (Extremera et al., 2018), we also explored whether teamwork communication—a basic teamwork competence (Aguado et al., 2014)—would act as a plausible mediating psychological variable. Previous research has suggested that high EI could represent a prerequisite to developing adequate and effective interpersonal communication skills (Goleman, 1995). Nonetheless, the role of teamwork communication in the relationship between EI and job satisfaction has not been elucidated so far. In this regard, prior indirect evidence allows us to infer that communication competence could exert an explanatory role. For instance, EI has been proven to be positively correlated with perceptions of constructive communication patterns (Smith et al., 2008). Furthermore, the adequate communication levels within the working group constitute a factor with resultant effectiveness and cooperation (George, 2002; Jordan et al., 2002; Pandey and Karve, 2018). Indeed, effective communication at work has been found to correlate with higher job satisfaction (Kim, 2002), thereby supporting the beneficial impact of communication on positive job attitudes. Because EI is deemed a key factor in various types of communication, potentially leading to optimal work-related outcomes (e.g., Sinha and Sinha, 2007), one might expect that EI positively affects job satisfaction by enhancing teamwork communication. Teamwork communication competence can be understood as the ability to identify and use decentralized networks to boost communication, as well as to use communication following both open and supportive techniques, or to adequately capture the non-verbal messages of other individuals (Stevens and Campion, 1999). Addressing interpersonal communication skills within the framework of a military teamwork is key as the team represents the major formation unity, and this is the scenario where the main social activities and collaborative work tasks are developed (Bass et al., 2003; Griffith, 2007). Indeed, instructional and training practices take place in these formation unities which are based upon communication-related aspects between the team components, providing insight on psychological dynamics and outcomes related to EI (Stubbs and Wolff, 2008). Overall, examining the role of teamwork communication in military units might help improve professional readiness and adopt more updated and effective military training practices and programs to promote positive work outcomes (Oden et al., 2015; Deveci, 2016).

THE CURRENT STUDY

This research is principally aimed at testing the predictive ability of EI on job satisfaction among a large sample of cadet officers. Additionally, we also examined the incremental validity of EI above and beyond partially conceptual overlapping factors (i.e., proactive personality and resilience), as well as the putative mediating role of work-team communication competence in the EI–job satisfaction relationship (see **Figure 1**), thus complementing prior research that analyzed other mediating factors (e.g., Miao et al., 2017a; Extremera et al., 2018). Overall, proceeding on the basis of the abovementioned considerations, the following hypotheses have been made:

Hypothesis 1: Cadet officers' EI will predict increased job satisfaction.
Hypothesis 2: Cadet officers' EI will exhibit incremental validity in job satisfaction above and beyond the effects of proactive personality and resilience.
Hypothesis 3: Teamwork communication competence will act as a mediator in the relationship between cadet officers' EI and job satisfaction.

MATERIALS AND METHODS

Sample

Cadet officers of the Spanish General Military Academy, located in Zaragoza, Spain, were invited to participate in this research. A total of 363 individuals completed a comprehensive survey

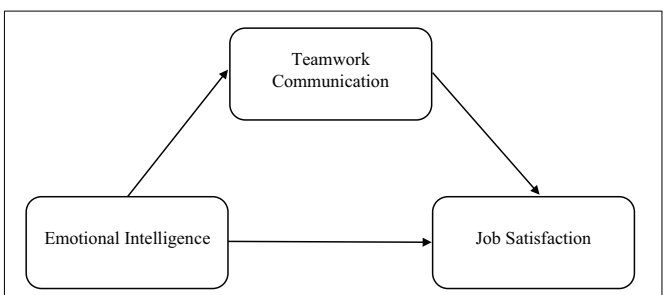

FIGURE 1 | Proposed model of the role of teamwork communication in explaining the emotional intelligence–job satisfaction relationship.

including five separate questionnaires. The sample comprised 343 male and 20 female military cadets between 20 and 40 years of age (M = 23.48, SD = 3.99).

MEASURES

Emotional Intelligence

We used the Wong Law Emotional Intelligence Scale (WLEIS-S; Wong and Law, 2002). This instrument consists of 16 items measuring four aspects of EI: Self-Emotion Appraisal, SEA, Others' Emotion Appraisal, OEA, Use of Emotion, UOE, and Regulation of Emotion, ROE. However, as in prior studies, we used the overall score in our analyses as we were interested in the global EI score (Law et al., 2004; Mérida-López et al., 2019). Items (e.g., "I am quite capable of controlling my own emotions" or "I always encourage myself to try my best") were rated using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores in this measure reflect higher levels of EI (α = 0.86). We used the well-validated Spanish version (Extremera et al., 2019).

Teamwork Communication

We used the communication measure composed of eight items of the Teamwork Knowledge, Skill, Ability Test proposed by Stevens and Campion (1994, 1999) and adapted to the Spanish population (Aguado et al., 2014; e.g., "I make an effort to talk about less important things with my peers for the sake of team spirit and better internal communication"). The answer format is a Likert-type scale with five options ranging from 0 (*never*) to 4 (*always*); high scores indicate effective communication for teamwork. Cronbach's alpha reliability on the present sample was 0.76.

Proactive Personality

We administered the shortened version of the Proactive Personality Scale proposed by Seibert et al. (2001) and validated according to Bateman and Crant's (1993) work. The short version consists of 10 items (e.g., "I am constantly on the lookout for new ways to improve my life") measuring individual differences in the inclination to take action and change the environment. Items were evaluated using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores indicate higher levels of proactive personality. Cronbach's alpha reliability was 0.86.

Resilience

We used the 5-item measure developed by Hardy et al. (2010) to evaluate resilience. It was operationalized as the ability to maintain confidence in the face of misadventures and dissatisfaction experiences (e.g., "Bounce back from performing poorly and succeed"). The response format was a 5-point Likert scale anchored at 1 (*low*) to 5 (*high*). Higher scores reflect greater resilience. Cronbach's alpha reliability was 0.81.

Job Satisfaction

To assess job satisfaction, we administered the job satisfaction scale proposed by Judge et al. (1998); this measure was based on Brayfield and Rothe's (1951) overall job satisfaction scale (e.g., "Most days I am enthusiastic about my work"). The responses to its 5 items were measured using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores in this measure indicate increased job satisfaction. In this study, the Cronbach's alpha coefficient was 0.84.

PROCEDURE

A number of previously trained evaluators requested military cadets' volunteers to participate in the Spanish General Military Academy. The evaluators explained to participants how the collected information will be used, ensuring that they could abandon their participation in the study at any time and without any consequences. After participants were informed about the estimated duration of their collaboration (about 25 min), confidentiality, and anonymity regarding their answers, they proceeded to complete the questionnaire booklet individually in Spanish General Military Academy classrooms while supervised by the aforementioned evaluators. Volunteers did not receive any type of academic or financial compensation in exchange for their participation. All respondents gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki and the protocol was approved by the Ethics Committee of CEMIX-UGR-MADOC (Ref. 22/18).

STATISTICAL ANALYSIS

First, basic descriptive statistics (i.e., means and standard deviations) and bivariate correlations for all measures were computed. Then, we performed a hierarchical regression analysis to determine the possible unique predictive contribution of EI to job satisfaction. As a preliminary check, we calculated variance inflation factors (VIFs) for each independent questionnaire variable. Collinearity statistics obtained for our sample showed acceptable values (VIFs $<$ 1.57; Akinwande et al., 2015). Lastly, we further computed a simple mediation analysis to explore whether the EI–job satisfaction relationship among cadet officers could be explained—at least, partially—by teamwork communication competence levels. The analyses were conducted using Statistical Package for the Social Sciences (SPSS version 23.0; SPSS Inc., Chicago, IL, United States).

RESULTS

Descriptive Statistics and Correlation Analysis

Descriptive statistics (i.e., means and standard deviations) and product–moment correlation coefficients for all key variables in the study are given in **Table 1**. Aligning with our main expectations, military cadets' EI showed positive correlations with the rest of the variables (**Table 1**). Thus, greater EI was significantly associated with elevated teamwork

TABLE 1 | Means, standard deviations, and correlations for EI, communication competence, proactive personality, resilience and job satisfaction.

Variable	*M*	SD	1	2	3	4	5
1. Emotional intelligence	5.49	0.63	–	–	–	–	–
2. Communication	2.75	0.55	0.45***	–	–	–	–
3. Proactive personality	5.46	0.66	0.51***	0.36***	–	–	–
4. Resilience	3.96	0.53	0.51***	0.37***	0.46***	–	–
5. Job satisfaction	4.85	1.20	0.36***	0.26***	0.29***	0.26***	–

****p < 0.001.*

communication competence, proactive personality, resilience, and job satisfaction.

The Unique Contribution of EI to Job Satisfaction

To verify Hypotheses 1 and 2, we performed a multiple hierarchical regression analysis. In the first step of the regression equation, demographics (i.e., sex and age) were entered (method: enter). Proactive personality and resilience were included in the second step (method: enter). Finally, we incorporated EI in the third step (method: enter) to calculate its added value in explaining variance in job satisfaction and ascertain its unique predictive contribution to this criterion above and beyond demographics (i.e., gender and age), proactive personality, and resilience. The results of the regression analysis predicting cadet officers' job satisfaction are given in **Table 2**.

Neither gender nor age significantly contributed to the prediction of job satisfaction, with an amount of criterion variance explained of 0.2%, $F(2,341) = 0.309$, $p = 0.735$. Conversely, the model including proactive personality and resilience, which were added at the second step of the regression analysis, was significant, $F(4,339) = 9.523$, $p < 0.001$. As illustrated in **Table 2**, both proactive personality and resilience emerged as significant predictors of higher levels of job satisfaction. These personality-related factors explained an additional 10% of the variance in job satisfaction. The inclusion of EI in the third step of the regression equation accounted for incremental criterion variance (5.2%), and the regression model remained significant, $F(5,338) = 12.231$, $p < 0.001$. As **Table 2** shows, the regression coefficient for EI was significantly positive, $t(343) = 4.564$, $p < 0.001$, indicating that military cadets' EI levels uniquely predicted greater job satisfaction even after controlling for demographics (i.e., gender and age) and personality variables (i.e., proactive personality and resilience). Hence, Hypotheses 1 and 2 are supported.

TABLE 2 | Summary of the hierarchical regression analysis with job satisfaction as the criterion variable.

Predictor	Job satisfaction			
	B	CI (95%)	*p*	R^2
Step 1				0.002
Gender	−0.067	[−0.604, 0.471]	0.808	
Age	−0.014	[−0.052, 0.025]	487	
Step 2				0.101
Gender	−0.044	[−0.557, 0.469]	0.866	
Age	−0.013	[−0.050, 0.025]	0.510	
Proactive personality	0.369	[0.160, 0.578]	0.001	
Resilience	0.368	[0.106, 0.630]	0.006	
Step 3				0.153
Gender	0.003	[−0.496, 0.503]	0.990	
Age	−0.023	[−0.060, 0.014]	0.222	
Proactive personality	0.180	[−0.039, 0.399]	0.107	
Resilience	0.160	[−0.111, 0.430]	0.246	
Emotional intelligence	0.539	[0.306, 0.771]	<0.001	

Unstandardized regression coefficients are reported. CI, confidence interval.

The Mediating Role of Teamwork Communication

We used Hayes' PROCESS macro for SPSS (Model 4; Hayes, 2013) to test Hypothesis 3, namely to determine the potential indirect effect of EI on job satisfaction via the mediator variable (i.e., communication). None of the covariate (age, gender, proactive personality, and resilience) effects were significant (all *ps* > 0.13). The only exception was the effect of proactive personality on teamwork communication ($b = 0.173$, SE = 0.059, $p = 0.003$). The results showed that military cadets with greater scores on EI showed higher communication competence ($b = 0.240$, SE = 0.059, $p < 0.001$), which in turn was related to increased job satisfaction ($b = 0.391$, SE = 0.151, $p = 0.010$). We calculated 95% bias-corrected confidence intervals (CIs) for the point estimate on the basis of 5,000 bootstrap samples. Taking into account Hayes' (2013) indications, the indirect effect is considered statistically significant when the 0 value is not included in its CI. Given that 0 is outside the CI [0.015, 0.204] of the indirect effect of cadet officers' EI on job satisfaction via communication competence ($b = 0.094$) (**Table 3**), the results confirmed that communication competence mediated the EI–job satisfaction relationship; hence, military cadets' EI was indirectly linked to job satisfaction through its association with teamwork communication. After controlling for the effect of communication (i.e., mediator variable), the direct effect of EI on job satisfaction among cadet officers remained significant ($b = 0.435$, SE = 0.140, $p = 0.002$, 95% CI [0.160, 0.711]), thus indicating the existence of a partial mediation. Thus, Hypothesis 3 is supported.

DISCUSSION

In the present research, we examined the predictive and incremental validity of EI on job satisfaction above and beyond the effects attributable to common demographic characteristics

TABLE 3 | Summary of mediation analysis.

	Outcome: Communication				Outcome: Job satisfaction			
Predictors	**Coeff.**	**SE**	**LLCI**	**ULCI**	**Coeff.**	**SE**	**LLCI**	**ULCI**
Constant	−0.021	0.373	−0.755	0.713	1.548	0.855	−0.137	3.233
Co: Gender	0.094	0.145	−0.192	0.380	0.277	0.334	−0.380	0.935
Co: Age	−0.001	0.010	−0.019	0.018	−0.033	0.022	−0.076	0.010
Co: Proactive personality	0.173**	0.059	0.057	0.288	−0.004	0.137	−0.274	0.266
Co: Resilience	0.128	0.070	−0.011	0.266	0.177	0.163	−0.143	0.498
Me: Communication	–	–	–	–	0.391**	0.151	0.094	0.688
X: EI	0.240***	0.059	0.124	0.356	0.435**	0.140	0.160	0.711
R^2	0.261***	–	–	–	0.164***	–	–	–

Indirect effect	**Boot SE**	**Boot LLCI**	**Boot ULCI**
0.094	0.048	0.015	0.204

*Unstandardized regression coefficients are reported. Bootstrap simple size: 5,000. LLCI = lower level of the 95% bootstrap percentile confidence interval; ULCI = upper level of the 95% bootstrap percentile confidence interval. The indirect effect is significant where the confidence intervals does not contain zero. **p < 0.01; ***p < 0.001.*

(i.e., gender and age), proactive personality, and resilience in Spanish military cadets; furthermore, this is also the first study to explore the mediating role of teamwork communication competence in the relationship between EI and job satisfaction in the military context.

Our regression findings supported Hypotheses 1 and 2. In line with prior meta-analytic research, EI has demonstrated its ability to predict some significant variance over levels of job satisfaction (Miao et al., 2017a). Besides, strong predictors of job satisfaction such as proactive personality and resilience have not been controlled for in previous research. Given the functional similarities among EI, proactivity, and resilience in predicting positive attitudes at workplace, we were also interested in verifying the contribution of EI to job satisfaction beyond the influence of cadet officers' other traits characteristics. Our results showed that EI explained a significant proportion of variance in job satisfaction above and beyond the effects of demographic variables, proactive personality, and resilience. These findings provide a stringent test of the practical importance of EI as an explanatory factor of job satisfaction in military organizations over theoretically and empirically robust predictors. Moreover, in our study EI explained an additional 5% of the variance of levels of job satisfaction. While this explained incremental variance was not excessively large, incremental values like these should be considered a reasonable contribution when other variables are controlled (Haynes and Lench, 2003; Hunsley and Meyer, 2003). In sum, independent of the influence of other well-known dispositional traits and demographics variables, our set of results has indicated that EI also plays a significant role in how cadet officers could develop and maintain positive job attitudes, suggesting that intervention programs focused on cultivating EI might have beneficial effects in the development and maintenance of job satisfaction among military members (Miao et al., 2017a; Mattingly and Kraiger, 2019).

On the other hand, the mediation analysis also demonstrated a partial mediation effect of teamwork communication competence in the relationship between EI and job satisfaction. Extending past research on mediating mechanisms in the link between EI and job satisfaction (Extremera et al., 2018), our study found that emotionally intelligent cadet officers reported higher effective communication for teamwork, which in turn was related to higher job satisfaction. Emotionally intelligent workers are thought to show not only higher interpersonal skills but also greater levels of effective communication for teamwork (Hendon et al., 2017). According to prior research (Lopes et al., 2004; Lopes et al., 2011), military cadets with higher EI might communicate more effectively because they are able to perceive, understand, and implement strategies to infer other people's intentions from their affective signs, use others' emotions as guides for their behavior, or influence people's motivation and use of effective skills to maintain successful relations that might result in greater job satisfaction. Military activity has been found to be associated with an array of workplace stressors that could affect the development of job attitudes (Laurence and Matthews, 2012). EI is proposed as a psychological resource that might contribute to developing positive job attitudes and behaviors and, specifically, job satisfaction (Miao et al., 2017a). According to our findings, one potential mechanism by which military cadets' EI may help to explain higher job satisfaction is through using and developing effective teamwork communication.

Limitations and Future Directions

Some limitations of our study are to be mentioned. First, our results are based on self-reported data and we used a cross-sectional design. Therefore, this methodology makes it impossible to determine the direction of association between variables. Further studies should include other complementary measurement approaches (e.g., interviews and situational judgment tests) and use longitudinal designs that provide further insights to the causal relationships between EI, teamwork communication, and positive job attitudes among cadet officers. Although one strength of this study was the examination of the relationship of EI and job satisfaction in a non-commercial organization (i.e., Spanish General Military Academy), one limitation is that the military academy is an officer training

and education context, and positive attitudes in this context might not be strongly related with their positions in army units after graduation.

Despite these limitations, our study provides insights into how EI, teamwork communication, and positive attitudes in military organizations are connected, and how the relationship between EI and job satisfaction is independent of other well-known dispositional factors. These findings might help to design future intervention programs aimed at increasing EI and teamwork communication skills among future career officers. EI is a psychological construct that might be predictive of several positive functioning outcomes and might foster adaptive (and mitigate maladaptive) personal and organizational outcomes for active duty members and their families (Zeidner et al., 2012; Bowles et al., 2015). In military operations, the success of missions frequently depends on the capacity of military leaders to understand and manage the emotions of the team and on the effective team communication among members in challenging and dangerous environments (Campbell, 2012). Current conflicts involving non-state actors require military leaders to be adaptive to shifting roles where EI favors interpersonal relationships, regulating stress, and focusing attention to optimize decision making (Jeppesen, 2017). Further academic programs of cadet leadership instruction should focus on developing EI and enable participants to acquire skills and tools to promote effective team interaction strategies for smooth communication and positive interpersonal relationships. The development of these abilities might help officers to effectively work with others in groups and teams. Notwithstanding this, it is worth mentioning that, given that our research has directly assessed respondents' perceptions of interpersonal communication-related aspects within a team, thus focusing on the individual level, further empirical research within the military context is needed to extend and complement our findings by incorporating team-related approaches. Overall, military institutions could benefit from implementing programs to facilitate and foster emotional abilities and effective teamwork communication to promote both personal and job attitudes (Mencl et al., 2016).

Conclusion

In conclusion, the setting for cadet officers typically involves collaborative and interdisciplinary teamwork tasks. However, working collaboratively requires several personal skills to allow different military academy cadets to effectively synchronize, work together cooperatively to solve conflict problems, and contribute as members of inter-professional teams to provide successful performance outcomes and experience higher positive attitudes in their daily military tasks. Increasing their abilities to understand and to manage their emotions may be positively related to teamwork communication and, therefore, positively linked to job attitudes. Extending previous findings on incremental validity of EI and underlying mechanisms between EI and job attitudes (Miao et al., 2017a), our current findings provide empirical support of (a) the incremental role of EI in job satisfaction beyond further dispositional factors and (b) the mediating role of teamwork communication in the EI–job satisfaction association in the military context. In short, teamwork communication skills appear to be a partial mediator in the association between emotional skills and job satisfaction in Spanish cadet officers. Therefore, team communication skills and emotional abilities may represent promising targets for academic training programs aimed at increasing job satisfaction among military cadets. If our findings are replicated, then these emotional and teamwork skills might become an integral part of a training module for the development of strategies for improving positive attitudes at work for future career officers.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Committee of CEMIX-UGR-MADOC (Ref. 22/18). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

IV-S, CG-G, and AR-M: project design, administration and funding acquisition. LL: formal analysis and data curation. GN-C, IV-S, NE, and CG-G: writing–original draft preparation. All authors: writing–review and editing.

FUNDING

This research was funded by Centro Mixto Universidad de Granada-Mando de Adiestramiento y Doctrina (CEMIX UGR-MADOC), grant number Ref. 22/18.

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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: 15 May 2020
doi: 10.3389/fpsyg.2020.00631

The Role of Personality Traits Toward Organizational Commitments and Service Quality Commitments

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Service providers personality traits is one of important determinants to deliver proper service to customers to make them satisfied in service delivery. Despite numerous studies on personality traits and emotional labor, little empirical work has been conducted to investigate the causal effects of hotel middle managers' personality traits on their commitment to the hospitality industry. Thus, this study aims to examine the effects of hotel middle managers' personality on two dimensions of commitments: organizational commitment and service quality commitment meditated by emotional variables: emotional labor and emotional exhaustion. The sample of this study consists of 266 department managers from full-service hotels in a metropolitan city in the Southern United States. The results confirmed the significant role of hotel middle managers' personality traits, especially expressive personality, in organizational commitment and service quality commitment. Hotel operators should foster a work setting that consistently promotes congruent emotions via regular training and screening to reducing employees' emotional exhaustion, increasing organizational commitment and service quality commitment, ultimately, reducing employees' turnover intentions.

Keywords: hotel middle managers, personality traits, emotional labor, emotional exhaustion, organizational commitment, service quality commitment

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Anthony Brien, Lincoln University, New Zealand
Ishmael Mensah, University of Cape Coast, Ghana

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

Received: *04 September 2019*
Accepted: *17 March 2020*
Published: *15 May 2020*

Citation:
Lee S, Park J, Back K-J, Hyun H and Lee SH (2020) The Role of Personality Traits Toward Organizational Commitments and Service Quality Commitments. Front. Psychol. 11:631. doi: 10.3389/fpsyg.2020.00631

INTRODUCTION

Researchers have agreed that understanding emotional factors and interrelations, such as emotional labor and emotional exhaustion, are essential for an employee's well-being, ultimately creating employee commitment to the organization and increasing service quality. Numerous social and organizational behavior researchers have concluded that emotional labor may result in occupational stress and burnout, leading to job dissatisfaction and other job-related problems (Wharton and Erickson, 1995; Grandey, 2000; Kruml and Geddes, 2000; Cheung et al., 2011; Gursoy et al., 2011; Chen et al., 2012; Lee and Ok, 2014; Raman et al., 2016). Employee turnover rate has been increasing in the hospitality industry (Back et al., 2008; Jang and George, 2012). According to the data from the *Bureau of Labor Statistics' Job Openings and Labor Turnover program* (2017), the restaurant and lodging industry turnover rate was 72.9% in 2016, which is 10% higher than that of 62.5% in 2013. One of the main reasons for high employee turnover rate is the emotional labor experienced by hospitality employees (Kim, 2008). Barnes (2001) further stated that the high turnover rate in

the service industry is due to the recruitment of employees with unsuitable types of personality. One mechanism that has been recommended for reducing the high turnover rate or retaining valuable employees in the event of emotional labor is effective employee selection (Furnham et al., 2002; Kim et al., 2007; Riggio and Lee, 2007). More specifically, an effective selection procedure should look beyond technical skills and assess domains, such as personality traits and/or people skills (Shay and Tracey, 1997). There is consensus among researchers that people who have more expressive personalities are more likely to develop and utilize relationships that assist them in facing stressful situations (Jolson and Comer, 1997). Also, individuals whose personality traits positively associate with empathy, ego drive, patience, and enthusiasm, are more intent to seek enjoyment, self-expression, and perform organizational activities in order to experience the pleasure, stimulation, and joy inherent in the activity (Futrell et al., 1983; Yavas et al., 2010). In addition, Brown et al. (2002) stated that work orientation and personality traits were predictors for the quality of customer relations. Specifically, the quality of interpersonal relationship with supervisors, peers, and supervisees is critical, because it is both indirectly and directly related to employees' job satisfaction (Furnham et al., 2002) and organizational commitment (Graf and Harland, 2005), as well as turnover intention (Donavan et al., 2004). O'Neill and Xiao (2010) found the significant direct and indirect effects of personality traits of hotel middle managers on emotional exhaustion. Their results were consistent with previous research that middle managers who had extroverted personalities tend to be largely buffered from emotional exhaustion.

Despite numerous studies on interplay of emotional labor, emotional exhaustion, and employee commitment, very little empirical work has been conducted to investigate the relationships among personality traits of middle managers as a critical component in the hospitality industry. Moreover, previous research (Cho et al., 2013) noted that some emotional variables have similar effects on employees' commitment, but they have rarely been measured simultaneously in managerial levels. Most of previous studies dealing with emotional variables have focused on the perspective of service employees (e.g., Kim, 2008; Karatepe and Aleshinloye, 2009; Shani et al., 2014). Hotel managers are surrounded by constant stress due to the nature of business, which is a non-stop 24/7 operation. Although hotel middle managers may not be frequently required for direct contact with customers, their tough job environment that demands long hours of work, work overload, and swift handling of unpredictable situations involving both time and quality, entails a lot of job-related stress (O'Neill and Xiao, 2010). As an important decision-maker and problem solver, hotel middle managers are responsible for a burdensome task managing complaints from not only external customers who are hotel guests but also internal customers who are hotel employees (Ledgerwood et al., 1998). Specifically, Ledgerwood et al. (1998) claimed that perceived social and psychological workplace climate would lead to burnout more than actual works such as work shifts. Hence, emotional labor and emotional exhaustion that hotel managers experience could be different from frontline employees. Thus, the present study utilizes instrumentality and expressiveness as two-dimension of personality traits and aims to examine the effects of hotel managers' two personality traits on organizational commitment and service quality commitment, mediating by emotional labor and emotional exhaustion. Most uniquely, the present study contributes to the interpretive discussion of how managers' emotional states and two distinctive directional commitments are interrelated in the context of hotel service settings. The results of this study help ascertain its potential importance in organizations in terms of practical and academic insights into the area of employee selection and retention strategies.

LITERATURE REVIEW

Theoretical Background

Personality Traits

Personality traits have been regarded as significant determinants of individuals' behavior, previous literature refers personality traits to cognitive (personal values), affective (attitudes), and behavioral patterns (behaviors) (Cattell and Tregaskis, 1965; Landers and Lounsbury, 2006; Huang et al., 2014). Some research has explored the significant causal effects of personality traits on consumer behavior (Bosnjak et al., 2007; Yoo and Gretzel, 2011), while several studies have utilized personality traits to identify their influence on employees' behavior (Mount et al., 2006; Walumbwa and Schaubroeck, 2009). Several researchers have investigated five dimensions of personality traits in the industry that is often called the Big Five: Neuroticism, Extraversion, Conscientiousness, Agreeableness, Openness to experience (Goldberg, 1990; De Raad et al., 1998; Hahn et al., 1999; Somer and Goldberg, 1999). Raman et al. (2016) examined the impacts of the aforementioned five dimensions of personality traits on frontline employees' emotional intelligence, emotional labor, emotional exhaustion, and counter-productive work behavior. They found out that three dimensions of personality traits (extraversion, agreeableness, and neuroticism) influence employees' emotional intelligence and two dimensions of personal traits (conscientiousness and openness) influence counter-productive work behavior. In addition, there was an indirect relationship between emotional intelligence and emotional exhaustion through emotional labor. Meanwhile, Lamont and Lundstrom (1977) reported 16 different variables (i.e., dominance, endurance, social recognition, empathy, and ego strength) and found that only endurance, social recognition, and dominance have positive influence on managerial ratings of performance.

Instrumental and expressive personality traits

Bem (1974) suggested two dimensions of personality traits, instrumentality and expressiveness, which are closely related to specific dimensions of culture. Specifically, Spence (1993) stressed that instrumentality is associated with masculinity, while Yee and Lei (2012) found consistent relationships between femininity with expressiveness and masculinity with instrumentality. For instance, masculinity related (instrumental)

traits are seen as characteristics of assertiveness, independence, and dominance. The femininity related (expressive) traits include compassion, warmth, tenderness, sympathy, and sensitivity. As consistent with the previous research, the relevance of instrumental and expressive personality traits to job performance has been revealed (Comer and Jolson, 1985; Jolson and Comer, 1992; McFarland and Kidwell, 2006; Luria and Kalish, 2013; Carretta et al., 2014). Jolson and Comer (1992) found that sales managers perceived a relationship between saleswomen's instrumental and expressive traits and their effectiveness in performing six generally accepted functions of selling: prospecting, making contact and establishing rapport, probing for needs, stimulating desire, closing, and retaining both the sale and customer. Industry psychologists have recognized that personality traits make a difference in handling stressful work situations (Tokar et al., 1998; Maslach et al., 2001). Also, measuring personality traits indicate predictive measures for emotional outcomes in service settings (Tan et al., 2004).

Kim et al.'s (2007) results indicated emotional expression and management were dependent on individuals' dispositional factors. Also, Maslach et al. (2001) argued that specific personality traits might make a difference in coping with job stress. A person with more expressive personality tends to handle stressful works rather smoothly than a person with instrumental personality due to warmth, sympathy, and tenderness nature of the personality (Tan et al., 2004). In addition, O'Neill and Xiao (2010) found that hotel middle managers who had registered high in expressive personality traits are more prone to emotional exhaustion. Although previous researchers have examined significant difference in the magnitude of relationship between two types of personality traits (instrumentality and expressiveness) and emotional exhaustion as well as emotional labor, it is hard to justify that a person is mutually exclusive on either personality traits. It is rather arguable that a person has dual personality traits so that the behavioral outcome can be dependent on which personality trait has more predictive power on emotional handling situations (Singelis, 1994).

Emotional Variables: Emotional Labor and Emotional Exhaustion

Emotional variables include emotional labor and emotional exhaustion. Emotional labor has been acknowledged as one of the core antecedents of emotional exhaustion (Glomb and Tews, 2004) and employees working in sectors with high emotional labor levels were not found to have higher levels of emotional exhaustion than those working low emotional labor level jobs (Wharton and Erickson, 1995; Schaubroeck and Jones, 2000). Emotional labor and emotional exhaustion comprise essential emotional components in determining not only the measurement of employees' performance and job satisfaction in the workplace, but also predicting their commitment toward the organization and service quality. Affective events theory is relevant to explain the importance of emotions in the hotel industry (Walter and Bruch, 2009). The theory indicates the nature of the job and the requirements for emotional behavior and work attitudes (Weiss and Cropanzano, 1996). A combination of daily fluctuation of emotional stages that employees experience on the job, lead to positive and negative emotions that may further lead to work attitudes, such as job satisfaction, performance, and organizational commitment (Ashkanasy et al., 2002). Based on the literature, the following hypotheses are proposed:

H1: *Hotel middle managers' instrumental personality trait positively influences their level of emotional labor.*

H2: *Hotel middle managers' instrumental personality trait positively influences their level of emotional exhaustion.*

H3: *Hotel middle managers' expressive personality trait positively influences their level of emotional labor.*

H4: *Hotel middle managers' expressive personality trait positively influences their level of emotional exhaustion.*

Emotional Labor

Hochschild (2012) introduced the emotional labor concept as "the management of feeling to create a publicly observable facial and bodily display" (p. 7). Emotional labor has been widely described as a dynamic self-regulatory process that employees utilize to express their emotions by surface acting and deep acting, continuously adjusting and monitoring their feeling during interactions with customers (Gabriel and Diefendorff, 2015). The core principle of emotional labor is the artificial manipulation of emotions in order to satisfy the needs of the organization according to display rules (Qin et al., 2012). Due to the unique characteristics of the hospitality industry, inseparability of production and consumption, hospitality firms are emphasizing providing positive attitudes and emotions by prescribing both implicit and explicit display rules during service encounters (Lee and Ok, 2012). Hospitality employees are required to present politeness, sympathy, warmth, and friendliness during interpersonal interactions with their customers (Lee et al., 2016). Responding to the rules of the firm, employees may choose to behave in different ways: surface acting and deep acting. Surface acting refers to a display of emotions without the true associated feeling, whereas deep acting highlights efforts to change the inner feeling of an individual (Seery and Corrigall, 2009). For example, the employees' behavior of smiling, by either surface or deep acting, is defined as an emotional labor strategy (Hennig-Thurau et al., 2015). Employees may choose to behave consistently with the display rules by hiding their true emotions. Some may try to alter their own emotional feelings and behave accordingly. Extant research claimed that surface acting causes negative outcomes such as job stress, job dissatisfaction, and burnout due to emotional dissonance (Lee and Ok, 2014) while deep acting causes positive outcomes such as increased job performance and job satisfaction (Lee and Ok, 2012). However, numerous previous studies had stressed the antecedent role of emotional labor on employee burnout, job dissatisfaction, and turnover intent, which is mainly created by the stress that employees face in a service industry (Jung and Yoon, 2014). Emotional labor becomes a major challenge when employees keep modifying or hiding their true emotions, which may result in employees' emotional exhaustion, job dissatisfaction, poor performance, and turnover behavior (Griffeth et al., 2000).

Although most emotional labor studies in the hospitality industry focus on employees' perceived emotional labor and its antecedents and consequences (Kim et al., 2007; Kim, 2008; Lee and Ok, 2012), it is more significant when it comes to middle managers. Just as hospitality employees experience emotional challenges during service encounters, middle managers may even have more challenges when they have to deal with both external and internal customers. Hotel managers must understand employees' performance and make appropriate decisions in the service sector (Hanzaee and Mirvaisi, 2013). Based on the literature, the following hypotheses are proposed:

H5: *The level of emotional labor for middle managers in the hotel industry positively influences their level of emotional exhaustion.*

Emotional Exhaustion

Emotional exhaustion is one of the three dimensions of burnout (Maslach and Jackson, 1981). Emotional exhaustion has been identified as "a chronic state of emotional depletion as a consequence of prolonged exposure to work stressors (e.g., anxiety, fatigue, work-related depression)" (Baba et al., 2009, p. 25). It refers to depression, hopelessness, and feelings of entrapment (Kim et al., 2007; O'Neill and Xiao, 2010; Zhao et al., 2014). The preponderance of evidence suggests that emotional exhaustion is the earliest symptom of burnout (Ashill and Rod, 2011). Emotionally exhausted employees feel helpless, lose self-esteem, feel a lack of accomplishment, and develop negative attitudes toward customers, the organization, their job, and themselves (Cordes and Dougherty, 1993). The emotional exhaustion leads to job dissatisfaction, which could directly increase turnover intention (Zopiatis et al., 2014). Lapointe et al. (2011) stated that emotional exhaustion would positively relate to turnover and have significant negative influence on commitment. Cropanzano et al. (2003) found a linkage between emotional exhaustion and organizational commitment when examining hospital workers. Furthermore, previous research has found a significant and negative relationship between emotional exhaustion and organizational commitment (Babakus et al., 1999; Cropanzano et al., 2003; Ashill et al., 2009). Former research suggested that emotional exhaustion could be led by negative experiences of work and has damage impact on service quality (Bennett and Barkensjo, 2005). Emotional exhaustion has been acknowledged as a negative factor for job performance (Wright and Cropanzano, 1998). Kim and Ra (2009) explored the negative influence of job stress on service commitment. A research conducted by Jeon (2015) explored the negative relationships between emotional exhaustion and commitment to customer service among flight attendants. Although the relationship between emotional exhaustion and organizational commitment has been tested by many previous studies, the direct relationship between emotional exhaustion and service quality commitment still needs more research to test, especially for middle managers in the hotel industry.

Commitment: Organizational and Service Quality

The nature of employee commitment to their organization and commitment to service quality has been a topic of great interest in the human resources management literature. According to Good et al. (1988), organizational commitment develops slower than job satisfaction, which is one's identification with the organization and loyalty to the organization. Classical views of organizational commitment include an attitudinal perspective and a behavioral perspective. Porter et al. (1974) also explored organizational commitment as the strength of an individual's identification with, and involvement in, a particular organization.

On the other hand, Becker (1960) described organizational commitment as the tendency to engage in consistent lines of activity because of the perceived costs of doing otherwise. According to DeCotiis and Summers (1987), organizational commitment has a positive effect on performance.

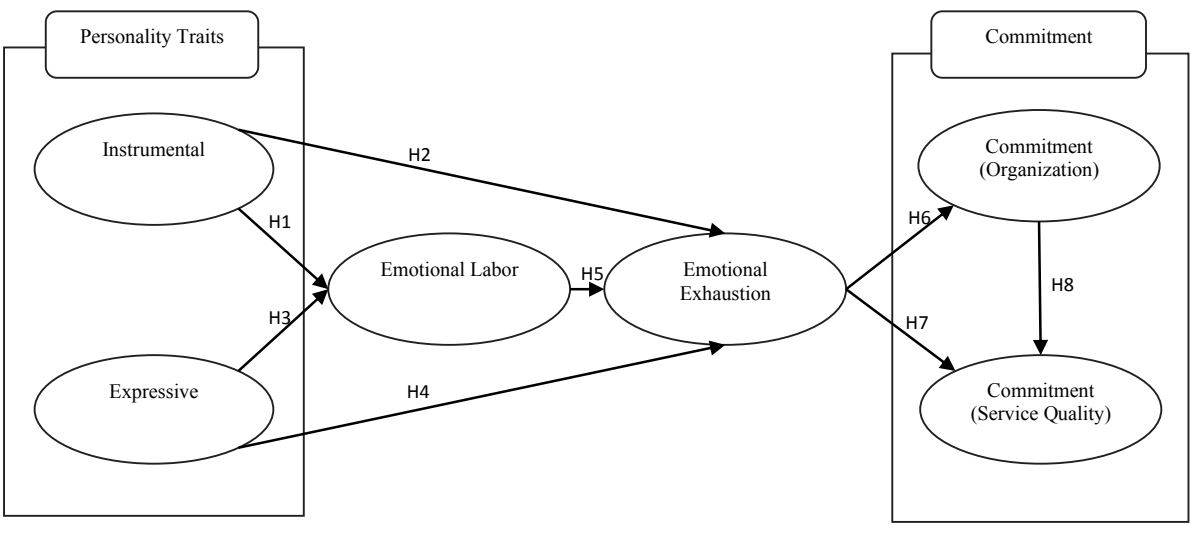

FIGURE 1 | Conceptual model of personality traits and emotional labor.

Imran et al. (2014) conducted a study, which indicates that the relationship between job satisfaction and performance is strongly positive: employee performance and attitudes toward work have positive relationship with organizational commitment. Boshoff and Mels (1995) reported strong positive relationship between organizational commitment and performance by measuring internal service quality. Tsai and Wu (2011) hold the opinion that organizational commitment functions as a mediator between internal marketing and service quality. The relative influence of employee commitment to the organization on delivering service has been considered in the context of service quality (Zeithaml et al., 1990).

Commitment to service quality also has been defined as an attitudinal commitment, which represents the employee's dedication to providing quality service to customers (Ahmed and Parasuraman, 1994). Mowday et al. (1979) suggested that commitment to service quality is similar to organizational commitment. However, Hartline and Ferrell (1996) explored the increase in employees' commitment to service quality aimed to improve the organization's service quality rather than the employee's commitment to the organization itself. Furthermore, previous research mentioned that the high level of service quality commitment of middle managers would have significant effects on employees' commitment to service quality, enhancing customer satisfaction, and lower turnover rate (Mathieu and Zajac, 1990; Hartline and Ferrell, 1996; Schwepker and Hartline, 2005). In order to test the relations between organizational commitment and service quality commitment, the following hypothesis is proposed in this research (see **Figure 1**):

H6: *The level of emotional exhaustion for middle managers in the hotel industry negatively influences their level of organizational commitment.*

H7: *The level of emotional exhaustion for middle managers in the hotel industry negatively influences their level of service quality commitment.*

H8: *Hotel middle managers' organization commitment positively influences their service quality commitment.*

TABLE 1 | Respondents' socio-demographic characteristics.

Variable		Frequency	Percent	Mean (*SD*)
Age	<40 years of age	64	24.1	48.5 (12.0)
	40–49	68	25.6	
	50–59	84	31.6	
	>60 years of age	50	18.8	
	Total	266	100.0	
Gender	Male	115	44.6	
	Female	143	55.4	
	Total	258	100.0	
Income	<$1,000	52	23.4	6,266.6 (13,810.1)
	$1,001–$3,000	73	32.9	
	$3,001–$6,000	49	22.1	
	>$6,001	48	21.6	
	Total	222	100.0	

METHODS

Sample and Data Collection

In order to examine the hypothesized model, we conducted an online survey with approval of IRB. The sample of this study consists of middle managers from full-service hotels in metropolitan cities in the Southern United States. One thousand questionnaires were randomly distributed via Qualtrics online survey tool with screening questions that asking respondents' position at the hotel at the beginning of the survey after consent form signed by respondents. Of those, 312 questionnaires were returned. A total of 266 usable questionnaires were obtained after list-wise deletion for a 26.6% response rate. Sample characteristics show 147 of the respondents were females. The average age of the respondents was 48.5 years old. The reported average monthly income was $6,266.60 (**Table 1**).

Measurements

All items in this study were measured on seven-point Likert-type scales. For the purposes of this study, eleven personality traits items by Jolson and Comer (1997) were used to measure instrumental (e.g., I am assertive) and expressive (e.g., I am sensitive to the needs of others) personality traits with the reliability of 0.93. Emotional labor measurements were adopted from Kruml and Geddes (2000) study (e.g., To do my job well, I talk myself into showing emotions that are different from what I truly feel.) which provided the reliability of 0.89. Three items of emotional exhaustion scales (e.g., I feel burned out from my work) by Maslach and Jackson (1981) were modified with reliability of 0.93. Finally, two commitments, five items of organizational (e.g., I would accept almost any types of job assignment in order to keep working for this organization: Mowday et al., 1979), and three items of service quality commitment (e.g., I enjoy discussing quality-related issues with people in my organization: Schwepker and Hartline, 2005) were used with reliability of 0.93 for both. All measurements were pilot tested and pre-tested with a group of hotel managers (**Table 2**).

Reliability and Validity Test – Measurement Test

Table 3 shows that all of the alpha coefficients for the data exceed the minimum standard of reliability (Cronbach's $\alpha = 0.70$) recommended by Nunnally (1978) for basic research. This indicates the reliability of the measures. Following Anderson and Gerbing (1988) two-step approach, a measurement model was estimated before the structural model. Results of the confirmatory factor analysis on the key constructs were good: $\chi^2_{237} = 328.073$, $p < 0.00$; GFI = 0.909; NFI = 0.937; RMR = 0.081; CFI = 0.981; RFI = 0.926; IFI = 0.982; TLI = 0.978; RMSEA = 0.038), and all of the indicator loadings were significant ($p < 0.01$). As shown in **Table 3**, the average variances extracted were all above 0.50, indicating convergent validity. Discriminant validity exists when the proportion of variance extracted in each construct [AVE; $\rho_{vc(\eta)}$] exceeds the square of the coefficient representing its correlation with other constructs (Fornell and Larcker, 1981). The results of confirmatory factor analysis along with mean,

TABLE 2 | Resources and measurements of variables.

Construct	Measurement items	Resources
Personality traits (instrumental)	1. I am independent. 2. I am assertive. 3. I have strong personality. 4. I am dominant. 5. I am willing to take a stand on issues. 6. I am aggressive	Jolson and Comer, 1997
Personality traits (expressive)	1. I am sensitive to the needs of others. 2. I am understanding. 3. I am compassionate. 4. I am warm. 5. I am gentle.	Jolson and Comer, 1997
Emotional labor	1. To do my job well, I talk myself into showing emotions that are different from what I truly feel. 2. When working with customers, I attempt to create certain emotions in myself that present the image my company desires.	Kruml and Geddes, 2000
Emotional exhaustion	1. I feel burned out from my work. 2. I feel fatigued when I get up in the morning and have to face another day on the job. 3. I feel emotionally drained from my work.	Maslach and Jackson, 1981
Commitment (organizational)	1. I talk up my organization to my friends as a great organization to work for. 2. I would accept almost any types of job assignment in order to keep working for this organization. 3. I feel this organization really inspires the very best in me in the way of job performance. 4. This is the best of all possible organizations for which to work. 5. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	Mowday et al., 1979
Commitment (service quality)	1. I feel strongly about improving the quality of my organization's services. 2. I enjoy discussing quality-related issues with people in my organization. 3. I really care about the quality of my organization's services.	Schwepker and Hartline, 2005

standard deviation, and the construct correlations between each construct are presented in **Tables 3**, **4**.

Structural Modeling Test

Table 5 summarizes the results of the structural equation model of this study. The fit indices of the research model shows goodness-of-fit: $\chi^2_{243} = 364.297$, $p < 0.00$; GFI = 0.901; NFI = 0.930; CFI = 0.975; RFI = 0.920; IFI = 0.975; TLI = 0.972; RMSEA = 0.043. With regard to RMSEA, the fit index was 0.043, which was below the recommended cut-off level of 0.08 (Hair et al., 2006). With these multiple fit indices indicating a reasonable fit for this model, the results indicated that the data fit the model fairly well. The results of path coefficients supported all the hypotheses except for H1, H2, H4, and H7.

H1 and H2, which proposed a causal relationship between sub-dimension of instrumental personality trait to emotional labor and emotional exhaustion, were not supported. As another sub-dimension of expressive personal trait toward emotionalexhaustion was not supported (H4), only expressive personal trait toward emotional labor was supported (H3: $\beta = 0.389$, $t = 4.126$, $p < 0.001$). Emotional labor toward emotional exhaustion (H5) was supported ($\beta = 0.518$, $t = 6.309$, $p < 0.001$). H6, regarding the effect of emotional exhaustion on organizational commitment, was supported ($\beta = -0.453$, $t = -9.102$, $p < 0.001$), however, H7, regarding the relationship between emotional exhaustion and commitment to service quality, was not supported ($\beta = 0.018$, $t = 0.397$). Finally, H8, which hypothesized the relationship between organizational commitment and commitment to service quality, was supported ($\beta = 0.335$, $t = 6.027$, $p < 0.001$).

DISCUSSION AND CONCLUSION

This study provides researchers with several important additions to the information on personality traits, emotionally related constructs, and commitment in two aspects: organizational and service quality. First, with support for 4 of the 8 linkages, the results indicate a better fitting model for hotel services industry and expand previous research to the managerial level. This study also provides a foundation for researchers to deepen understanding of the role of personality traits and emotional variables for middle managers in the hotel industry. This study finds that expressive personality trait is the main predictor of emotional labor rather than instrumental personality trait. This could be explained by the nature of expressive personality, which is an integral part of building relationship with customers such as warmth, empathy, kindness, patience and so on (Jolson and Comer, 1997). According to McFarland and Kidwell (2006), employees with expressive traits are more likely to concern about other people's feelings and thus are able to meet other customers' needs for the sake of their own intrinsic reward. As expressive personality traits tend to focus on developing relationships with

TABLE 3 | Reliability and validity tests.

Variable	Indicator	Loading	*t*-value	SMC	Cronbach-α	AVE	C.R
Personality traits (instrumental)	PI 1	1.27	14.60	0.69	0.931	0.70	0.93
	PI 2	1.32	15.57	0.77			
	PI 3	1.14	15.18	0.73			
	PI 4	1.39	16.67	0.86			
	PI 5	1.33	13.45	0.60			
	PI 6	1.00	–	0.58			
Personality traits (expressive)	PE 1	1.03	14.88	0.65	0.894	0.63	0.79
	PE 2	0.95	13.39	0.56			
	PE 3	1.00	14.37	0.62			
	PE 4	1.08	14.78	0.64			
	PE 5	1.00	–	0.68			
Emotional labor	EL 1	1.06	9.48	0.77	0.844	0.73	0.64
	EL 2	1.00	–	0.69			
Emotional exhaustion	EE 1	1.01	19.96	0.75	0.926	0.81	0.77
	EE 2	1.09	22.98	0.89			
	EE 3	1.00	–	0.79			
Commitment (organizational)	CO 1	0.90	18.83	0.68	0.930	0.73	0.85
	CO 2	1.00	–	0.83			
	CO 3	0.97	20.19	0.73			
	CO 4	0.99	20.90	0.75			
	CO 5	0.85	18.37	0.67			
Commitment (service quality)	CS 1	1.02	26.05	0.83	0.934	0.83	0.92
	CS 2	1.00	–	0.91			
	CS 3	0.88	22.83	0.75			

Goodness-of-fit: χ^2_{237}*= 328.073, p < 0.00; GFI = 0.909; NFI = 0.937; RMR = 0.081; CFI = 0.981; RFI = 0.926; IFI = 0.982; TLI = 0.978; RMSEA = 0.038.*

TABLE 4 | Construct means, standard deviations, and correlations.

Construct	PI	PE	EL	EE	CO	z
PI	1.00					
PE	−0.26	1.00				
EL	0.04	0.24	1.00			
EE	−0.01	0.19	0.42	1.00		
CO	0.18	−0.01	−0.19	−0.52	1.00	
CS	0.29	−0.07	−0.04	−0.21	0.43	1.00
Means	5.81	3.76	3.57	3.36	5.34	6.21
S.D	0.90	1.25	1.65	1.82	1.37	1.06

PI, Personality Traits (Instrumental); PE, Personality Traits (Expressive); EL, Emotional Labor; EE, Emotonal Exhaustion; CO, Commitment (Organizational); CQ, Commitment (Service Quality).

TABLE 5 | Structural models results.

Structural path	Coefficient	*t*-value
H1: Personality traits (instrumental) → emotional labor	0.254	1.717
H2: Personality traits (instrumental) → emotional exhaustion	-0.022	-0.146
H3: Personality traits (expressive) → emotional labor	0.389	4.126***
h4: personality traits (expressive) → emotional exhaustion	0.142	1.446
H5: Emotional labor → emotional exhaustion	0.518	6.309***
H6: Emotional exhaustion → commitment (organizational)	-0.453	-9.102***
H7: Emotional exhaustion → commitment (service quality)	0.018	0.397
H8: Commitment (organizational) → commitment (service quality)	0.335	6.027***

Goodness-of-fit: χ^2_{243}*= 364.297, p < 0.00; GFI = 0.901; NFI = 0.930; CFI = 0.975; RFI = 0.920; IFI = 0.975; TLI = 0.972; RMSEA = 0.043.*
****p < 0.001.*

customers, managers who encompass expressive traits are more likely to become involved with emotional labor.

Surprisingly, both instrumental personality traits and expressive personality traits were not significant predictors of emotional exhaustion. However, personality traits indirectly influenced emotional exhaustion, which was mediated by emotional labor. Given that emotional exhaustion was not significantly related to commitment to service quality within this model, this study suggests that emotional exhaustion could indirectly affect commitment to service quality through commitment to organization. This finding is in line with the study of Cropanzano et al. (2003) that emotional exhaustion directly affects organizational commitment and indirectly affects effective work behaviors including work attitudes, job performance, and turnover intentions, which are mediated by organizational commitment.

When looking at integrated emotional variables, emotional labor and emotional exhaustion, this study provides several important insights to consider as this area of study advances. First, this study confirms the findings of the previous studies (e.g., Cho et al., 2013), even in the different industries and employee's rank settings. Meanwhile, it also discloses the following discrepancies, which can be industry and employees rank specific: personality traits are not entirely related to emotion, in general; an instrumental personality trait has no significant link to emotional variables; emotional exhaustion does not fully influence overall commitment. All in all, the results confirm the impact of hotel middle managers' expressive personality traits on their commitment, which is mediated by emotional variables.

Implications

Overall, this study provides owners and upper-level managers in the hotel industry with strong evidence that managers' emotions are pivotal when trying to increase organizational commitment. Given that integrated emotional variables, emotional labor and emotional exhaustion, are the main predictors of organizational commitment, ultimately enhancing commitment to service quality, hotel industry upper-level administrators or owners need to set realistic job expectations with appropriate emotional screening and training. When managers fail to manage emotions, these employees have an increased probability of failing to commit to service quality and the organization, in turn impacting line personnel. Thus, owners and upper-level management should consider focusing on developing methods or training to identify and hire employees who are adept at managing their emotions.

The results confirmed the importance of individual employees' expressive personality traits, which can indirectly enhance organizational commitment to improving the commitment to service quality that mediated by emotional labor and emotional exhaustion. A selection process that can identify employees with high expressive personality traits should result in the hiring of those who can cope effectively with relationships in situations involving emotional labor. By implementing some personality traits testing during the selection process, employers can assess candidate's expressive personality traits in terms of his or her unique relational competencies, interaction involvement, expression of genuine concern for customers, and friendliness.

Further, hotel industry organizations should foster a work setting that consistently promotes congruent emotions via regular training and screening. Understanding emotion and reducing employees' emotional exhaustion is the next key area to focus on in increasing organizational commitment and ultimately increasing employees' service quality commitment and reducing employees' turnover intentions. In addition, the early identification of employee emotional exhaustion is critical because it significantly influences organizational commitment and, possibly, turnover intention. Upper-level hotel managers can regularly track their departmental manager records for sick leaves, injury rates, and absenteeism so that problems can be tackled at an early stage. Besides, senior management can adopt an open work culture policy to encourage subordinates to talk freely; this also leads to a better understanding of the staff's feelings. For instance, general managers or senior executives could host a lunch for managers regularly and encourage them to express their views to management. Managers who identify these concerns and address them will be able to reduce emotional exhaustion.

Limitation and Future Research

As with all research, this study has several limitations. This study focused on middle managers in the hotel industry only. While this allows for more control of industry-specific issues, the ability to generalize the outcomes of the study outside of the hotel industry or different ranks of employees within the industry is limited. Research should examine both the impact of personality traits on full scale and emotional intelligence scale as a new meaningful antecedent for outcomes of emotional variables on commitment. Although it was not intended to assess the effects of different types of middle managers in the study model, the result did not show any significant differences among managers from various departments. However, it is worthwhile to assess the possible moderating effects of managers from different scaled hotels (e.g., limited service, upper-upper scaled, luxury scaled hotels) whether there are different roles of personality and emotional labor that have impacts on employees attitude and behaviors toward the organization.

Cross-cultural studies could also investigate the possible moderating effects of culture in the relationships among study variables. Furthermore, this study could apply to different sectors of the hospitality industry that look at similar forms of emotional labor, such as the restaurant and airline industries using cross-sectional studies. Second, due to the nature of this study as a self-reported data-based study, the possible threat of common method variance may be present (Campbell and Fiske, 1959). For future studies, the multi-method process may be recommended to enhance the validity of the study. Also, as one-shot study, it would be valuable to conduct the future study as a longitudinal study in order to continually assess middle managers' attitude changes. Finally, actual retention rates, quitting behavior, and other demographic information, such as educational background and religious identification should be included in future studies.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of Houston's IRB committee. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

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

ACKNOWLEDGMENTS

This manuscript was supported by Konkuk University in 2016.

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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: 26 May 2020
doi: 10.3389/fpsyg.2020.01052

The Moderating Role of Regulatory Institutional Environment in the Relationship Between Emotional Job Demands and Employee Absenteeism Likelihood of Healthcare Workers. Evidence From the Low-Income Country Context

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OPEN ACCESS

Edited by:
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Reviewed by:
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Denis Chênevert, HEC Montréal, Université de Montréal, Canada

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

Received: *13 January 2020*
Accepted: *27 April 2020*
Published: *26 May 2020*

Citation:
Munyenyembe B, Chen Y-Y and Chou W-C (2020) The Moderating Role of Regulatory Institutional Environment in the Relationship Between Emotional Job Demands and Employee Absenteeism Likelihood of Healthcare Workers. Evidence From the Low-Income Country Context. Front. Psychol. 11:1052. doi: 10.3389/fpsyg.2020.01052

Previous research has not clearly studied how the effects of emotional job demands on absenteeism likelihood are moderated by the contingent absenteeism-related regulatory institutional environments of low-income countries. In this regard, we surveyed 487 healthcare workers in a low-income country in order to test for the effect of emotional job demands on healthcare workers' absenteeism likelihood. We also explored the mediating role of work engagement and the contingent role of context-specific regulatory institutional environments on the link between emotional job demands and absenteeism likelihood. The main findings of this study are as follows: (1) emotional job demands have a direct positive effect on healthcare workers' absenteeism likelihood, (2) work engagement plays a mediating role on the link between emotional job demands and healthcare workers' absenteeism likelihood, and (3) the regulatory institutional environment related to absenteeism moderates the negative link between work engagement and absenteeism likelihood. Results in this study demonstrate the crucial role that the context-specific regulatory institutional environment related to absenteeism plays in suppressing the effect of emotional job demands on absenteeism likelihood when considered through the work-engagement pathway. The study's findings clarify the mechanism through which emotional job demands affect absenteeism likelihood in a low-income country context. The study thus offers a new refined theoretical perspective on how emotional job demands, work engagement, and context-specific regulatory institutional environments interact in ways that predict absenteeism likelihood.

Keywords: absenteeism likelihood, emotional job demands, healthcare workers, low-income country, regulatory institutional environment, work engagement

INTRODUCTION

In the low-income country context, the issue of employee absenteeism is of vital significance because it presents one of the major challenges that organizations face. Even with the availability of official rules providing for possible punitive action in the case of repeated absenteeism, actual enforcement of such official rules has been found to be loose in low-income countries, complicating the problem of rampant employee absenteeism (Chaudhury et al., 2006). Low-income countries have also been characterized by "professional human resource" crises due to the limited availability of adequately trained employed personnel – an issue that underscores the importance of the employee-absenteeism problem (Belita et al., 2013). Employee absenteeism in the low-income country context is regarded as one of the biggest human-capital risks to productivity-improvement goals (Ejere, 2010). Also important to note is that over the past decade, voluminous literature on employee absenteeism has sprung up offering a variety of conceptual models and theories, most of which are constructed from the Anglo-American and Euro-Asian contexts, not low-income country contexts. The scant research has created an ideal opportunity for researchers to systematically document the practices of employee absenteeism in the context of the low-income country (Molleda and Moreno, 2008).

In particular, a general consensus that has emerged points out that the regulatory institutional environments in low-income countries are weak and significantly different from the ones present in developed and emerging economies (Khanna et al., 2005; Meyer and Peng, 2005; Wright et al., 2005; Chaudhury et al., 2006; Gelbuda et al., 2008). Given these regulatory institutional-environment differences, how do emotional job demands affect employee-absenteeism likelihood in the low-income country context? And in this context, does the regulatory institutional environment related to absenteeism play any contingent role in the link between emotional job demands and employee-absenteeism likelihood? On the basis of these research questions, we have adopted the job demands-resource (JD-R) model to understand the effect of emotional job demands on employee-absenteeism likelihood in the low-income country context. We have incorporated the regulatory institutional environment into the JD-R model to test for the contingent role that a low-income country's regulatory institutional environment plays in the link between emotional job demands and employee-absenteeism likelihood.

Employee absenteeism emphasizes the idea that, in normal workplace circumstances, employees can avoid being absent (Avey et al., 2006). This view thus asserts that employee absenteeism represents an optional, or voluntary, behavior unapproved by the organization where the employee chooses not to report for work. As a multidimensional phenomenon, employee absenteeism involves various causes that have been discussed in the literature. Many studies setting out to determine the complex patterns predictive of absenteeism have used predictors of absenteeism relating broadly to personality factors, attitudinal factors, demographic factors, health-related factors, organizational factors, labor-market conditions, and job characteristics (Ćikeš et al., 2018). Other studies have linked various types of job demands to various employee counterproductive work behaviors including employee absenteeism (Grieco, 1987; Robinson and Bennett, 1995; Penney et al., 2011; Appelbaum et al., 2012; Ahmed et al., 2013; Chen et al., 2017). However, no study to our knowledge has incorporated the regulatory institutional environment into the JD-R model in order to clarify (1) how emotional job demands affect employee absenteeism likelihood and (2) how the context-specific regulatory institutional environment moderates the link between emotional job demands and employee absenteeism likelihood.

Linking the JD-R model to the absenteeism of healthcare workers in the context of a low-income country is captivating for two reasons. First, the healthcare-worker density in most low-income countries is well below the World Health Organization (WHO) recommended minimum of 2.5 healthcare workers per 1,000 populations while the burden of disease is high (Kombe et al., 2005; Liu et al., 2017). With such low health care-worker density, the problem of healthcare workers' absenteeism is thus hugely more significant in low-income countries than in developed countries, hence triggering – in the former countries – not only a loss of man hours and a loss of productivity, but also a loss of patients' lives (Oche et al., 2018). In recent years, low-income countries have been challenged with the task of being required to nearly triple their number of healthcare workers, adding some 1 million of them to the existing ranks so as to meet domestic demand (Chen et al., 2004; Liu et al., 2017). Second, in low-income countries, the emergence and re-emergence of infectious diseases such as HIV/AIDS, TB, and malaria have increased demand for health services, putting an additional stress on the countries' already small number of healthcare workers (Richard et al., 2016). With such increased demands for health services coupled with low healthcare-worker density per 1,000 populations, healthcare workers in low-income countries continue to be overwhelmed in a way that makes high job demands a daily operational routine (Dieleman et al., 2009).

Researchers have widely applied management literature's JD-R model to research on employees' counterproductive work behavior, one significant example of which is absenteeism (Schaufeli and Bakker, 2004; Xanthopoulou et al., 2009). Some previous research has proved that work engagement, job anxiety, psychological detachment, burn-out, and job stress play intermediary roles in the link between job demands and counterproductive work behaviors (Schaufeli and Bakker, 2004; Xanthopoulou et al., 2009; Chen et al., 2017). However, the role of the regulatory institutional environment has been ignored as a possible contingency factor in the link between emotional job demands and employee-absenteeism likelihood when looked at through the work-engagement pathway. To our knowledge, no previous research integrated regulatory institutional environments into the JD-R model to test if this factor plays a contingent role in the link between emotional job demands and employee-absenteeism likelihood. The scant research on this possible role particularly in the low-income country context is what prompted the current study.

Overall the current research makes three significant contributions to the literature. First, this study enriches the

JD-R model as a way to better understand employee-absenteeism likelihood in the low-income country context. Our primary hypothesis suggests that emotional job demands positively relate to employee-absenteeism likelihood. Second, the current research incorporates and clearly demonstrates the moderating role that absenteeism-related regulatory institutional environments play in the effect of emotional job demands on employee-absenteeism likelihood. We achieved this objective by testing the moderating role of regulatory institutional environments on the link between emotional job demands and employee-absenteeism likelihood when this link is considered through the work-engagement pathway. The current research should significantly contribute to the literature regarding the role that context-specific regulatory institutional environments play in employee absenteeism. Finally, by featuring a primary survey in a low-income country, the current research extends the geographical reach of other research on employee absenteeism in the low-income country context from both an emotional-job-demand perspective and a regulatory-institutional-environment perspective. Because the low-income country context is quite different from the contexts of developed and emerging economies, the current research sheds additional light on how emotional job demands and the regulatory institutional environment interact with each other in ways that help predict employee-absenteeism likelihood in the low-income country context. Snejina (2011) stressed the need to conduct contextualized research for the purposes of generating accurately generalizable empirical results. The research community therefore recognizes the need for continued systematic country-by-country documentation of employee practices (Molleda and Moreno, 2008; Xu and Meyer, 2012).

THEORETICAL BASIS AND HYPOTHESIS DEVELOPMENT

Emotional Job Demands and Absenteeism Likelihood

Emotional job demands are those psychological or social aspects of a job that require sustained emotional effort and are therefore associated with certain psychological costs (Demerouti and Bakker, 2011). The effect of emotional job demands on employee absenteeism is better explained by the JD-R model, which has gained prominence in recent years and reflects an effort to accommodate two traditional research traditions: the "stress research tradition" and the "motivation research tradition" (Azharudeen and Anton, 2018). The key argument raised under the JD-R model is that although emotional job demands are not necessarily negative, they may turn into job stressors once employees come into contact with emotional demands that require a high expenditure of emotional effort from which the employee fails to recover adequately (Meijman and Mulder, 1998). Emotional job demands, when present in high amounts, are likely to become a source of emotional exhaustion for employees, hence leading to employee absenteeism. Accordingly, we propose the following hypothesis.

Hypothesis 1: There is a positive link between emotional job demands and absenteeism likelihood.

The Mediating Role of Work Engagement

Work engagement has been defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli and Bakker, 2004). Engaged workers put more effort in their jobs, and consequently perceive higher employer obligations than do unengaged workers (Matthijs Bal et al., 2011). Vigor refers to high levels of energy and resilience in work. Dedication is characterized by strong involvement in one's work as well as a sense of significance and enthusiasm. Absorption is a state of being fully concentrated and happily engrossed in one's work. Hence, engaged employees are usually equipped with high levels of energy and are enthusiastically involved in their work (Yongxing et al., 2017).

Because emotional job demands, when in abundance, can become stressors and cause emotional exhaustion as proposed by the JD-R model, we can reasonably expect that employees' vigor, dedication, and disposition are specific casualties in such situations. As such, in the link between emotional job demands and absenteeism likelihood, work engagement may play a significant contributing role. Accordingly, we propose the following hypothesis.

Hypothesis 2: Work engagement mediates the link between emotional job demands and absenteeism likelihood.

The Moderating Role of Regulatory Institutional Environments

The regulatory institutional environment refers to a system of legal rewards and sanctions that ensure compliance behavior (Robert, 1974; Meyer and Rowan, 1977). Institutional theory has been acknowledged as a powerful perspective to examine various phenomena, and it is important in that institutions have the ability to either legitimize or constrain the actions of both individuals and firms (Kreiser et al., 2002). Institutions differ from context to context; in other words, there is no general set of accepted institutions that is applicable to all instances of a particular behavior. The cost-benefit model tells us that individuals are rational beings who carefully calculate the pros and cons of personal decisions (Pearce, 1984; Margalit, 2011). The model assumes that rational decision-makers act in order to maximize their expected utility such that they will consequently cease an activity when they estimate that its costs exceed its benefits. Following the basic ideas of this model, we argue that even though, according to the findings of previous studies, employee work engagement negatively affects absenteeism (Schaufeli and Rhenen, 2009; Soane et al., 2013), employees take into consideration regulatory institutional environments before engaging in absenteeism behavior. Regulatory institutions impose or prescribe standards of acceptable behavior and set the legal penalties for non-observance of those standards. We more specifically argue that the regulatory institutional environment plays a role in moderating the link between work engagement and employee-absenteeism decisions. Accordingly, we propose the following hypothesis.

Hypothesis 3: Regulatory institutional environments moderate the negative link between work engagement and absenteeism likelihood.

Figure 1 presents the current study's research model, which rests on the sum of the hypotheses proposed herein.

MATERIALS AND METHODS

Participants

The population of the current study is healthcare workers in the low-income country of Malawi. We chose Malawi because it was amongst the poorest countries in the world according to World Bank data in 2019[1]. We collected the data by using a convenient non-probability-sampling method in which people are sampled simply because they are "convenient" sources of data for researchers (Lancaster, 2005). We chose healthcare workers as the target population for this study because they have the highest rate of absenteeism in Malawi's workforce (Manafa et al., 2009). A total of 496 healthcare workers replied to this study questionnaire, thus representing a response rate of 82.83%. After screening the data, we removed a total of 9 responses as they were incomplete, thus reducing the responses for processing to 487. Of these respondents, 211 were females and 276 were males, representing 43.33 and 55.65%, respectively. In terms of age, 95 respondents were under 25 years old, 28 respondents were between 25 and 29, 41 respondents were between 30 and 34, 137 respondents were between 35 and 39, 129 respondents were between 40 and 44, and 47 respondents were 45 years old or older. These age-related categories account for 19.5, 5.7, 8.4, 30.2, 26.5, and 9.7% of the total pool respectively.

Procedure

First, we communicated the research objectives to all the participants and guaranteed both their anonymity and our compliance with the ethical standards governing confidentiality in data processing. In 2018, the questionnaires used for data collection were implemented on a Web platform, which enabled the respondents to fill out the questionnaires online. About 600 questionnaires were distributed through the healthcare workers' staff emails, and the questionnaires were all answered online. We included a series of control questions in the questionnaire to detect random and incongruent answers. We discarded incomplete and incongruent questionnaires from the study sample.

Instruments

Absenteeism Likelihood

In this study, rather than use employees' organization records, we used a self-reported proxy to measure for absenteeism likelihood because organizations in such low-income countries as Malawi (our research setting) are unlikely to have accurate absenteeism records. Prior studies have stated that the unavailability of an organization's absenteeism records is a common problem for scholars seeking to measure employee absenteeism, so we have solved the problem by using a self-reported proxy (Johns, 1994, 2003). Johns and Miraglia (2015) concluded that self-reports of absenteeism offer adequate test-retest reliability and that they exhibit reasonably good rank order. Because the focus of our measurements in the current study is on the likelihood of voluntary absenteeism as opposed to involuntary absenteeism, we employ only 5 measurement items out of the 13 items adopted from Paget et al. (1998). This proxy of absenteeism likelihood was originally developed by Nicholson and Payne (1987). Respondents identify the likelihood that each of five common factors might result in an absence from work. An aggregate of their responses serves as an estimate for their absenteeism likelihood. One question corresponds to each of the five factors: (1) "How likely is it that you would be voluntarily absent from work because you are feeling depressed?" (ABL1), (2) "How likely is it that you would be voluntarily absent from work because you had a fallout with your workmates or supervisor?" (ABL2), (3) "How likely is it that you would be voluntarily absent from work because the schedule of a personal activity conflicts with your work schedule?" (ABL3), (4) "How likely is it that you would be voluntarily absent from work because you did not wake up on time to go to work?" (ABL4), and (5) "How likely is it that you would be voluntarily absent from work because you are experiencing minor domestic problems?" (ABL5). We used a 5-point Likert scale ranging from "1 = Not at all" to "5 = Highly likely."

Emotional Job Demands

We measured emotional job demands by using six items adopted from Xanthopoulou et al. (2013). Emotional job demands are also a component of the JD-R model. Questionnaire items include (1) "Is your work emotionally demanding?" (EJD1), (2) "Do you face emotionally challenging situations at your work?" (EJD2), (3) "In your work, are you confronted with things that personally touch you?" (EJD3), (4) "In your work, do you deal with clients who incessantly complain, although you always do everything to help them?" (EJD4), (5) "Do you have to deal with clients who do not treat you with the appropriate respect and politeness?" (EJD5), and (6) "In your work, do you have sentimental experiences?" (EJD6). We used a five-point Likert scale ranging from "1 = Never" to "5 = Always."

Work Engagement

We measured work engagement by using nine items adopted from Schaufeli and Bakker (2004). There questionnaire items are: (1) "At my work, I am bursting with energy" (WE1), (2) "At my job, I feel strong and vigorous" (WE2), (3) "When I get up in the morning, I feel like going to work" (WE3), (4) "I am enthusiastic about my job" (WE4), (5) "At my job, I feel strong and vigorous (WE5)," (6) "I feel happy when I am working intensely" (WE6), (7) "My job inspires me" (WE7), (8) "I am immersed in my work" (WE8), and (9) "I get carried away when I am working" (WE9). We used a five-point Likert scale ranging from "1 = Never" to "5 = Always."

[1]https://www.worldbank.org/en/country/malawi/overview

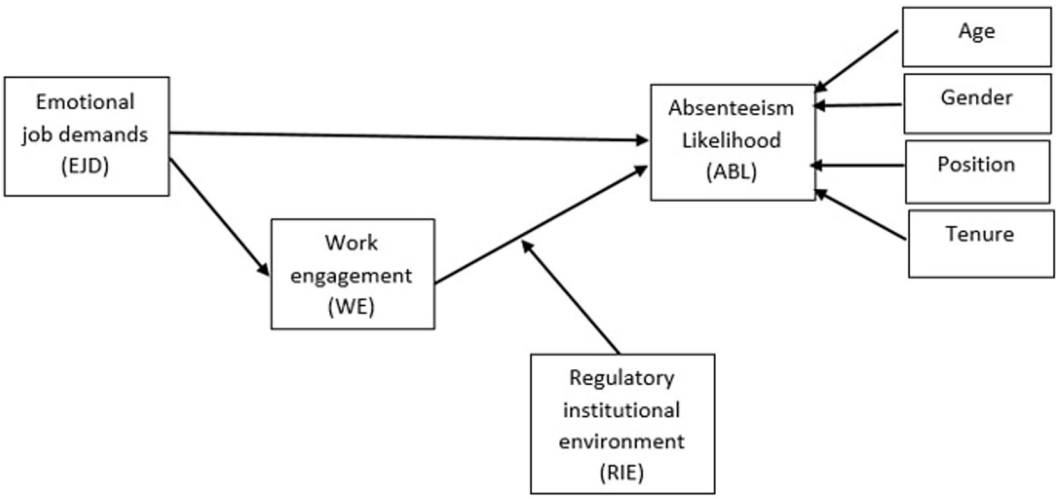

FIGURE 1 | Proposed study framework.

Regulatory Institutional Environment

We measured regulatory institutional environment by using three items that we had specifically developed for this study on the basis of previous studies: Bamberger and Michal (2007); Busenitz et al. (2000), Kostova (1997), and Parboteeah et al. (2008). Because no general set of accepted institutions (regulatory, normative, and cognitive) is applicable to all contexts of a particular behavior, we employed some items that better fit our current research context (Merton, 1968; Robert, 1974; Meyer and Rowan, 1977). We concurred with Kostova (1997) and Roxas and Coetzer (2012), who argued that each study should develop its own items to measure a particular construct in an institutional environment so that in this way the items can be domain specific. For our current study, we conducted interviews with fifteen health experts in Malawi to help confirm if the items developed represented the existing regulatory institutional environment related to healthcare workers' absenteeism in a hospital setting. The interviews conducted confirmed that those three items of the regulatory institutional environment were related to healthcare workers' absenteeism and represented a system of sanctions and rewards aimed at ensuring healthcare workers' compliance with work attendance behavior. We used questionnaire items: (1) "Being voluntarily absent from my work will lead to a reduction in my wages" (RIE1), (2) "Being voluntarily absent from my work will lead to disciplinary measures" (RIE2), and (3) "Being voluntarily absent from my work will lead to reductions in my promotion opportunities" (RIE3). We used a 5-point Likert scale ranging from "1 = Strongly disagree" to "5 = Strongly agree."

Control Variables

Drawing on previous research, we controlled for respondents' age, gender (1 = Male, 2 = Female), position, and tenure. We extracted the data from the biographical information provided by respondents on the study questionnaire. We measured age on the basis of a single question ("How old are you?") to which the respondents replied by simply filling in the appropriate age. We measured position by having respondents select one of three options: (1) junior, (2) senior, and (3) supervisor. We measured tenure by having respondents select one of six options: (1) less than 1 year, (2) 1 to less than 2 years, (3) 2 to 3 less than years, (4) 3 to less than 5 years, (5) 5 to less than 10 years, or (6) more than 10 years.

Pilot Test

In order to test for the reliability of the study's construct prior to conducting the main survey, we conducted a pilot study. During the pilot study, a sample of 125 healthcare workers responded to the test questionnaire that we had sent them via email. Their ages ranged from 24 to 48. The pilot-study results indicated that all the study constructs were reliable for use in the study: emotional job demands (Cronbach $\alpha = 0.778$), work engagement (Cronbach $\alpha = 0.845$), regulatory institutional environment (Cronbach $\alpha = 0.774$), and absenteeism likelihood (Cronbach $\alpha = 0.865$). From the pilot test results, it can be seen that all the study constructs had Cronbach's Alphas greater than 0.7, indicating sufficient reliability of the study constructs (Patten, 2000; Creswell, 2002).

Data-Analysis Strategy

We used structural equation modeling (SEM) and the analytical tool of AMOS 21 to test our research model in this study. To further test the significance of the mediating effect, we employed bootstrap analysis. We empirically tested the moderation effect by using moderated regression and the analytical tool of SPSS 21. Before undertaking further data analyses, we processed each study variable by performing data cleaning and imputation (via the mean value of each item). In this way, we infused our data with sufficient robustness.

Multicollinearity Assessment

We initially conducted a multicollinearity assessment in order to rule out the possibility of multicollinearity issues. To this end,

TABLE 1 | Exploratory factor analysis.

Constructs and measures	Average	SD	Standardized loadings	Construct reliability (CR)	Average variance extracted (AVE)
Emotional job demands					
EJD1	3.72	1.325	0.804	0.639	0.898
EJD2	3.69	1.383	0.864		
EJD3	3.74	1.357	0.885		
EJD4	3.99	1.192	0.723		
EJD5	4.04	1.2	0.703		
Work engagement					
WE3	2.51	1.079	0.675	0.571	0.867
WE4	2.28	1.023	0.745		
WE5	2.19	1.098	0.877		
WE6	2.07	1.042	0.848		
WE7	2.33	1.031	0.595		
Absenteeism					
AB1	3.71	1.36	0.817	0.741	0.934
AB2	3.75	1.553	0.951		
AB3	3.72	1.55	0.962		
AB4	3.19	1.321	0.718		
AB5	3.53	1.294	0.829		
Regulatory institutions					
RIE1	3.59	1.596	0.735	0.669	0.858
RIE2	4.13	1.191	0.893		
RIE3	4.15	1.196	0.818		

we examined variance inflation factors (VIFs). Hair et al. (1995) recommended that multicollinearity is a concern if a VIF value is higher than 10, as such a value inflates the variance of regression parameters and can thus lead to the wrong identification of relevant predictors in a statistical model. The results of our multicollinearity analysis reveal that all study constructs had VIF values less than 10. In other words, our study suffered from no multicollinearity issues. In fact, the highest VIF value observed was 1.117 in this study.

Common Method Bias

The current study design is cross-sectional in nature and may suffer from mono-methodological bias (Podsakoff et al., 2003, 2012). We thus conducted Harman's single factor test in order to rule out common method bias (Harman, 1976). The test, in general, explains that common method bias is present when only one factor emerges or when one factor accounts for more than 50% of the variance associated with all items loaded simultaneously in a factor analysis (Harman, 1976). The outcome of the current study's factor analysis shows that a single factor explained 34.923% of the total variance. The result indicates that no single factor accounted for more than 50% of the variance of all the simultaneously loaded items. This leads to our conclusion that there was no common method bias in our study's data set.

RESULTS

Following the suggestions offered by Anderson and Gerbing (1988) on structural equation modeling (SEM), we used a two-stage approach in order to test for our model in AMOS 21. First, we conducted a confirmatory factor analysis to assess the quality of the measurement model. Second, we used a structural model to test our hypotheses. We then, using the bootstrap method, conducted a further analysis pertaining to the significance of the mediating effect. We tested for the moderating effect by using moderated regression analysis in SPSS.

Measurement Model

There are four latent factor (emotional job demands, work engagement, regulatory institutional environment, and absenteeism likelihood) and 18 observed variables. In the first step, we conducted an exploratory factor analysis of each of the constructs individually to test for uni-dimensionality as shown in **Table 1** (Anderson and Gerbing, 1988). We discarded any item that had a factor loading less than 0.6 (Bagozzi and Yi, 1988). The eliminated items are 0.518 for EJD6, 0.381 for WE1, 0.559 for WE2, 0.555 for WE8, and 0.307 for WE9. As **Table 1** shows, the composite reliability values ranging from 0.571 to

TABLE 2 | Descriptive statistics, correlations, and reliability.

Constructs	1	2	3	4
1. Emotional job demands	***0.948***			
2. Work engagement	−0.153**	***0.931***		
3. Absenteeism	0.560**	−0.262**	***0.966***	
4. Regulatory institutions	−0.170**	0.137**	−0.341**	***0.926***

The bold and italicized cells display the values of the squared averaged variance extracted, while others show the values of the correlated coefficients between our constructs.

TABLE 3 | Fit indices for the measurement models (N = 487).

	χ^2	df	χ^2/df	$\Delta\chi^2$ (df)	p	RMSEA	CFI	IFI	TLI
One factor	3475.1	275	12.637			0.155	0.692	0.694	0.625
Two factor	2349.32	269	8.73			0.126	0.797	0.698	0.640
Three factor	1173.15	235	4.99			0.091	0.862	0.863	0.817
Four factor	785.06	219	3.58			0.073	0.945	0.940	0.925
One factor vs. 2				1125.78 (6)	0.05				
One factor vs. 3				2301.95 (40)	0.05				
One factor vs. 4				2690.04 (54)	0.05				
Two factor vs. 3				1176.17 (34)	0.05				
Two factor vs. 4				1564.26 (50)	0.05				
Three factor vs. 4				388.09 (16)	0.05				

RMSEA, root mean square error of approximation; CFI, comparative fit index; IFI, incremental fit index; and TLI, Tucker Lewis Index. A comparison of the change in χ^2 shows that they are all significantly different meaning that the four-factor model is superior to all others.

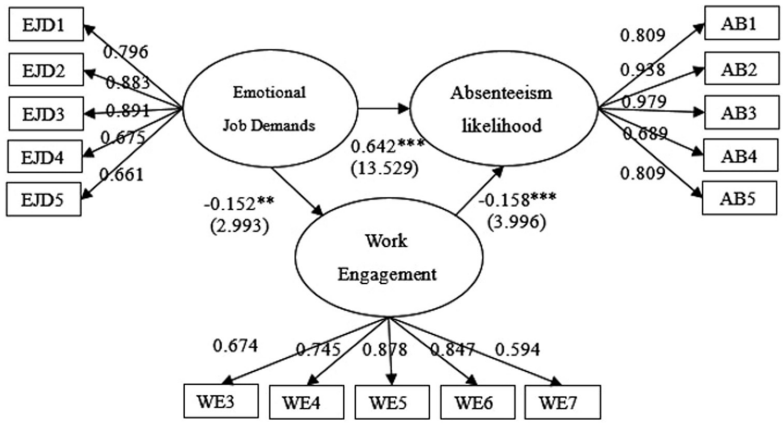

FIGURE 2 | The structural model for emotional job demands, work engagement, and absenteeism likelihood.

0.741 were greater than (or approaching) the suggested cut-off of 0.6 (Bagozzi and Yi, 1988). The average variance extracted (AVE) values fell into a range between 0.867 and 0.934. All of these values are greater than the threshold of 0.5. Moreover, all factor loadings were greater than the threshold value of 0.6. Overall the results indicate satisfactory reliability regarding the latent variables. We checked the discriminant validity of the latent variables. In **Table 2**, the values of the square roots of the AVE were all greater than the correlated coefficient values between any two constructs illustrating that our data achieved satisfactory discriminant validity (Espinoza, 1999).

We then deployed CFA by comparing four models to distinguish study variables including emotional job demands, work engagement, regulatory institutional environment, and absenteeism likelihood. We compared one-factor model (all observed variables loaded on a single factor), two-factor model (emotional job demands and work engagement as one factor and regulatory institutional environment and absenteeism likelihood as the other), three-factor model (emotional job demands and work engagement as one factor and regulatory institutional environment and absenteeism likelihood as separate factors), and four-factor model (emotional job demands, work engagement, regulatory institutional environment, and absenteeism likelihood as separate factors). CFA results revealed that the four-factor model demonstrated the better fit as shown in **Table 3**. This measurement model showed a better fit: χ^2 (219, N = 487) = 785.06; RMSEA = 0.073, CFI = 0.945, IFI = 0.940, TLI = 0.925. In **Table 3**, a comparison of the $\Delta\chi^2$ also reveals that the four-factor model is superior to all other models.

Structural Model With Work Engagement as a Mediator

We created our measurement model after conducting validity and reliability tests in a CFA. Further, we developed a

TABLE 4 | Bootstrap results for total, direct and indirect effect.

	Path	Estimated Effect	LL 99% CI	UL 99% CL
Total Effect	EJD → ABL	0.6470	0.5346	0.7593
Direct Effect	EJD → ABL	0.6150	0.5038	0.7262
Indirect Effect	EJD → WE→ ABL	0.0320	0.0068	0.0692

Empirical 99% confidence interval does not overlap with zero. CI, confidence interval; EJD, emotional job demands; WE, work engagement; ABL, absenteeism likelihood.

structural model to test the proposed hypotheses in this study. We employed AMOS 21 to conduct a path analysis. **Figure 2** shows the results from the analysis: they present the path coefficient from the independent constructs to their corresponding constructs as stated in the research hypotheses. Overall, the structural model shows acceptable goodness of fit with χ^2/df = 3.001, RMSEA = 0.078, GFI = 0.937, CFI = 0.972, NFI = 0.959, PCFI = 0.750, IFI = 965 and PNFI = 0.739. Furthermore, the results of SEM show that emotional job demands had significant and positive effects on absenteeism likelihood with a β coefficient of 0.642; these results thus support H1. Furthermore, the influence of emotional job demands on work engagement was significant and negative (β coefficient = −0.152, *t*-value = 2.993). The influence of work engagement on absenteeism likelihood was significant and negative (β coefficient = −0.158, *t*-value = 3.996). The results of the comparison between the β of direct and indirect paths of work engagement as a mediator in the link between emotional job demands and absenteeism likelihood show that the indirect effects of 0.024 (i.e., −0.158 * −0.152) are less than the direct effects of 0.642. This result indicates that work engagement is a significant mediator in the relationship; the overall results thus support H2.

We conducted a bootstrap analysis to further test the extent to which work engagement had a mediating effect on the link between emotional job demands and absenteeism likelihood. This post-SEM analysis has been adopted by many scholars, such as Gong et al. (2020) and Nauman et al. (2018) with the aim of strengthening the initial mediating-effects results. Bootstrap samples (5,000) were generated from the original sample set (N = 487) through random sampling. The absence of zero in the 99% confidence interval for the estimates indicates that the mediation effect was significant (Cheung and Lau, 2008). **Table 4** demonstrates the mediating effects that work engagement have in the link between emotional job demands and absenteeism likelihood. **Table 4** also shows the results of the mediation analysis. As indicated in **Table 4**, work engagement exerted significant indirect effects on the link between emotional job demands and absenteeism likelihood offering further credence to H2.

TABLE 5 | Moderated regression analysis results.

Variables	β
Controls	
Gender	−0.035
Age	−0.099
Position	−0.037
Tenure	0.049
Predictors	
Emotional job demands	0.465***
Work engagement (WE)	−0.150***
Moderator	
Regulatory Institutional Environment (RIE)	−0.230***
Interaction Effect	
WE × RIE	−0.081**
R^2 (Adjusted R^2)	0.421 (0.411)

***P < 0.05; ***P < 0.01. Regression results above are for the complete model with all the variables entered at the same time.*

The Moderating Effect of Regulatory Institutions

Hypothesis 3 predicts that regulatory institutional environment moderates the negative link between work engagement and absenteeism likelihood. We conducted a moderated regression analysis to analyze this moderating effect. **Table 5** presents the results. The results show that the interaction term has a statistically significant coefficient (β = −0.081, $p < 0.05$), implying that regulatory institutional environment has a moderating effect on the negative link between work engagement and absenteeism likelihood. **Figure 3** presents the graphical plot of the moderating effect of regulatory institutions on the link between work engagement and absenteeism likelihood. In the plot, the moderating effect is significantly higher in the high regulatory institutional environment than in the low one.

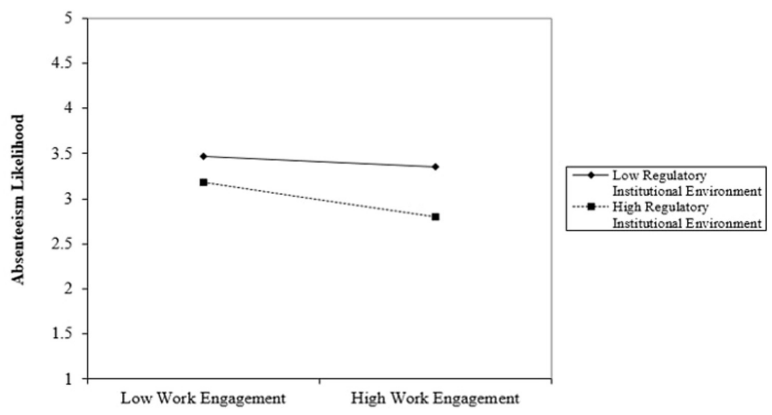

FIGURE 3 | Moderating effect of regulatory institutional environment in the relationship between work engagement, and absenteeism likelihood.

DISCUSSION

The results of our current study not only demonstrate the positive link between the emotional job demands and the absenteeism likelihood of healthcare workers but also highlight important possible work-engagement interventions that management can adopt to lessen the effects of emotional job demands on employee-absenteeism likelihood. Managers should consider not only stiffening the regulatory institutions pertaining to absenteeism but also increasing employees' awareness of the regulatory institutions as these steps will very likely lessen the negative effect of low work engagement on employee-absenteeism likelihood.

This study also makes a number of contributions to the theoretical side of this issue. First, this study has enriched the JD-R model as it concerns employee absenteeism in the context of low-income countries. Our primary hypothesis suggested that emotional job demands positively relate to employee-absenteeism likelihood, and our findings indeed demonstrate the existence of this link in the context of low-income countries. Second, this article has incorporated and clearly demonstrates the role of the regulatory institutional environment in the effect of emotional job demands on employee-absenteeism likelihood. To demonstrate this role, we tested specifically the moderating role played by the regulatory institutional environment in the link between work engagement (an outcome of emotional job demands) and employee-absenteeism likelihood. In so doing, we have brought into clearer focus the pertinent roles played by context-specific regulatory institutional environments. Third, because past research has found that low-income countries' regulatory institutional environments are weak, it is worth noting that – according to our current study – these environments still matter as they moderate the negative effect of work engagement on absenteeism likelihood. Fourth, by conducting a survey in a low-income country, we have extended the geographical reach of research on employee absenteeism. Fifth, this study has demonstrated the applicability of the JD-R model to low-income countries and to regulatory institutional environments. Because the economies in low-income countries are markedly different from those in developed and emerging economies, this study sheds considerable light on how emotional job demands, work engagement, and regulatory institutional environment all interact to predict employee absenteeism.

Limitations and Future Research Directions

As with all studies, the current one has its limitations. The first one concerns this study's absenteeism-likelihood measurement item, which requires respondents to self-assess the likelihood of their being absent across five common reasons. In reality, there are more than just five reasons underlying employees' decision to be absent from work. The results of this study should be carefully interpreted in light of this fact. Further studies can test the current study's findings by using a different measure of employees' absenteeism. A second limitation is time, as we had to collect the results during a disappointingly short period (Collins et al., 2015). Another limitation comes from linguistic problems that arose: although English is the official language of Malawi, we could not guarantee that every respondent had sufficiently high English-comprehension skills when interpreting the questionnaire's wording. Lastly, in this study, we collected the data of all variables from the same group of respondents in one-time period via a cross-sectional survey. We chose this approach owing to the difficulty of collecting data from healthcare workers in two time periods. This data-collection approach may suffer from common method variance (Podsakoff et al., 2003). However, it bears repeating that we conducted a Harman's single factor test to rule out the problem. Additional studies would do well to develop a normative approach relative to regulatory institutional environment in documenting the problem of absenteeism in the low-income country context. Such studies will offer additional clarity to our understanding of how employee absenteeism manifests itself in low-income countries.

CONCLUSION

This study has offered additional insights into how emotional job demands relate positively to employee-absenteeism likelihood in the context of low-income countries. In general, the greater the emotional demands of a job are, the higher the absenteeism likelihood of the employees will be. Work engagement mediates the effect of emotional job demands on employee-absenteeism likelihood, and this mediation highlights the important role of workplace attitudes in explaining the effects of emotional job demands on employee absenteeism. But most important to note is the moderating role of the regulatory institutional environment in the negative link between work engagement (an outcome of emotional job demands) and absenteeism likelihood. This finding demonstrates how regulatory institutional environments moderate the link between emotional job demands and employee-absenteeism likelihood when considered through the work-engagement pathway.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Research Committee at the National Dong Hwa University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

BM carried out the data collection and analysis, and wrote the manuscript. Y-YC helped with the designing of the study framework and edited the manuscript. W-CC helped with analysis of the data set and interpretation of the results.

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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: 26 May 2020
doi: 10.3389/fpsyg.2020.00893

Team Emotional Intelligence in Working Contexts: Development and Validation of the Team-Trait Meta Mood Scale (T-TMMS)

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The collective construct of Team Emotional Intelligence (TEI) has been widely used and discussed. However, although several studies have examined the relationship between individual emotional intelligence and transformational leadership, few reports have explored the TEI of leadership teams. The aim of this study was to develop a scale to measure TEI, developing and validating the T-TMMS in a sample of 1,746 participants grouped into 152 leadership teams. The research design of the study was cross-sectional, and, in order to observe reliability as well as the construct, convergent, and predictive validity of the scale, we conducted an internal consistency analysis, confirmatory factor analysis, as well as a correlation and hierarchical linear regression analysis. The T-TMMS showed a three-factor structure (Attention, Clarity, and Repair), with adequate internal consistency, temporal stability, and convergent validity. We also examined the relationship between TEI and organizational performance. The limitations and implications of this new scale for organizational contexts are discussed.

Keywords: emotional intelligence, teams, leadership, validity, reliability, scale

OPEN ACCESS

Edited by:
María del Mar Molero, University of Almería, Spain

Reviewed by:
Antonio Granero-Gallegos, University of Almería, Spain
Juana Gómez-Benito, University of Barcelona, Spain

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

Received: *28 January 2020*
Accepted: *09 April 2020*
Published: *26 May 2020*

Citation:
Aritzeta A, Mindeguia R, Soroa G, Balluerka N, Gorostiaga A, Elorza U and Aliri J (2020) Team Emotional Intelligence in Working Contexts: Development and Validation of the Team-Trait Meta Mood Scale (T-TMMS). Front. Psychol. 11:893. doi: 10.3389/fpsyg.2020.00893

INTRODUCTION

The collective construct of Team Emotional Intelligence (TEI) has been widely used and discussed in the field of work and organizational psychology as an important predictor of a number of variables related to individual and group behavior. For example, it has been shown that teams with high TEI cooperate more, coordinate their work better, and communicate more effectively than do teams with low TEI (Lee and Wong, 2017). Studies have likewise found that teams composed of individuals with high EI showed lower levels of conflict, higher levels of cooperation, and better results in terms of team effectiveness and performance (Ghuman, 2016).

Despite these findings and the large number of studies regarding emotion in work contexts (e.g., Ashkanasy and Dorris, 2017), research on collective or group emotions in leadership teams is still scarce, and most studies of EI in leadership teams examine individual EI rather than the collective construct of TEI (Miao et al., 2016a,b). Likewise, although several studies have examined the relationship between individual EI and transformational leadership (López-Zafra et al., 2017), few reports have explored the TEI of leadership teams.

There are two approaches to examine TEI: a model based on individual variables – that is, data measured at an individual level are aggregated to a higher level (i.e., group or organization); and a

model based on groups or teams; that is, variable measures that come from the groups or teams (i.e., group or team level information is examined). The individual-referent model proposes that TEI is an individual ability that members of a team can share, combine, and use when the team needs it, whereas the team-based model argues that TEI is a variable that is better measured examining team members' perceptions about the team as a whole (Druskat et al., 2017).

These approaches have shown different associations with performance depending on the type of tasks examined. Team performance in low-interdependence tasks is related to each team member's EI skills and to the possibility of summing them (Day et al., 2004), and individual-based EI models can probably better examine this type of individual competency (Rezvani et al., 2018). However, in high-interdependence tasks, as in those present in leadership teams, team performance depends on the whole team's ability (Courtright et al., 2015). Top managerial teams, like leadership teams examined in this research, are teams centered on decision-making processes. These processes involve high emotionality and interdependence, and their performance might depend on the quality of the interactions between the teammates more than on their individual abilities. In this sense, Wei et al. (2016) reported that, in leadership teams, a team-referent measure of EI was the strongest predictor of emotion-related outcomes (i.e., conflict) in decision-making teams.

In the field of work and organizational psychology, only two measures of group EI have been proposed: the Workgroup Emotional Intelligence Profile (WEIP; Jordan et al., 2002) and the Group Emotional Intelligence (GEI) Survey (Druskat and Wolff, 2001). The WEIP is currently the only available tool for measuring group EI in Spanish-speaking work groups (López-Zafra et al., 2012). It evaluates the aggregated construct of the group EI using individual-referent model (instead of the collective construct), and it was adapted into Spanish using a sample of 332 employees, no leaders, belonging to 53 work groups.

Given the importance of group emotional phenomena for organizational contexts (Peñalver et al., 2017), the need to integrate variables across multiple levels of analysis so as to provide a more veridical account of leadership phenomena (Tse et al., 2018), and the scarcity of instruments for measuring group EI in Spanish-speaking leadership teams, the goal of this study was to develop a short and easy-to-administer questionnaire for measuring TEI in leadership teams using the team-referent model.

TEI can be considered an extension of a group's ability to collaborate and work interdependently – in other words, its functional intelligence (Sternberg, 1984). Following Ashkanasy (2003), we regarded TEI as being more than the sum of individual emotional intelligence. If we accept that groups and teams may have and display emotions (van Kleef and Fischer, 2016), and also accept that leadership teams that work in a stable and constant over time manner can be understand as groups (Hawkins, 2017), then it is possible to expect different leadership teams to show different levels of TEI. Some processes, such as "emotional contagion" (Totterdell et al., 1998), "vicarious affect processes" (Fultz and Nielsen, 1993), and "interaction synchrony processes" (Siegman and Reynolds, 1983), support the idea that affective experiences located at the individual level may be aggregated to create a group-level affective construct.

Therefore, TEI can be considered as a construct located at the group level that is based on team members' shared subjective emotional experiences. These shared subjective experiences contribute to the creation of a set of expected behaviors that influence an individual's emotional experience (Druskat et al., 2017). The TEI examined here is a consequence of the nature of interaction occurring between leaders in the team. Such interaction generates a group construct (TEI) that is different from the individual EI traits that members of that team have. Thus, TEI can be considered a "collective construct" related to the team (Morgeson and Hofmann, 1999). More specifically, and consistent with the cognitive components of EI described by Salovey et al. (1995), the measure of TEI developed here examines the degree to which leaders in the same team consider that their team pays attention to and values the feelings of teammates, understands the emotions felt in the team, and uses positive thinking to repair negative moods in the team.

Other constructs regarding the collective emotional experiences as the group climate have also been shown to be clearly related to workers' adaptive behavior. Encouraging group climates has been related to goal-oriented attitudes and behaviors. However, non-encouraging climates have been related to negative results, for example, avoidance conflict-managing behaviors or disruptive behaviors (Patrick et al., 2003). In this same line, it has been observed that workers belonging to teams with high involvement, that is, teams that show motivation to learn and high levels of member's identification, also show higher experiences of flow (Csikszentmihalyi and Csikszentmihalyi, 1988; Chang et al., 2018) and a greater ability to examine reality from the perspective of others (Flinchbaugh et al., 2016) compared to workers belonging to teams with low levels of involvement (Pekrun et al., 2007).

Taken together, these findings suggest that team members in work contexts, such as leadership teams, may pay special attention to the feelings and emotions they perceive while interacting with others in the team. Furthermore, these interactions may have an important influence on workers' behaviors toward both the organization and each other (Li et al., 2017). In the Spanish-speaking context, however, there is currently no short, easy-to-administer, reliable, and valid instrument for examining these kinds of emotional interactions from the perspective of Mayer and Salovey's (1997) model of EI.

Taking into account the aforementioned, the aim of this study was to develop and validate a short and easy-to-administer scale called T-TMMS to measure TEI in leadership teams.

MATERIALS AND METHODS

Development of the T-TMMS

Many investigations into the realm of EI have been interested in the elaboration of scales for measuring individual EI (Extremera et al., 2009). In this context, one of the most widespread

theoretical models is that proposed by Mayer and Salovey (1997), and one of the most widely used instruments for measuring perceived EI is the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995). The TMMS measures "individual beliefs about the importance of paying attention to one's own emotions and feelings" (Attention), "about the capacity for understanding one's own emotions" (Clarity), and "about the ability to repair negative emotional states and maintain positive ones" (Repair). Fernández-Berrocal et al. (2004) adapted the original TMMS into Spanish, producing an abridged version comprising 24 items. Based on this model, a collective measure known as the G-TMMS was recently developed to examine group EI in school classrooms (Aritzeta et al., 2016). In the present study, the items for assessing team EI were derived from those featured in the G-TMMS, and hence we called the new measure the T-TMMS.

As in the development of the G-TMMS the process of creating the T-TMMS used the "consensus-based change-of-reference" strategy, following Chan's (1998) theory of group-level composition models. This strategy supports the idea that a group-level characteristic can be examined by changing the reference from the individual to the group level; that is to say, changing the framework of the tapped characteristic from the individual to the group level. Additionally, the within-group agreement should be ensured by means of the James inter-coder reliability index (James et al., 1993). In the G-TMMS and following the aforementioned "consensus-based change-of-reference" process, the reference framework for responding to items was changed from the individual self-evaluation (e.g., "I pay a great deal of attention to my feelings") to the perception of classroom experience (e.g., "In this classroom we pay a great deal of attention to our feelings"). In developing the T-TMMS, the classroom framework was changed to the leadership team framework (e.g., "In this team we are able to describe our feelings"). Taking into account that a short, 12-item version of the TMMS has previously been validated (Salguero et al., 2009), the initial version of the T-TMMS included 12 items, each with a 6-point Likert-type response format anchored by "Strongly disagree" and "Strongly agree." These items measure the degree to which, on average, leaders or workers belonging to a stable team perceive that their team attends to feelings and values them, is clear rather than confused about feelings, and adopts positive thinking to repair negative group moods.

Two psychologists specialized in teamwork and emotions independently modified the reference framework from the classroom to the team level. Both psychologists were familiar with the fundamental psychometric criteria of item construction. Before reaching an agreement on all items, each item of each version was examined, paying special attention to "team" as the key reference framework.

Participants

The study sample comprised 1,764 leaders grouped into 152 business teams: 40.3% from the food distribution sector (stores analyzed in the present research fell under the Small and Medium-sized Enterprises (SME) category with an average headcount of 100 people per store), 14.2% from the education sector (schools analyzed here also are small with less than 100 workers), 27.4% from the industry sector (72% of them were SME and 28% were large enterprises), and 18% from the service sector (all of them were small firms). A total of 38% of the total sample was female, and the average age was 42 ($SD = 8.68$). All the firms are located in the Basque Country (northern Spain) and are part of the Mondragon Cooperative Corporation, sharing four corporate values: cooperation, participation, social responsibility, and innovation. All organizations were private and cooperatives being with small to average sizes.

Data Collection Procedure

Data were collected between 2013 and 2017, after having agreed the conditions with the directors of each participating firm. Data was obtained through survey questionnaires that were completed voluntarily by managers. Data was gathered through surveys completed both on paper and electronically (i.e., managers received the survey through the email). In both formats (i.e., paper or email) subjects were briefly informed that the study pertained to how they felt about their job environment, their workmates, and the company they worked for. They were asked to answer with sincerity, and absolute confidentiality was guaranteed. On the occasions where managers completed the survey on paper, specific dates and schedules were agreed with the companies, and suitable rooms were made available. Informed consent was requested from each participating group. The response rate was 93%.

The study fulfiled the standards of the Ethics Committee for Research Involving Humans of the University of Mondragón (ID: Bateratzen-Partaidetza-IGB-39).

Other Instruments and Measures Used to Validate the T-TMMS

Workgroup Emotional Intelligence Profile (WEIP-3)

Evidence of convergent validity for the T-TMMS was sought by applying the WEIP-3 (Jordan et al., 2002) in its Spanish version (López-Zafra et al., 2012). The WEIP-3 was chosen as it is based on Salovey and Mayer's (1990) original construct of EI, the same theoretical model from which the T-TMMS is derived.

The WEIP-3 analyses perceived EI in workgroups. Its 27 items, each rated on a 7-point Likert scale, measure seven aspects organized into two broad dimensions: (a) the "ability to deal with one's own emotions;" and (b) the "ability to deal with the emotions of others."

Three of the seven aspects were considered for the present study: (a) *Awareness*: awareness of emotions (e.g., "I am aware of my feelings when working with my teammates"); (b) *Expression*: ability to discuss/articulate emotions (e.g., "I can explain the emotions I feel to my team"); and (c) *Management*: ability to use one's own emotions to facilitate thinking (e.g., "When I am angry with a member of my team I can overcome that emotion quickly"). The scale has shown good reliability and validity (Jordan et al., 2002), and, in its Spanish version, values were 0.92 (Awareness), 0.83 (Expression), and 0.89 (Management).

Group Emotional Intelligence (GEI) Survey

The Group Emotional Intelligence (GEI) Survey (Wolff, 2006) is based on Goleman's (1995) framework of awareness and regulation of emotion at multiple levels. The GEI Survey examines six dimensions (Group awareness of members, Group

management of members, Group self-awareness, Group self-management, Group social awareness, and Group management of external relationships) and nine norms associated with these dimensions. For this study we used two norms associated with the dimension of group self-management: *creating resources for working with emotions*, which implies accepting emotions as part of a group and encouraging the expression and examination of feelings (e.g., "When there is tension in our group we acknowledge or discuss it"), and *creating an affirmative environment*, which is associated with creating a positive group affect and an optimistic outlook (e.g., "In our group, we are optimistic about our ability to deal with challenges"). The scale has shown good validity, as the reliabilities of all norms ranged from 0.88 to 0.74 (Druskat and Wolff, 2001).

Data Analysis

In order to examine the dimensionality of the T-TMMS we conducted several Confirmatory Factor Analyses (CFAs). The estimation method used was Maximum Likelihood (ML), which is the most widely used estimator in applied CFA. This estimator has been recommended for data under the assumption that (1) there is a large sample size, (2) the indicators of the factors have been measured on continuous scales, and (3) the distribution of the indicators is normal (see **Table 1** for data distribution results) (Brown, 2015). The goodness-of-fit indices were the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). In the case of the CFI and TLI, values above 0.90 and 0.95 indicated an acceptable and excellent fit, respectively. For the RMSEA, values below 0.08 indicated an acceptable fit, and values less than 0.06 indicated a good fit (Hu and Bentler, 1999; Brown, 2015).

Internal consistency of the T-TMMS was estimated by means of Cronbach's alpha, omega and hierarchical omega coefficients and Average Variance Extracted (AVE) and composite reliability for each subscale was calculated for reliability. To ensure that mean scores adequately represented emotional intelligence at the team level (i.e., TEI), the James indices of inter-coder reliability (James et al., 1993) were used. Besides, temporal stability was assessed using the test-retest procedure, with the instrument being re-administered to a smaller sample. We used 32 teams (21% of the total sample) comprising a total of 241 leaders. This sample size was established using power analysis to establish the minimum sample needed for a power of 0.95 and 0.05 alpha value. Following the time-lap criteria of previous investigations, the instrument was re-administered 8 weeks after the initial data collection. In order to obtain evidence of the instrument's convergent and discriminant validity, we calculated Pearson correlation coefficients between mean team scores on the T-TMMS subscales and scores on the WEIP and GEI subscales. Finally, hierarchical regression analysis was conducted to evidence the predictive validity of the new scale.

RESULTS

Descriptive Statistics

The descriptive statistics of all items of the T-TMMS scales are shown in **Table 1**. Afterward, Kim's (2013) normality was assessed based on the skewness and kurtosis values (Kim, 2013). The recommended cut-off values of 2.0 for skewness and 7.0 for kurtosis (Curran et al., 1996) were applied. All items fell within the cutoff values, meaning that our data were normally distributed.

Confirmatory Factor Analysis

We began by testing a three-factor solution (Attention, Clarity, and Repair) with four items corresponding to each factor. As this initial model did not yield an adequate fit (χ^2_{51} = 1371.003, p = 0.0001, CFI = 0.90, TLI = 0.87, RMSEA = 0.12, 90% CI = 0.11–0.13), we analyzed the factor loadings (see **Table 1**) and eliminated those items with loadings below 0.50 (items 4, 8, and 12). In addition, the three-factor solution was compared with the unifactorial solution of the scale (χ^2_{27} = 1193.76, p = 0.0001, CFI = 0.87, TLI = 0.83, RMSEA = 0.16, 90% CI = 0.15–0.16). The final model showed better fit than the unifactorial model (χ^2_{23} = 234.015, p = 0.0001, CFI = 0.98, TLI = 0.96, RMSEA = 0.07, 90% CI = 0.06–0.08) with adequate factor loadings (see **Table 2** for the final model).

Reliability

The T-TMMS showed adequate internal consistency, exceeding the cut-off value of 0.75 that is generally accepted for instruments in the area of health sciences for Cronbach's alpha and omega (Viladrich et al., 2017). All the values were also above the desired cut-off value of 0.5 in the case of AVE and 0.7 (Henseler et al., 2015) in the case of composite reliability. Please, see **Table 2** to observe internal consistency and reliability values.

In order to examine the temporal stability of the T-TMMS, we calculated the correlation index between mean team scores at the two assessment points, obtaining a value of 0.86. James indices of inter-coder reliability (James et al., 1993) had previously been calculated to ensure that these mean scores adequately represented emotional intelligence at the team level (i.e., TEI). The indices ranged between 0.80 and 0.98, suggesting that the leaders belonging to each team had similar perceptions about the construct that the instrument sought to measure.

Convergent and Discriminant Validity

As in the case of reliability, James indices of inter-coder reliability were calculated for scores on the WEIP and GEI subscales prior to estimating correlation coefficients. Values ranged from 0.79 to 0.85 for the WEIP and between 0.83 and 0.93 for the GEI subscales. Pearson correlation coefficients between T-TMMS scores and scores on the WEIP and GEI subscales are shown in **Table 3**. Even the correlation between Attention and Clarity dimensions of the T-TMMS scale (r = 0.80; p < 0.01.) were slightly high following the Brown (2015) criterion, and it can be considered that the three dimensions showed an adequate discriminant validity and are not overlapping.

Predictive Validity

In order to examine the predictive validity of the new scale, we analyzed the ability of the TEI to predict group cohesion using linear regression analysis. In addition, we compared the predictive power of T-TMMS and WEIP when predicting group

TABLE 1 | Initial items included in the T-TMMS, their descriptive statistics, and factor loadings.

Items	*M*	*SD*	*s*	*k*	Attention	Clarity	Repair
1. In my team we usually care about what our workmates are feeling	4.81	0.74	−1.06	1.84	0.658		
2. In this team we are able to describe our feelings	4.38	1.07	−0.74	0.34		0.782	
3. Although we may feel sad at times, we have a positive outlook as a team	4.69	0.91	−0.55	0.10			0.811
4. In this team we believe that it is worth paying attention to work-mates' feelings (Eliminated)	4.77	0.89	−1.04	1.43	*0.282*		
5. We usually know how our teammates feel	4.27	0.84	−0.61	0.25		0.739	
6. Although we might feel bad, all team members try to have a positive outlook	4.60	0.93	−0.58	0.29			0.855
7. In this team most of us know what our mood is at any given moment	4.32	0.76	−0.30	0.17	0.714		
8. In this team we normally know what we feel about our teammates (Eliminated)	4.33	0.89	−0.57	0.85		*0.154*	
9. In this team we try to have a positive mood	4.86	0.75	−0.84	1.37			0.857
10. We often think about what feelings our teammates might have	4.50	1.02	−0.67	0.29	0.823		
11. We usually know what we feel in different situations	4.41	0.63	−0.75	0.75		0.714	
12. When we are angry we try to change our mood (Eliminated)	4.49	0.80	−0.48	0.66			*0.466*

M, mean; SD, Standard deviation; s, skewness; k, kurtosis. The items shown here are English translations of the Spanish version administered in this study. The original Spanish items are available from the authors.

TABLE 2 | Final 9-item version of the T-TMMS after eliminating the problematic ones.

Items	Attention	Clarity	Repair	Total
1. In my team we usually care about what our workmates are feeling	0.63			
2. In this team we are able to describe our feelings		0.77		
3. Although we may feel sad at times, we have a positive outlook as a team			0.83	
5. We usually know how our teammates feel		0.76		
6. Although we might feel bad, all team members try to have a positive outlook			0.87	
7. In this team most of us know what our mood is at any given moment	0.69			
9. In this team we try to have a positive mood			0.85	
10. We often think about what feelings our teammates might have	0.85			
11. We usually know what we feel in different situations		0.75		
α [CI]	0.77 [0.76, 0.79]	0.81 [0.80, 0.82]	0.88 [0.87, 0.89]	0.92 [0.91, 0.92]
ω [CI]	0.76 [0.77, 0.80]	0.82 [0.81, 0.83]	0.89 [0.88, 0.89]	0.92 [0.91, 0.92]
ωh	0.76	0.81	0.88	0.82
AVE	0.53	0.58	0.72	–
CR	0.76	0.81	0.88	–

The items shown here are English translations of the Spanish version administered in this study. The original Spanish items are available from the authors. α, alpha; ω, omega; ω; h, hierarchical omega; CI, confident intervals 95%; AVE, Average Variance Extracted; CR, Composite Reliability.

TABLE 3 | Pearson correlation coefficients between T-TMMS scores and scores on the WEIP and GEI subscales.

	1	2	3	4	5	6	7	8
1. T-TMMS attention	–	0.801**	0.679**	0.601**	0.494**	0.721**	0.697**	0.582**
2. T-TMMS clarity		–	0.654**	0.651**	0.551**	0.735**	0.689**	0.555**
3. T-TMMS repair			–	0.662**	0.482**	0.651**	0.558**	0.725**
4. WEIP management				–	0.591**	0.730**	0.606**	0.574**
5. WEIP expression					–	0.627**	0.620**	0.572**
6. WEIP awareness						–	0.699**	0.678**
7. GEI-WE							–	0.575**
8. GEI-CA								–

***p < 0.01. GEI-WE, Group Emotional Intelligence Survey, "Working with emotions" norm; GEI-CA, Group Emotional Intelligence Survey, "Creating an affirmative environment" norm.*

TABLE 4 | Regression results for testing the incremental validity of T-TMMS and WEIP-3 measures.

Normal order				Reversed order			
Variable added	**B**	R^2	ΔR^2	**Variable added**	β	R^2	ΔR^2
Criterion: team cohesion							
T-TMMS TEI	0.441**	0.192		WEIP_3 TEI	0.381**	0.142	
WEIP-3 EI	0.120	0.195	0.003	T-TMMS TEI	0.352**	0.195	0.05

*$^{**}p < 0.01$.

cohesion. Considering the type of teams participating in this study and the aggregating model behind each scale, we expected T-TMMS would explain strongly group cohesion than WEIP-3. The results indicated that the percentage of the variance explained by T-TMMS ($R^2 = 0.21$) was bigger than the explained by WEIP ($R^2 = 0.15$).

To better understand the differences among team EI measures, we conducted a series of hierarchical regression analyses. The focal (the T-TMMS) and the alternative (WEIP) variables were entered in to the first and the second steps of the regression model. The order of entry was subsequently reversed.

In their associations with team cohesion, as illustrated in **Table 4**, the T-TMMS explained additional variance in team cohesion beyond the explaining capacity of the WEIP-3. When the order was reversed, however, the WEIP-3 did not explain additional variance.

DISCUSSION

The goal of this study was to develop a valid and reliable questionnaire for measuring perceived TEI in leadership teams. The T-TMMS was shown to have adequate psychometric properties and replicated the three-factor structure (i.e., Attention, Clarity, and Repair) of both the original TMMS (Salovey et al., 1995) and its Spanish adaptation (Fernández-Berrocal et al., 2004).

The reliability of the T-TMMS was supported by the indices obtained for internal consistency and temporal stability. Evidence of convergent validity was provided by correlations between T-TMMS scores and scores on the WEIP and GEI subscales with only one exception – the moderate correlation between the T-TMMS and the Expression subscale of the WEIP. Whereas the other WEIP dimensions examine individual emotional behavior when interacting with groups, the Expression dimension focuses on emotional communication during this interaction (in this case, with the team), which is more difficult to assess than is behavior. This is one possible reason to explain the observed moderate correlation. As expected, the TEI construct was positively correlated with two of the WEIP subscales and with the GEI subscales. Given the results for convergent validity, the T-TMMS can be considered a useful instrument for the assessment of group emotional processes.

Regarding the predictive validity of T-TMMS, the scale was shown to be a stronger predictor of team cohesion than the individual referent measure used and demonstrated incremental validity over the WEIP. This result is consistent with the research of Wei et al. (2016) who reported that team-referent measure of EI was the strongest predictor of emotion-related outcomes (i.e., conflict) in teams with high interdependence tasks.

If we wish to explain and predict how work teams function, it is important to consider in a holistic way how workers' emotions, cognitions, and motivations may result from their interactions within a team. Indeed, being part of a work team implies a complex combination of information processing and emotional responding that could influence team members' responses, as the same worker may experience different emotional responses to a dramatic event in two different teams, which, in turn, might influence a worker's perceptions of TEI (Ghuman, 2016). In this context, the T-TMMS can be regarded as a useful instrument for assessing group emotional processes, and its application could help to highlight the importance of leader relationships for the development of emotional wellbeing in teams. As research has shown, organizations characterized by better relationships between workers and that are able to improve team performances and reduce conflict are those that implement social and emotional learning programs (Menges and Bruch, 2009).

Some limitations should also be mentioned. The results should be generalized with caution, as the study sample was drawn exclusively from leaders of the Mondragon Cooperative Corporation located in Basque Country (Spain). Because of the specific characteristics of these kinds of corporations, future research should seek to replicate the findings obtained here in other organizational contexts and also in other countries. The relationships we observed also need to be examined longitudinally. A further limitation is that the results are based on self-report data, which may produce some bias and that the design of the study is cross-sectional. Future studies should therefore employ more objective measures and longitudinal research designs to verify the impact of TEI in organizations.

Despite these limitations, the T-TMMS can contribute to a better understanding of differences between leadership teams. Not only does it constitute an important addition to ability measures of EI, it should also help researchers and practitioners to assess whether the emotional context is likely to promote or impede an individual's awareness of his or her emotional abilities and behavior. Furthermore, the T-TMMS could be used to explore inter-group differences in EI, providing information

that would be useful for designing programs to increase group emotional intelligence.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee of the University of Mondragon. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

AA together with GS and RM were responsible of developing the theoretical foundations of the manuscript (Introduction, Discussion, and Conclusion). NB together with AG and JA were responsible of the methodological part of the manuscript, especially of the statistical analysis. Finally, UE was responsible of the process for gathering data and reviewing the manuscript.

FUNDING

This work was supported by the Basque Government (Grant No.IT892-16) and the University of the Basque Country [PIF2016/195] as well as by the Provincial Council of Gipuzkoa (Bateratzen, exp.2011-DIP1-000022-01).

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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: 18 June 2020
doi: 10.3389/fpsyg.2020.01194

Hard Enough to Manage My Emotions: How Hardiness Moderates the Relationship Between Emotional Demands and Exhaustion

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The frequency of conflicts with patients' families is one of the main contributors to the amount of emotional demands that healthcare professionals must tackle to prevent the occurrence of burnout symptoms. On the other hand, research evidence suggests that hardiness could enable healthcare professionals to handle their responsibilities and problems effectively. Based on the health impairment process of the Job Demands–Resources model, the main goal of this study was to delve deeper into the relationship between conflict with patients' families, emotional demands, and exhaustion, as well as to test the buffering role of hardiness. Data were collected from a sample of N = 295 healthcare professionals working in a private hospital in Northern Italy. Most of them were women (78.6%) with a mean age of 40.62 years (SD = 9.50). The mediation of emotional demands within the association between conflict with families and emotional exhaustion and the moderating role of hardiness was tested using a bootstrapping approach. In the current sample, emotional demands mediated the association between conflict with families and exhaustion among healthcare professionals. Moreover, this relationship decreased among individuals with higher levels of hardiness. These findings contribute to the current understanding of the negative impact played by conflict with families on healthcare professionals' psychological well-being. Furthermore, they corroborated the role of hardiness as a personal resource that could prevent the occurrence of burnout symptoms. In addition to manage—and decrease—episodes of conflict with patients and their families, organizations in the healthcare sector should develop interventions aimed at fostering employees' hardiness and, consequently, tackle job demands ingrained in their profession (i.e., emotional demands).

Keywords: emotional demands, conflict, hardiness, emotional exhaustion, health care sector, nurses, Job Demands–Resources (JD-R) model

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Emanuela Ingusci, University of Salento, Italy
Amelia Manuti, University of Bari Aldo Moro, Italy

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

Received: *10 March 2020*
Accepted: *07 May 2020*
Published: *18 June 2020*

Citation:
Mazzetti G, Guglielmi D and Topa G (2020) Hard Enough to Manage My Emotions: How Hardiness Moderates the Relationship Between Emotional Demands and Exhaustion. Front. Psychol. 11:1194. doi: 10.3389/fpsyg.2020.01194

INTRODUCTION

Healthcare professionals represent one of the occupational populations most frequently involved in studies aimed at exploring the incidence of emotional exhaustion (e.g., Van Mol et al., 2015). This evidence could be explained by the work environment and the demands faced by these professionals. Healthcare professionals must take on considerable responsibilities concerning

patients' health and well-being to tackle traumatic and painful life events that affect their patients' lives and to cope with the emotional demands stemming from these situations (Riley and Weiss, 2016). A significant portion of the emotional demands perceived among healthcare professionals could arise from the constant interaction with patients' families. For instance, they are required to make difficult decisions in critical medical situations and to discuss them with families using suited communication strategies and attention to their emotional needs (Vicent et al., 2019). These situations may lead to conflictual interaction with patients' relatives that, in turn, may negatively impact the quality of care provided, jeopardize the cohesion of healthcare work teams and have a detrimental impact on professionals' well-being (Fassier and Azoulay, 2010). Accordingly, the current study draws on the assumption that the establishment of an emotional bond with families facing a stressful life event, such as assisting ill relatives, could imply the occurrence of conflicts between families and healthcare professionals.

These conflictual relationships may arise, for instance, from disagreements about patients' treatment, communication breakdown, and unrealistic expectations concerning the outcome of care. They could contribute to the amount of emotional demands that physicians and nurses perceive in their daily activities (Forbat et al., 2016). This emotional overload may, in turn, exhaust employees' mental and physical resources and, therefore, translate into a higher occurrence of burnout symptoms (i.e., emotional exhaustion). Drawing on the health-impairment process postulated by the Job Demands–Resources model (JD-R model; Schaufeli and Taris, 2014), this study was aimed to clarify the mechanism through which conflict with patients' families contributes to emotional exhaustion by proposing emotional demands as a transmitting variable. Moreover, we posit that this process is conditional. In other words, the indirect association between emotional demands and exhaustion is expected to be buffered by higher levels of hardiness, which is hypothesized to act as a protective factor of psychological well-being among healthcare professionals.

The Role of Emotions in the Job Demands–Resources Model

During the last decades, one of the leading models in the job stress literature has been the JD-R model (Schaufeli and Taris, 2014), which postulates the presence of two underlying psychological processes that trigger the development of workers' strain and motivation. On the one hand, the health-impairment process posits that a prolonged exposure to aspects of work entailing a significant expenditure of energy (i.e., job demands) may deplete workers' psychological, emotional, and physical resources. This progressive depletion flows into a condition of emotional exhaustion that represents the central component of burnout and the first dimension to develop, subsequently eliciting symptoms of cynicism and reduced personal efficacy (Maslach et al., 2001). Emotional exhaustion is characterized by persistent feelings of tiredness and a shortage of energy in executing one's daily work tasks (Mäkikangas and Kinnunen, 2016). As reported in a noteworthy review of burnout literature (Patel et al., 2018), emotional exhaustion is related to a wide range of adverse work-related (e.g., impaired job performance, higher turnover rates), and individual outcomes (e.g., substance use, depressive symptoms).

On the other hand, the motivational process of the JD-R model postulates that the availability of psychological and social features enabling workers to achieve work goals (i.e., job resources) may foster employees' motivation. According to this framework, adequate job resources may enhance work engagement (Schaufeli and Taris, 2014), defined as a positive psychological state characterized by the combination of vigor (i.e., the willingness to invest higher energy at work and to persist even in the face of difficulties), dedication (i.e., feelings of passion and involvement toward one's job), and absorption (i.e., feelings of being immersed in one's job). This condition can promote positive organizational and individual outcomes, such as improved job performance and workers' well-being (Guglielmi et al., 2013). A core characteristic of the JD-R model is its flexibility. In other words, this overarching theoretical framework can be applied to any occupational setting, regardless of the particular demands and resources involved. Still, it also can be tailored to select the distinctive risk factors and protective features (job demands and job resources, respectively) able to trigger and prevent job stress conditions in each specific occupational sector (Bakker and Demerouti, 2017).

The current study focused on the occurrence of conflicts with patients' families and the subsequent perception of emotional demands, since these job demands are crucial among professionals working in the healthcare sector, especially regarding emotional exhaustion. The management of conflict with patients' relatives requires investing a considerable quantity of staff time, mainly when they stem from communication complexities due to cross-cultural differences (Brierley et al., 2013).

These conflictual situations entail direct and indirect costs at the organizational level, such as the undermining of team morale, decreased trust between healthcare staff (i.e., nurses and physicians) and patients' relatives, and the possibility of legal proceedings (Forbat et al., 2016).

The main goal for the healthcare professional is to deliver high-quality care that safeguards patient safety but also to contain costs. Accordingly, demanding contacts with relatives are considered as a significant source of emotional demands among healthcare professionals, who are also expected to perform efficiently when facing patients suffering and to cope with aggressive patients' behavior (Sundin et al., 2008). Burnout literature indicates that the effort performed by workers in their attempt to manage their feelings properly could represent a major cause of intense physiological fatigue, thus triggering increased levels of emotional exhaustion (Simbula et al., 2019). Based on this rationale, the following hypothesis was tested:

Hypothesis 1. *Emotional demands mediate the relationship between conflict with patients' families and emotional exhaustion.*

Thus, the occurrence of conflicts with families is positively related to emotional demands, which in turn are associated with higher levels of exhaustion among healthcare professionals.

The Buffering Role of Hardiness

According to the motivational process of the JD-R model (Schaufeli, 2014), job resources have a motivational potential both at the intrinsic (i.e., by stimulating employees' learning and development) and extrinsic level (i.e., by allowing employees to achieve their goals). Additionally, the buffering hypothesis proposed by the JD-R model restates that job resources have the potential to decrease the harmful association between job demands and strain—in this study, emotional exhaustion (Bakker and Demerouti, 2014). There is compelling evidence from the JD-R model literature suggesting that, in addition to job resources, also personal resources could act as significant protective factors for workers' well-being. Personal resources are defined as positive cognitions and self-evaluation regarding employees' ability to manage effectively and influence their environment (Xanthopoulou et al., 2009). For instance, previous findings suggest that proactive personality acts as a protecting factor able to hinder the onset of conflicts with clients in the service sector, particularly among workers experiencing high levels of emotional dissonance (Mazzetti et al., 2019). Accordingly, the current study was aimed to investigate the role of hardiness as a personal resource able to reduce the detrimental association between emotional demands and symptoms of emotional exhaustion among healthcare professionals.

The construct of hardiness—or hardy personality—was developed by Kobasa (1979) to describe a personality structure built upon the inclination to derive meaning from stressful events, the perception of control on life events, and the tendency to experience any occurring change as an opportunity to learn and grow. Hence, hardiness originates from the combination of three key dimensions: commitment to life and work, sense of control over the events, and the aptitude to experience changes as challenges. *Commitment* is characterized by experiencing one's job as intrinsically stimulating; *control* is defined as perceiving oneself as able to influence life events; and *challenge* describes the tendency to interpret changes as natural events that allow developing new abilities (Maddi, 2008). In line with this definition, hardiness can be conceived as a personal resource that protects healthcare professionals facing demanding situations and enables them to implement adaptive behaviors. By reframing demands as challenges toward which they can exert adequate control, these workers are enabled to implement effective coping strategies (Delahaij et al., 2010). This assumption is supported by the evidence that hardiness is negatively related to burnout symptoms, in particular, the depletion of cognitive and emotional energy—emotional exhaustion—and cynism (Alarcon et al., 2009; Adriaenssens et al., 2015). Accordingly, the current study was aimed to contribute to the literature on hardiness by exploring the buffering role of this personal resource in the indirect association between conflict with patients' families and emotional exhaustion. Based on the related theory and empirical evidence summarized, the second study hypothesis was formulated as follows:

Hypothesis 2. *Within the association between conflict with patients' families, emotional demands, and exhaustion, hardiness can reduce the relationship between emotional demands and exhaustion. Hence, we expect that healthcare professionals characterized by greater hardiness also display poorer symptoms of exhaustion in comparison to their colleagues reporting a lower level of hardiness.*

The hypothesized moderated mediation is depicted in **Figure 1**.

MATERIALS AND METHODS

Participants and Procedures

The current study was part of a project on occupational health and psychosocial risk assessment in a private hospital located in Northern Italy. In particular, healthcare professionals working in this context participated in a short presentation session held by four members of the University research group that was aimed to present the general aims of the project. The head physicians of each ward were asked to distribute the paper-and-pencil questionnaire to their staff. The survey included a cover letter reporting background information about the general aim of the study, detailed information regarding data processing, and a description of the measures implemented to prevent unauthorized access to personal data. On the first page of the questionnaire, participant anonymity was emphasized, and confidentiality guaranteed, following the guidelines for personal data treatment defined by the General Data Protection Regulation (GDPR) and Italian privacy law (Law Decree DL-196/2003 and at. 89 of EU REGULATION 2016/679). This introduction also stated that participation in this study was voluntary and that informed consent was implied through survey completion. Participants were asked to place the filled-out questionnaires in a ballot box located in each hospital ward. A total of 295 healthcare professionals returned the completed questionnaire. Concerning their professional role, the majority of the sample consisted of nurses (28.3%), physiotherapists (25.2%), medical assistants (21.3%), physicians (12.8%), and intermediate care technicians (12.4%). Most participants were women (78.6%), and the age ranged from 23 to 64 years old, with a mean age of 40.62 years (SD = 9.50). Among them, 41.5% had an organizational tenure between 11 and 20 years, 21.8% reported an organizational tenure between 6 and 10 years, 17.7% between 1 and 5 years, and the remaining 19% of the sample has been working in the current hospital for more than 20 years.

Measures

Conflict With Patients' Families

The frequency of unfriendly interactions and disagreements about protocols, treatment aims, and inadequate communication with patients' families was assessed with the three-item scale adapted from the survey validated by Guglielmi et al. (2011).

Sample items were: "I am in conflict with the patients' family members" and "Interacting with patients' family members is frustrating." Participants were asked to rate how often they experienced the situation described using a 5-point frequency

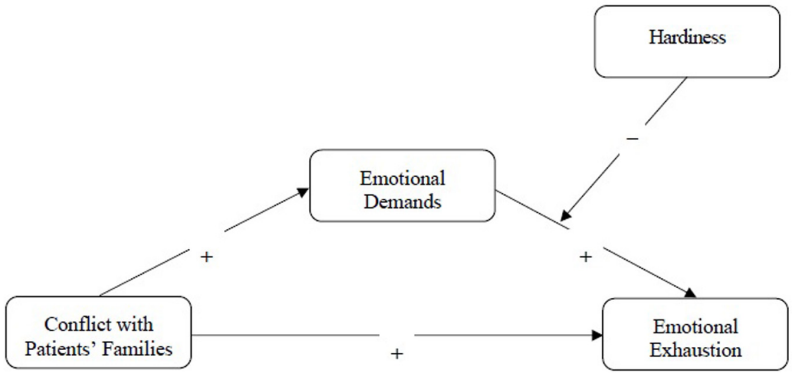

FIGURE 1 | The hypothesized moderated mediation model. Control variables (gender and age) are omitted for reasons of clarity.

scale from 1 = *never* to 5 = *very often*. Thus, greater scores indicated a higher occurrence of conflictual interactions with patients' families. In the present study, the reliability of the scale was $\alpha = 0.83$.

Emotional Demands

The emotional load stemming from daily activities carried out by healthcare professionals, such as performing painful procedures and communicating unpleasant news to patients, was measured using four items taken from the Nursing Stress Scale (Gray-Toft and Anderson, 1981). Sample items are: "How often in your job do you experience the death of a patient with whom you developed a close relationship?" and "How often do you feel helpless in the case of a patient who fails to improve?" Each item was rated on a Likert scale ranging from 1 = *never* to 4 = *very frequently*. The internal consistency of the scale yielded a Cronbach's alpha of $\alpha = 0.75$.

Hardiness

This personal resource was assessed through the Occupational Hardiness Questionnaire validated by Moreno-Jiménez et al. (2014). The survey includes three subscales covering the core dimensions of hardiness. Each subscale consists of five items: challenge (e.g., "In my job, I feel attracted to tasks and situations involving a personal challenge"), control (e.g., "The control of situations is the only thing that ensures success"), and commitment (e.g., "My own excitement is what makes me go ahead with the completion of my activity"). The response options varied on a 4-point agreement scale ranging from 1 = *completely disagree* to 4 = *completely agree*. The internal consistency of this scale was $\alpha = 0.85$.

Emotional Exhaustion

The core dimension of burnout was assessed using the corresponding subscale of the Maslach Burnout Inventory (Schaufeli et al., 1996). The scale included five items, with higher scores indicating a greater occurrence of symptoms of exhaustion. Sample items are: "I feel emotionally drained by my work" and "I feel fatigued when I wake up in the morning and have to face another day on the job." Participants were asked to assess each item on a frequency scale ranging from 0 = *never* to 6 = *every day*. In this study, the Cronbach's alpha was set at $\alpha = 0.84$.

Strategy of Analysis

The hypotheses were tested using the Process macro for SPSS (Hayes, 2013). To be specific, the mediating effect of emotional demands in the relationship between conflict with patients' families and emotional exhaustion (*Hypothesis* 1) was tested using Model 4. Furthermore, Model 14 was performed to assess the moderated mediation model (*Hypothesis 2*) postulating that conflict with patients' families (i.e., the independent variable) is associated with higher levels of emotional demands (i.e., the mediating variable). Emotional demands, in turn, are related to higher levels of emotional exhaustion (i.e., the criterion variable), and this association is expected to be moderated by participants' hardiness (i.e., the moderator).

These models were tested using 5,000 bootstrap samples in order to obtain reliable estimates of standard errors and confidence intervals. Gender and age were included as covariates, given their association with emotional demands and exhaustion (Purvanova and Muros, 2010; Brienza and Bobocel, 2017).

RESULTS

Descriptive Results

Descriptive statistics for all study variables are reported in **Table 1**. It should be noted that all significant associations between the constructs under investigation were in the expected direction. As displayed on the diagonal of this table, all scales have satisfactory reliabilities, with Cronbach's alpha coefficients higher than 0.70.

Testing the Mediating Role of Emotional Demands

The assumption that emotional demands mediate the relationship between conflict with patients' families and emotional exhaustion (*Hypothesis 1*) was tested using bootstrap analysis. The obtained results indicated a significant direct

TABLE 1 | Mean, SD, and correlation among study variables (N = 295).

	M	SD	*r*					
			1	2	3	4	5	6
1. Gender (1 = male)	0.21	0.41	–					
2. Age	40.61	9.50	0.23***	–				
3. Conflict with patients' families	2.42	0.93	−0.10	−0.24***	*(0.83)*			
4. Emotional demands	2.98	0.85	−0.13*	−0.12*	0.33***	*(0.75)*		
5. Hardiness	3.08	0.44	0.06	−0.01	−0.16**	−0.10	*(0.85)*	
6. Emotional exhaustion	3.24	1.46	−0.20**	−0.25***	−0.42***	0.35***	−0.21***	*(0.84)*

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; and Cronbach's alpha in brackets along the diagonal.

relationship between conflict with patients' families and emotional exhaustion: b (SE) = 0.50 (0.09), p = 0.000, and 95% CI (0.33;0.67).

Furthermore, conflict with patients' families reported a significant association with emotional demands: b (SE) = 0.27 (0.05), p = 0.000, and 95% CI (0.17;0.37). Emotional demands, in turn, were positively related to emotional exhaustion: b (SE) = 0.40 (0.09), p = 0.000, and 95% CI (0.21;0.58). The estimated indirect relationship between conflict with patients' families and exhaustion *via* emotional demands was statistically significant: b (SE) = 0.11 (0.03), and 95% CI (0.05;0.18). Approximately 27% of the variance in emotional exhaustion was accounted for by the predictors (R^2 = 0.268). These results supported the mediating role of emotional demands in explaining the relationship between the frequency of conflicts with families and the occurrence of symptoms referred to emotional exhaustion. This evidence provided support to *Hypothesis 1*.

Testing the Moderated Mediation Model

Table 2 displays the results of the hypothesized moderated mediation model (*Hypothesis 2*). The mediating model (to emotional demands) revealed that conflict with patients' families was significantly associated with a higher perception of emotional demands [b = 0.27, SE = 0.05, p = 0.000, and 95% CI (0.17;0.37)]. The dependent variable model indicated that a higher perception of emotional demands was positively associated with symptoms of emotional exhaustion [b = 0.36, SE = 0.09, p = 0.000, and 95% CI (0.18;0.55)]. Taken together, these results indicate that a greater frequency of conflictual relationships with patients' families was related to higher emotional demands which, in turn, reported a positive association with the occurrence of exhaustion symptoms. Furthermore, hardiness reported a negative association with emotional exhaustion [b = −0.40, SE = 0.16, p = 0.017, and 95% CI (−0.73; −0.07)]. The interaction between emotional demands and hardiness on exhaustion was significant [b = −0.57, SE = 0.17, p = 0.001, and 95% CI (−0.92; −0.22)], as well as the index of moderated mediation [b = −0.15, SE = 0.06, and 95% CI (−0.28; −0.06)].

According to the values of the moderator reported in the lower part of **Table 2**, the indirect relationship between conflict with patients' families and emotional exhaustion through emotional demands was significant at low [−1 *SD*; b = 0.61, SE = 0.12, p = 0.000, and 95% CI (0.38;0.85)] and medium [*mean*; b = 0.36, SE = 0.09, p = 0.000, and 95% CI (0.18;0.55)] levels of hardiness. In contrast, this indirect association was not significant at high levels of hardiness [+1 *SD*; b = 0.11, SE = 0.13, p = 0.368, and 95% CI (−0.13;0.36)]. This interaction effect is displayed in **Figure 2**. Healthcare professionals characterized by low and medium levels of hardiness reported higher symptoms of emotional exhaustion. Overall, these results supported *Hypothesis 2*.

Among the control variables considered in the current model, higher levels of emotional exhaustion were reported by women (b = -0.37, p = 0.040), and younger participants (b = −0.02, p = 0.011).

TABLE 2 | Results of the moderated mediation model for emotional exhaustion.

Variable	Emotional demands (*M*)		Emotional exhaustion (*Y*)	
	Coefficient	*SE*	*Coefficient*	*SE*
Gender (1 = male)	−0.21	0.11	−0.37*	0.18
Age	−0.01	0.01	−0.02*	0.01
Conflict with patients' families (*X*)	0.27**	0.05	0.46**	0.08
Emotional demands (*M*)			0.36**	0.09
Hardiness (*W*)			−0.40*	0.16
Emotional demands *X* Hardiness			−0.57**	0.17
Model of *M* Summary	R^2 = 0.12**			
Model of *Y* Summary			R^2 = 0.31**	

Conditional indirect effect of conflict with patients' families (X) on emotional exhaustion (Y) through emotional demands (M) at values of hardiness (W)

Hardiness	*Effect*	*Boot SE*	*Boot 95% CI*
Lower levels	0.61	0.12	0.38;0.85
Middle levels	0.36	0.09	0.18;0.55
Higher levels	0.11	0.13	−0.13;0.36

*N = 295; *p < 0.05; and **p < 0.01.*

DISCUSSION

This study was aimed to delve deeper into the process that links the occurrence of conflicts with patients' families and the

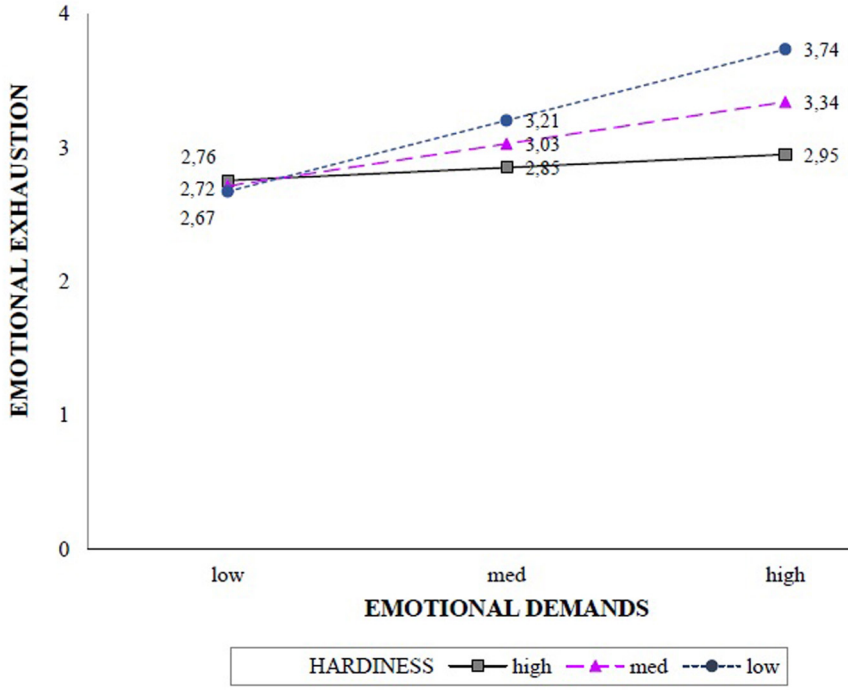

FIGURE 2 | Interaction effect of emotional demands and hardiness in predicting emotional exhaustion.

core dimension of job burnout—,i.e., emotional exhaustion—through the transmitting role played by emotional demands using a sample of healthcare professionals. A second goal was to empirically assess the moderating role of hardiness as a personal resource that could reduce the harmful relationship between emotional demands and symptoms of exhaustion. The obtained results provided support to the assumption that higher levels of exhaustion may result from a greater occurrence of dysfunctional relationships with patients' relatives and the subsequent burden of emotionally demanding tasks. In line with previous results, emotional demands represent a category of job demands particularly crucial in the healthcare sector. They entail the requirement to perform efficiently even when facing situations particularly intense in emotional terms: interacting with suffering patients and families, dealing with the dramatic consequences of unsuccessful procedures, and containing strong emotional reactions (Van Keer et al., 2015; Riedl and Thomas, 2019). The mediating model tested in the current research corroborated the assumption that the relationship between conflictual relationships with families and the frequency of exhaustion symptoms can be explained through the amplified amount of emotional demands. According to these findings, the chronic exposure to unceasing requests from patients and their families can be greatly expensive in terms of resources invested by workers, thus are likely to drain their emotional and cognitive energies (Blanco-Donoso et al., 2016; Aiello and Tesi, 2017).

The current research also supports the protective role of professionals' hardiness against the negative outcome of the health-impairment process described in the JD-R model. In line with previous findings, this study indicates that hardiness can reduce the harmful association between the emotionally demanding aspects of healthcare professions and the symptoms of exhaustion. In other words, hardy nurses, physicians, and care technicians can persevere with commitment and a sense of control in their daily work activities, even in the face of heavy emotional demands (Mazzetti et al., 2019).

On the other hand, the current study has some limitations that should be mentioned. The main weakness comes from the adoption of a cross-sectional design that prevents from drawing indisputable conclusions on the causal link among the study variables. Future studies based on longitudinal data could evaluate the occurrence of reciprocal causal relationships between emotional exhaustion and the perception of higher job demands (i.e., conflict with patients' families and emotional demands). Furthermore, the current study postulated a theoretical model that conceived emotional demands as a predictor of exhaustion, in line with the health-impairment process of the JD-R model. Nonetheless, it did not consider the direction of their association with work engagement. Previous evidence suggests that emotional demands could represent a challenging feature of healthcare professions that can foster nurses' creativity and motivation toward their work (De Jonge et al., 2008; Eley et al., 2012).

An additional limitation of the current research is related to the nature of our sample, which consisted of healthcare professionals working in a single private hospital. Therefore, an interesting venue for future research would be to replicate the current model in a different working population that is likely to

experience conflictual relationships with customers and clients, such as employees from the service sector. This extension would allow to corroborate the current results and evaluate whether they are generalizable across different contexts.

These present findings also provide relevant indications for the opportunity to train healthcare professionals in order to help them in managing the emotional demands of their work. To this purpose, training activities could foster strategies for emotional labor. In particular, deep acting strategies are based on the effort of adjusting the perception of emotional events to genuinely experience the emotions required by one's work role or context (Gabriel and Diefendorff, 2015). This antecedent-focused strategy allows eliciting the required emotion and, consequently, it could protect one's sense of authenticity. The enactment of deep acting strategies could prevent the state of emotional dissonance stemming from exhibiting unauthentic emotions to fit with the requirements, particularly in terms of display rules, prescribed by one's role (Hobfoll et al., 2018). Although deep acting strategies require the investment of a considerable amount of resources, they could prevent the occurrence of strain symptoms that originate by the constant effort to display unauthentic emotions (Hülsheger and Schewe, 2011). A further venue entails training paths aimed to foster workers' hardiness, which is defined as a malleable characteristic that could be developed through dedicated initiatives (Sudom et al., 2014). This strategy would be in line with the motivating potential of personal resources depicted by the JD-R model. In essence, a higher level of hardiness could be expected to stimulate workers' growth and development (Schaufeli and Salanova, 2010).

A further implication entails the promotion of an approach that leads to experience one's job as more engaging and meaningful (i.e., job crafting strategies). As a result, workers can proactively tackle their job demands, prevent the occurrence of counterproductive work behavior and perceive higher levels of well-being (Ingusci et al., 2016; Guglielmi et al., 2017). Previous findings among nurses' managers revealed that hardiness training could boost workers' confidence in their ability to influence the course of events and to translate demanding situations into learning opportunities (Judkins et al., 2006). According to these findings, hardiness training for the entire staff can boost workers' resources and, from a broader perspective, craft a healthy work environment where professionals perform their duties efficiently and experience a condition of intrinsic motivation and satisfaction.

DATA AVAILABILITY STATEMENT

The data are available upon request to the first author (greta.mazzetti3@unibo.it).

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

DG and GM contributed to the conceptualization. GM contributed to the formal analysis. GM and DG contributed to the investigation and writing. GM contributed to the methodology. DG and GT contributed to the supervision. GM and DG contributed to the writing of the original draft. GT contributed to the review and editing. All authors contributed to the manuscript and approved the submitted version.

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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 July 2020
doi: 10.3389/fpsyg.2020.01612

Work-to-Family Spillover Effects of Workplace Negative Gossip: A Mediated Moderation Model

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Existing research has found that workplace negative gossip exerts a negative impact on employees and organizations. However, there is a lack of study on the spillover effect of workplace negative gossip on employees' families. This paper aimed to address this gap in prior literature. Based on resource conservation theory, we chose married employees who perceived or suffered from workplace negative gossip as the subjects and analyzed the effect of workplace negative gossip on their work–family conflict. We adopted a self-reported questionnaire to assess employees' perception or experience of workplace negative gossip, psychological distress, level of neuroticism, and work–family conflicts. A total of 245 valid employee questionnaires were obtained from two-wave data collection in China. The results of the empirical analysis indicated that workplace negative gossip perceived or suffered by employees has a positive impact on their work–family conflicts, and psychological distress plays a mediating role in the relationship between perceived or suffered workplace negative gossip and employees' work–family conflict. Furthermore, we found that employees' level of neuroticism moderates the positive effect of workplace negative gossip and work–family conflict, and it also moderates the mediating effect of workplace negative gossip on employees' work–family conflict by psychological distress. The conclusion of this paper supported our previous hypotheses. Finally, according to the earlier findings, we discussed the theoretical contributions, practical significance, and limitations of the study and provided some practical suggestions for managers.

Keywords: workplace negative gossip, psychological distress, work–family conflict, neuroticism, conservation of resource theory, spillover effects

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Xinyuan Zhao, Sun Yat-sen University, China
Inam Ul Haq, Monash University Malaysia, Malaysia

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

Received: *02 November 2019*
Accepted: *15 June 2020*
Published: *22 July 2020*

Citation:
Liu T, Wu L, Yang Y and Jia Y (2020) Work-to-Family Spillover Effects of Workplace Negative Gossip: A Mediated Moderation Model. Front. Psychol. 11:1612. doi: 10.3389/fpsyg.2020.01612

INTRODUCTION

Gossip is a key social behavior that nearly everyone working in any organization experiences, hears, and probably contributes to, and it exists in various organizations and places where people live (Dunbar et al., 1997; Foster, 2004; Kniffin and Wilson, 2010; Jiang et al., 2019). The office provides a fertile ground for gossip to spread (Farley et al., 2010). Some scholars pointed out that 14% of the coffee break in the workplace is actually gossip, and approximately 66% of the general communication between employees is talking about other topics of colleagues (Cole and Dalton, 2009). Some earlier studies remarked upon the functions of workplace gossip. Specifically, workplace gossip is a vital channel to facilitate informal communication among employees

(Kniffin and Wilson, 2005). Meanwhile, information passed via workplace gossip may explain matters previously unclear to the organization (Noon and Delbridge, 1993; Wu et al., 2012). However, some research has found that workplace gossip is a negative behavior and an extension of abuse, which is often included in a scale that captures broader forms of bullying, such as aggression and harassment (Salin, 2001). Workplace gossip tends to have more adverse effects than positive effects on employees. This is especially true, as competition or "dark behavior" in the workplace has increased (Porath and Pearson, 2010), and most employees have experienced being gossiped about (Snyder et al., 2005). According to a survey of 262 staff in America, nearly 69% of employees admitted to being verbally hurt by their leaders or colleagues in the past year (Fox and Stallworth, 2005).

Workplace negative gossip (WNG) refers to the negative and informal valuation that organizational members discuss or maliciously spread about another member who is absent (Wu L.Z. et al., 2018; Zhou et al., 2019). It mainly includes the following four characteristics, that is, subjective perception, malevolent evaluation, difficult traceability, and rapid dissemination (Ellwardt et al., 2012a; Grosser et al., 2012; Wu L.Z. et al., 2018). Given the previously discussed characteristics of WNG, scholars have urged greater attention to the negative gossip in the workplace (Baumeister et al., 2004; Wu L.Z. et al., 2018). Prior studies focused on the causes of WNG at different dimensions, such as individual level (values, informal status, etc.) and organizational level (integrity of organizational structure, organizational atmosphere, etc.) (Baumeister et al., 2004; Beersma and Van Kleef, 2012; Ellwardt et al., 2012b; Decoster et al., 2013). Some literature has also suggested that WNG can be regarded as an indirect attack or victimization (Beersma and Van Kleef, 2012), which may be harmful to employees' in-role behavior (Michelson and Mouly, 2000; Kong, 2018; Wu X. et al., 2018; Zhou et al., 2019). WNG damages the reputation of employees and their relationship with colleagues (Shackelford, 1997; Jiang et al., 2019). Exposure to gossip implies that the target does not easily trust others, hampering cooperation with colleagues (Aquino and Thau, 2009). Also, the targets of gossip are likely to suffer greater psychological stress, which exerts an adverse effect on their work motivation, work efficiency, job satisfaction, and innovation (Michelson and Mouly, 2000; Wu L.Z. et al., 2018; Wu X. et al., 2018).

Despite the wealth of existing literature, to our knowledge, little is paid attention to the spillover effect of WNG on employees' family domain, especially the relationship between WNG and work–family conflict (WFC). Work and family are equally important to employees, especially in Chinese society, where employees' work and family domains are inseparable and often interact with each other (Liu et al., 2013). Taken together, it is necessary to discuss how and why WNG affects employees' WFC in the context of Chinese society.

This research bases on the conservation of resource theory (COR) to explain the effect of WNG on WFC in the Chinese context. The COR theory argues that it is vital for individuals to avoid resource loss than to obtain resources (Hobfoll, 1989, 2001). Individuals commonly take multiple roles in their daily life, and resources are always scarce and unevenly distributed. They thus tend to conduct a cognitive assessment of the return of each role and the situation of resource loss in advance to determine which roles to give up or invest in. According to the previously mentioned principles, if employees decide to consume numerous resources to cope with WNG in work life, maybe the remaining resources they could devote to family life are scarce, which positively impacts their WFC.

Meanwhile, WNG represents a resource loss (Wu X. et al., 2018). The COR theory posits that stress and distress occur when resources are lost. When the loss of the resource is greater or exhausted, individuals will enter a defensive mode to conserve resources, appearing aggressive and in an irrational behavior (Hobfoll et al., 2018). By drawing on the COR theory, we thus suggest that psychological distress plays a mediating role in the relationship between WNG and WFC.

Also, to our knowledge, little do we know about whether personality traits provide a boundary condition of gossip's effects. This study aims to explore the "dark side" in the workplace. Neuroticism, a kind of the big five personality traits, is related to negative feelings such as anxiety, frustration, and emotional instability. We thus use neuroticism as a moderator. More precisely, we propose that high neuroticism may strengthen the relationship between WNG and psychological distress and the mediating effect of psychological distress on the relationship between WNG and WFC.

Taken together, this study makes three contributions to the WNG and family life literature. First, existing research has little attention to the effect of WNG on family life. To fill the gap in existing literature, we apply the COR theory to argue why WNG from the perspective of resource loss could cause WFC, especially in the Chinese cultural context. Second, we examine how WNG conduces to WFC. Specifically, psychological distress plays a mediating role between WNG and WFC. Finally, by testing the moderating mechanism of neuroticism in the earlier mentioned relationships, we reveal that the boundary condition of the effect of WNG on WFC. **Figure 1** is the conceptual model.

THEORY AND HYPOTHESIS

Main Effect of Workplace Negative Gossip on Employees' Work–Family Conflict

Work and family are two crucial components of employees' life (Kossek and Ozeki, 1998; Anderson et al., 2002). WFC represents a particular type of inter-role conflict in which the role pressures from the work and family domains are incompatible in some aspects (Greenhaus and Beutell, 1985). A review of related literature suggests that WFC is generally divided into three major forms, including time-based conflict, strain-based conflict, and behavior-based conflict (Greenhaus and Beutell, 1985; Liu et al., 2013). Time-based conflict takes place when individuals spend time on the work role

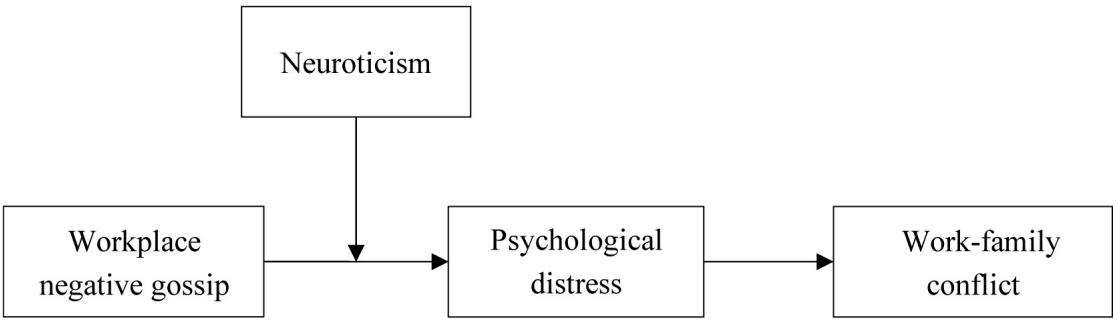

FIGURE 1 | The conceptual mode of this research.

and make it difficult to perform their family duties. Strain-based conflict is produced when some strain symptoms (i.e., stress, tension, anxiety, etc.) caused by the work role affect one's performance in family role. Behavior-based conflict exists when a person is unable to adjust behavior from work to meet with the expectations regarding behavior in the family role.

Workplace negative gossip is a dilemma faced by employees in their office life. As they make use of limited resources to cope with gossip about themselves to change the situation, it means their resources are consumed (Liu et al., 2020). In other words, WNG represents a kind of resource loss (Wu X. et al., 2018). The COR theory argues that protection of remaining resources is a priority for those individuals who suffer a resource loss (Hobfoll, 1989, 2001). Along this line, given the issue of limited resources, if employees have devoted more time and energy to deal with negative gossip in the work domain, they would tend to protect their remaining resources in the family domain. An effective way in which employees seek to protect personal resources is to reduce the amount of energy invested in their families. Meanwhile, the COR theory suggests that loss will have a significantly greater impact, and the lack of personal resources will bring about difficulties handling their daily life (Hobfoll, 1989, 2001). Therefore, we could propose that employees' behaviors of priority protection of remaining resources and the loss of their resources will make it difficult to balance work and family roles effectively, resulting in WFCs.

More precisely, employees suffering from WNG may adopt some approaches such as hard work or attendance at group activities to change the gossipers' negative assessment of themselves. Thus, they may face working hours overload, and WFC is related to work time per week (Schafer, 1980). Given the priority of resources protection, they are more likely to reduce the investment in time or energy for family role, resulting in time-based WFC. Moreover, the targets of gossip have already done much emotional labor for coping with gossip in the workplace. Therefore, following the principle of protection priority, employees tend to have a cold and detached attitude toward their partners or relatives to preserve individual psychological resources when they return home, thereby generating strain-based conflict. Furthermore, employees who have been exposed to WNG are likely to display warmth and emotionality to repair their reputation in their interactions with those gossipers. Consequently, for the conservation of personal resources, they cannot meet family expectations that a person to be warm and nurturant, leading to behavior-based conflict. Thus, we propose the following hypothesis:

Hypothesis 1 (H1): *WNG will yield WFC of employees.*

Mediating Effect of Psychological Distress

Psychological distress, an unpleasant state, is often associated with negative thoughts and emotions, such as anxiety, fear, depression, etc. (Barnett and Brennan, 1997). Psychological distress takes place when individuals experience the stress and strain of work and family life and emotional trauma (Keashly and Harvey, 2005).

The COR theory provides a theoretical explanation for whether and in what situations WNG leads to psychological distress. The COR theory posits that individuals prefer to retain their existing resources. However, when personal resources are threatened, lost, and believed to be unstable, people are likely to suffer psychological distress (Hobfoll, 1989, 2001; Hobfoll and Lilly, 1993). Prior researches have exhibited evidence for the interpretation that stressors are regarded as a threat to individual resources, which finally produces greater psychological distress (Almeida, 2005).

Generally, China is seen as a collectivist society. Most people thirst for properly dealing with personal relationships and expect to be acknowledged and treated kindly (Hofstede, 1991). In this cultural context, when employees suffer from WNG, they will immediately attempt to deploy resources to improve their situation (Wu X. et al., 2018). We thus suggest that WNG represents resource loss and interpersonal stressors (Shackelford, 1997; Liu et al., 2020). This is mainly based on the following two considerations. Firstly, exposure to negative gossip implies that the targets tend to be angry and frustrated, especially if the gossip is fake and hostile. They could consume substantial personal resources to address the situation (Wu X. et al., 2018; Liu et al., 2020), such as identifying the gossiper, justifying their behaviors, and elucidating the truth, etc. Secondly, employees whose reputation has been damaged by gossip are less likely

to obtain resources from superiors or colleagues to make up their resource loss, even increasing the possibility of resource depletion (Wu et al., 2012). For example, when the targets would like to approach colleagues and increase social connections actively, colleagues generally have an evasive or indifferent attitude. This not only results in no return on the resources invested by individuals but also speeds up the loss of their psychological resources such as lowering self-esteem, increasing anxiety, etc. Taken together, according to the COR theory, WNG, as a resource loss, is strongly related to psychological distress (Chandra and Robinson, 2009).

The COR theory also posits some important corollaries. Especially corollary 2 provides a theoretical explanation for scholars to study how WNG yields WFC. Corollary 2 is called "loss spirals" because resource loss is more powerful than resource gain and because stress and distress occur when resources are lost. At each iteration of the stress spiral, the individual's resources used to offset resource losses gradually decrease, but the momentum and magnitude of resource losses are still increasing, leading to further damage to future resources (Hobfoll et al., 2018). When the resource loss is greater or exhausted, individuals will enter a defensive mode to conserve resources, appearing aggressive and in an irrational behavior (Hobfoll et al., 2018). Exposure to WNG implies that employees have already faced resource loss and suffered a great deal of psychological distress. Under the influence of the resource loss spiral, psychological stress and distress further increased their resource loss, making them face the threat of resource exhaustion. Consequently, they often choose a defensive strategy to conserve their resource reserves. Employees' work and family domains are closely linked, especially in China. They tend to conserve their resources by adopting the defensive posture in their family life. For example, they tend to be passive avoidant to avoid the emotional labor in family life. This may conduce to tensions, disputes, and disharmony in family relations, which in turn cause WFC.

Overall, given the positive effect of WNG on the psychological distress and the positive role of the psychological distress in aggravating WFC, we propose the following hypothesis:

> Hypothesis 2 (H2): *Psychological distress mediates the positive relationship between WNG and WFC.*

Moderating Effect of Neuroticism

In this study, we mainly aim to explore the adverse effects of the "dark side" in the workplace. As a result, we regard neuroticism, a kind of the big five personality traits, as a moderator rather than other dimensions of the big five personality traits. This is because only neuroticism is directly relevant to unfavorable feelings, such as anxiety, depression, and self-doubt, whereas other traits are related to positive emotions or behaviors. Consequently, we adopt the COR theory to analyze the conditions under which neuroticism is likely to strengthen or weaken the influence of WNG.

The COR theory argues that resources comprise those objects such as individual characteristics, conditions, or energies that are valued in their own right or that are valued because they play vital roles in obtaining or production of valued resources (Diener and Fujita, 1995; Hobfoll, 2001). Resources can be specifically divided into four categories: material resources, conditional resources, personality traits, and energy resources (Hobfoll et al., 2018). These resources can not only meet individual needs but also help them accurately identify and socially locate themselves. In line with this definition and classification of resource, we could suggest that neuroticism represents a characteristic resource that individuals possess.

Of the primary dimensions of personality, neuroticism is typically defined as a tendency toward anxiety, depression, self-doubt, and other negative feelings. It is closely linked with one's emotional stability. Lower levels of neuroticism indicate that the individual possesses a strong power of emotional control and regulation. In other words, individuals with low levels of neuroticism have abundant psychological resources, such as emotionally stable. Conversely, higher levels of neuroticism represent those individuals who usually suffered mood swings due to the effect of external factors. That is, individuals with high levels of neuroticism are lack of psychological resources.

The COR theory posits that individuals with greater resources are less vulnerable to resource loss and more capable of resource gain. On the contrary, those who lack resources are more susceptible to resource loss and less capable of resource gain, and their willingness to protect remaining resources is stronger than their awareness of acquiring surplus resources (Hobfoll et al., 2018). Following this theoretical logic, we suggest that when employees with different levels of neuroticism experience resource loss, they are more likely to show diverse perceptions of this adverse event, thus adopting differentiation strategy. More specifically, employees with high neuroticism act more sensitive to resource loss (i.e., WNG) for lack of psychological resources, and they are likely to constantly reinforce resource loss and magnify negative perceptions of themselves (Li et al., 2016; Lu et al., 2017; Decuypere et al., 2018). Consequently, they tend to be in the grip of psychological distress, such as anxiety, tension, and emotional instability. Instead, individuals with low neuroticism have considerably psychological resources. They thus are insensitive to the adverse effects of recourse loss. They could exert their ability and resource to maintain emotional stability and show positive aspects in their work attitudes and behaviors, reducing the psychological distress caused by resource loss, that is, exposure to WNG. Thus, the following hypothesis is proposed:

> Hypothesis 3 (H3): *Neuroticism moderates the relationship between WNG and psychological distress, such that the positive relationship is stronger when the employee possesses higher neuroticism.*

Also, based on the previously discussed assumption that the positive impact of WNG on psychological distress is stronger when the employee has higher neuroticism and that psychological distress is positively related to WFC, it is logical to speculate that the positive indirect effect of WNG on WFC via psychological distress will be stronger when an employee has higher neuroticism. Hence, we propose that:

Hypothesis 4 (H4): *Neuroticism moderates the indirect effect of WNG on WFC via psychological distress. Specifically, the indirect effect will be strengthened when the employee possesses higher neuroticism.*

MATERIALS AND METHODS

Sample and Procedures

The data used in this paper were collected with the help of a professional research company, which built a large database containing information from numerous enterprises and employees in China. The data company randomly selected 1,000 employees in its database as the initial subjects. Data were collected at different time points for reducing the possibility of common method bias. Existing literature on resource loss has used different time lags, including 6 weeks (Ritter et al., 2016), 3 months (Uglanova and Staudinger, 2013), 6 months (Matthews et al., 2014), and even a few years (Knecht et al., 2011). There is no one right temporal lag that can be universally recommended (Menard, 2002). Some scholars indicated that shorter intervals in studies should be considered because longer lags could miss the manifestation window and impact the true relationship (Tetrick and Buffardi, 2006). Consequently, we use 3-month gaps in this study. That is, we sent the questionnaires to 1,000 participants at two different times over a span of 3 months. Meanwhile, we coded the questionnaires before distributing the survey to match the responses to different times.

In the first-wave survey, we distributed the questionnaire to the respondents by email, which mainly included the basic information of the subjects. We also surveyed participants if they had perceived or experienced WNG during the past 6 months and their marital status. Given the core goal of this study, we only retained questionnaires where items of the experience of WNG and marital status were both answered "yes." In other words, married employees who suffered from WNG were the ones we ultimately studied. Specifically, in the first-wave survey, we surveyed a total of 1,000 employees and received 821 questionnaires, including 660 married samples. Of the 660 married samples, 502 samples perceived or experienced WNG. After removing missing values of some variables, we obtained 445 valid questionnaires in the first wave. The second-wave data collection was conducted 3 months later; 455 employees who had completed first-wave questionnaires were surveyed again, investigating their personality traits, psychological distress, and WFC. We received 268 responses, for a response rate of 58.9%. After sorting out the questionnaires, we finally obtained 245 valid results, which formed the basis of data analysis in this paper.

Of the 245 usable samples, there were 105 female and 140 male participants. About 26.53% had state-owned jobs, and the remaining employees had non-state-owned jobs. Only 32.24% were in management positions. The average age of all participants was 32.67 years old (SD = 7.26). Of the employees, 66.9% lived with their parents, and the rest did not. With regards to education level, the proportions of those with high school degrees or below, those with associate degrees, and those with master's degrees or above were less than 3, 10.61, and 8.98%, respectively. The number of employees with bachelor's degrees was the largest, accounting for 77.96%. Also, the average employee changed jobs about 3.39 times (SD = 1.50).

Measure

Workplace Negative Gossip

We measured the employees' perceptions of WNG by the three-item scale from the work of Wu L.Z. et al. (2018). Example items were "During the past 6 months, others have spread damaging information about you in office," "During the past 6 months, others have communicated unfavorable gossip about you in office," and "During the past 6 months, others have made negative allegations about you in office." All adopted a seven-point Likert scale, ranging from 1 (never) to 7 (daily). The scale's reliability was 0.900.

Psychological Distress

We adopted a six-item scale developed by Kessler et al. (2002) to measure psychological distress. Respondents were asked to answer how often they generally experienced some special emotions or feelings during the last 30 days, including nervousness, hopelessness, restlessness or fidgetiness, depression (nothing could cheer you up), struggling (everything was an effort), and worthlessness. Each item was measured on a seven-point scale (1 = never, 7 = daily). Cronbach's alpha for this scale was 0.902.

Neuroticism

Shafer (1999) designed a brief bipolar rating scale to measure the five-factor model of personality, including extraversion, neuroticism, conscientiousness, agreeableness, and openness. We applied one subscale as an indicator of neuroticism, which consisted of six items such as "at ease-nervous," "calm-anxious," "unworried-fearful," etc. Respondents were asked to indicate the extent of agreement, which ranged from (1) strongly agree to (7) strongly disagree. The scale's reliability was 0.939.

Work–Family Conflict

Work–family conflict was assessed with five items applied by Anderson et al. (2002). Respondents were asked to indicate the extent to which one's work interfered with one's family. Sample items included: "Have you not had enough time for yourself because of your job?," "Have you not been in as good of a mood as you would like to be at home because of your job?," and so on. We used a seven-point Likert scale (1 = very often, 7 = never). To maintain consistency of data direction, we reverse-coded those items, that is, higher numbers denote more frequent experiences of one's work interfering with one's family. Cronbach's alpha for this scale was 0.884.

Control Variables

To eliminate potential confounding effects, we took demographic information of the employees, including age, gender, education level, and living with parents (Byron, 2005), as control variables. Meanwhile, following existing research on WNG,

we also controlled for employees' position, number of job changes, and ownership.

RESULTS

Confirmatory Factor Analysis

Before testing the previously discussed hypotheses, we needed to conduct confirmatory factor analyses with Mplus7 to verify the discriminant validity because all our core variables were from the same questionnaire. The indicators recognized by most scholars were adopted to judge the model fit, including χ^2/df, comparative fit index (CFI), Tucker–Lewis index (TLI), and root mean square error of approximation (RMSEA). When the values of CFI and TLI are greater than 0.9, the value of χ^2/df is between 1 and 5, the value of RMSEA is less than 0.08, and the overall fitness of the model is better and can be accepted. We planned to pick the optimal fit model by comparing the assumed factor models.

We first tested the single-factor model that contained all of variables, which yielded a poor fit (χ^2 = 1,956.067, χ^2/df = 11.506, CFI = 0.488, TLI = 0.427, and RMSEA = 0.207). Then, we examined other alternative factor models, two two-factor models, and five three-factor models, which did not provide good fits either. As we assumed, the four-factor model contributed the best fit to the data: χ^2 = 230.789, χ^2/df = 1.407, CFI = 0.981, TLI = 0.978, and RMSEA = 0.041 (**Table 1**), demonstrating that the discriminant validity of this study variables was high and effective.

Descriptive Statistics

Table 2 shows the result of descriptive statistics and correlations among all variables, including the means, standard deviations, and the correlation coefficients. Obviously, there were close relationships between the core variables in the study. WNG was positively correlated with psychological distress (r = 0.393, $p < 0.01$) but negatively related to WFC ($r = -0.274$, $p < 0.01$). As we expected, psychological distress was significantly associated with neuroticism (r = 0.575, $p < 0.05$) and WFC (r = 0.356, $p < 0.01$). Also, neuroticism and WFC were positively related to one another (r = 0.153, $p < 0.05$).

Hypothesis Testing

We used hierarchical regression analyses to test Hypotheses 1 and 2. Hypothesis 1 of this study predicts that WNG yields employees' WFC. As shown in **Table 3**, WNG was positively associated with employees' WFC (β = 0.245, $p < 0.01$; Model 4), supporting Hypothesis 1. Also, Hypothesis 2 of this study posits that psychological distress mediates the positive relationship between WNG and WFC. First, the control variables and the independent variable were entered into Model 1. Regression result of Model 1 indicated that WNG had a positive relationship to psychological distress (β = 0.294, $p < 0.01$; Model 1). Second, Model 5 is that we added the mediating variable based on Model 1. Its results represented that psychological distress was positively correlated with WFC, as WNG is controlled (β = 0.225, $p < 0.01$; Model 5). Meanwhile, when psychological distress is controlled, WNG is positively related to WFC (β = 0.179, $p < 0.05$; Model 5). In conclusion, according to the causal steps approach used by Baron and Kenny (1986), we propose that psychological distress plays a mediating role in the relationship between WNG and WFC, supporting Hypothesis 2.

Moreover, we adopted the bootstrapping procedure with 5,000 subsamples to further examine the main and mediating effects. If the 95% confidence interval (CI) does not contain zero, this means the effects are significant. **Table 4** shows the analysis results. In particular, WNG was positively associated with WFC (β = 0.364, *SE* = 0.113, 95%, CI = [0.181, 0.555], CI did not include zero), and Hypothesis 1 was tested again. The results also revealed a significant indirect effect of WNG on WFC, and the 95% CI ranged from 0.076 to 0.280 (CI did not include zero). Hence, these findings provided initial support for Hypothesis 2.

We applied the moderated causal step approach of analysis to examine Hypothesis 3, which expects that neuroticism plays a moderating role in the relationship between WNG and psychological distress. As **Table 3** indicated, interaction one term was significantly and positively related to psychological distress (β = 0.131, $p < 0.01$, Model 3), supporting Hypothesis 3.

TABLE 1 | Results of the confirmatory factor analysis for the main variables.

Factor models	χ^2	df	χ^2/df	CFI	TLI	RMSEA
Single-factor mode l	1,956.067	170	11.506	0.488	0.427	0.207
Two-factor model 1	1,459.128	169	8.634	0.630	0.584	0.177
Two-factor model 2	1,267.798	169	7.502	0.685	0.646	0.163
Three-factor model 1	1,512.979	167	9.060	0.614	0.561	0.181
Three-factor model 2	888.937	167	5.323	0.793	0.764	0.133
Three-factor model 3	846.932	167	5.071	0.805	0.778	0.129
Three-factor model 4	802.730	167	4.807	0.818	0.792	0.125
Three-factor model 5	660.284	167	3.954	0.858	0.839	0.110
Four-factor model	230.789	164	1.407	0.981	0.978	0.041

Single-factor model: WNG + NE + PD + WFC; two-factor model 1: WNG + WFC and NE + PD; two-factor model 2: WNG + PD + WFC and NE; three-factor model 1: WNG, WFC + NE, and PD; three-factor model 2: WNG + WFC, NE, and PD; three-factor model 3: WNG, WFC + PD, and NE; three-factor model 4: WNG, NE + PD, and WFC; three-factor model 5: WNG + PD, NE, and WFC; four-factor: WNG, NE, PD, and WFC. WNG, workplace negative gossip; NE, neuroticism; PD, psychological distress; WFC, work–family conflict.

TABLE 2 | Descriptive statistics and correlations among all variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(1) Workplace negative gossip	1													
(2) Psychological distress	0.393**	1												
(3) Neuroticism	−0.034	0.575*	1											
(4) Work–family conflict	−0.274**	0.356**	0.153*	1										
(5) Age	−0.042	0.001	0.037	−0.060	1									
(6) Gender	0.219**	0.417**	0.187**	0.208**	−0.085	1								
(7) Education 1	0.263*	0.229**	0.199**	0.096	0.040	−0.023	1							
(8) Education 2	0.024	0.069	0.010	0.085	0.100	0.031	−0.055	1						
(9) Education 3	−0.144*	−0.078	−0.042	−0.109	−0.073	0.017	−0.298**	−0.648**	1					
(10) Education 4	0.041	−0.085	−0.057	0.015	−0.023	−0.045	−0.050	−0.108	−0.591**	1				
(11) Living with parents	0.185**	0.566**	0.252**	0.205**	0.111	0.263**	0.109	0.044	−0.079	0.008	1			
(12) Position	−0.017	−0.022	0.035	0.016	−0.142*	0.068	−0.053	0.216**	−0.076	−0.095	−0.107	1		
(13) The number of job-hopping	−0.008	−0.134*	−0.148*	−0.059	−0.217**	−0.123	0.012	0.141*	−0.132*	0.033	−0.066	0.031	1	
(14) Ownership	−0.057	0.057	0.087	0.050	0.096	0.016	0.024	−0.027	−0.015	0.038	0.048	0.060	−0.341**	1
Mean	3.820	3.699	3.214	4.094	32.673	0.571	0.024	0.106	0.780	0.090	0.669	0.322	3.388	0.265
SD	0.913	1.189	1.272	1.059	7.262	0.496	0.155	0.309	0.415	0.286	0.480	0.468	1.499	0.442

*N = 245. *P < 0.05, **P < 0.01. Sex: 1—male, 0—female; Ling with parents: 1—yes, 0—no; Ownership: 1—state-owned, 0—non-state-owned; Position: 1—manager, 0—employee; Education 1: high school degrees or below, Education 2: associate degree, Education 3: bachelor's degree, Education 4: master's degree or above.*

TABLE 3 | Results of hierarchical regression analyses.

Variables	Psychological distress			Work–family conflict				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Control variables								
Education 2	−0.775*	−0.016	0.592	0.061	0.235	0.220	1.038**	0.946**
Education 3	−0.985***	−0.197	0.406	−0.254	−0.032	−0.088	0.723	0.660
Education 4	−1.294***	−0.461	0.195	−0.179	0.113	−0.004	0.879*	0.849
Ownership	0.059	0.037	−0.015	0.108	0.095	0.103	0.034	0.367
Hop	−0.068	−0.025	−0.021	−0.036	−0.021	−0.027	−0.023	−0.019
Position	−0.013	−0.073	−0.071	−0.005	−0.002	−0.018	−0.016	−0.005
Living with parents	1.103***	0.861***	0.839***	0.289**	0.041	0.238	0.209	0.079
Age	−0.009	−0.008	−0.007	−0.012	−0.010	−0.012	−0.011	−0.010
Sex	0.560***	0.396***	0.375***	0.240*	0.114	0.206	0.178	0.120
Independent variable								
Workplace negative gossip	0.294***	0.391***	−0.094	0.245***	0.179**	0.266***	−0.387**	−0.372**
Moderator								
Neuroticism		0.425***	−0.035			0.089	−0.529***	−0.524***
Interaction 1								
Workplace negative gossip* Neuroticism			0.131***				0.176***	0.156***
Mediator								
Psychological distress					0.225***			0.156*
_cons	2.993***	0.592	1.733***	2.847***	2.847***	3.016***	4.552***	4.282***
r^2	0.490	0.665	0.687	0.163	0.163	0.140	0.190	0.199

*N = 245. *p < 0.1, **p < 0.05, ***p < 0.01.*

Following the procedure recommended by Stone and Hollenbeck (1989), we further computed the slopes using one SD above (high level of neuroticism) and below (low level of neuroticism) the mean of the moderating variable and then plotted the moderation patterns. As shown in **Figure 2**, we found the moderation patterns to be consistent with Hypothesis 3. When employees possessed a high level of neuroticism, WNG exerted a stronger positive influence on psychological distress than the individuals enjoyed a low level of neuroticism. Therefore, Hypothesis 3 was verified again.

We utilized PROCESS macro for SPSS 23.0 with 5,000 bootstrap samples to test Hypothesis 4. The results reported in **Table 5** suggested an indirect effect of WNG on employees' WFC via psychological distress whether the level of neuroticism

TABLE 4 | Non-standardized mediation analysis results.

Model paths	Estimate	*SE*	BC 95% CI	
			Lower	Upper
Total effect				
WNG → WFC	0.364	0.113	0.181	0.555
Direct effect				
WNG → PD	0.547	0.093	0.388	0.692
PD → WFC	0.296	0.098	0.139	0.460
WNG → WFC	0.202	0.120	0.001	0.392
Indirect effect				
WNG → PD → WFC	0.162	0.061	0.076	0.280

BC, biased corrected (5,000 bootstrapping sample). Control variables (age, sex, education 2, education 3, education 4, living with parents, position, the number of job-hopping, and ownership) were added to the non-standardized mediation analysis. WNG, workplace negative gossip; PD, psychological distress; WFC, work–family conflict.

was high or low and that the indirect effect was significant and positive. Specifically, when employees possessed high neuroticism, the indirect effect was enhanced (low = 0.073, mean = 0.102, and high = 0.160, CI did not include zero). By combining these analyses, Hypothesis 4 was well demonstrated.

DISCUSSION

This study mainly explores the impact of WNG perceived and experienced by employees on their WFCs as well as the specific influencing mechanism. Two hundred forty-five employees from Chinese companies were investigated for data analysis, and results show that WNG perceived or suffered by employees has a positive impact on employees' WFCs through the mediating variable of psychological distress. Meanwhile, employees with high levels of neuroticism have a more adverse effect on their psychological distress by the WNG that they perceived or experienced compared with those with low levels of neuroticism. Moreover, neuroticism moderates the indirect effects of WNG on the WFCs of employees through psychological distress. Also, our research has some theoretical and practical significance, which we will discuss in the next section.

Theoretical Implications

In the current increasingly competitive workplace, WNG is a common phenomenon. Scholars have carried out plenty of research on the possible impact of WNG on employees and organizations, forming a rich body of literature. However, there is a lack of research on the possible impact of WNG on the employees' families as well as the mediating mechanism. To fill in these gaps, we regarded it as the main research issue and conducted an empirical analysis in the Chinese context. Therefore, the results of this study have theoretical significance. First, according to resource conservation theory, this study discusses the spillover effect of WNG on the family life of employees, that is, the impact on the conflict of working families. Although there is a large number of studies on the adverse effects of negative gossip in the workplace, they mainly focus on the impact of WNG on job motivation, job performance, job satisfaction, etc. (Kong, 2018; Babalola et al., 2019). The results of this study extend the impact of WNG from the individual level of the employee to the family level, thereby opening up a black box between WNG and WFCs.

Second, based on the perspective of work stress, this study reveals an important mediating mechanism of how WNG leads to WFCs of employees. In other words, WNG leads to WFC through the mediating role of psychological distress. At the same time, perceived or suffered WNG exacerbates the psychological distress of employees, which means that employees' psychological distress may not only come from structural factors, such as organizational design, job content, etc. but may also

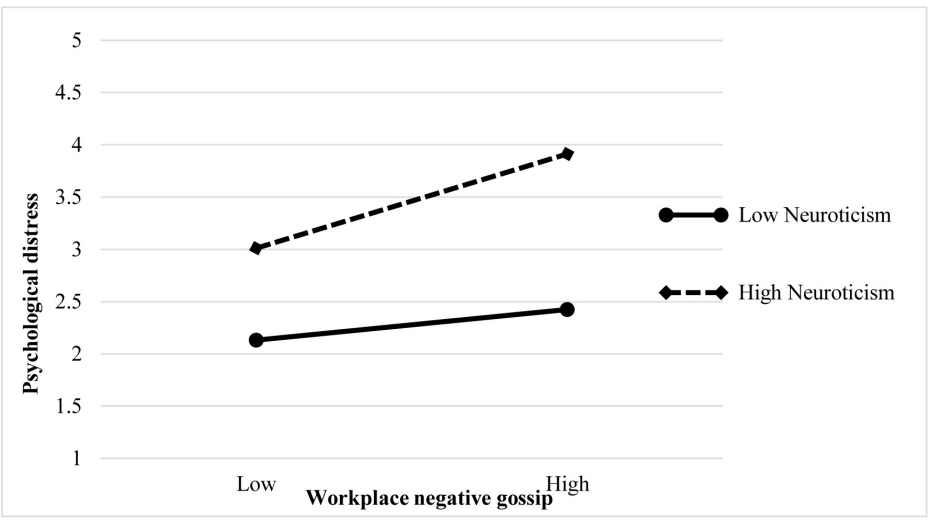

FIGURE 2 | Interactive effect of neuroticism on the relationship between workplace negative gossip and employees' psychological distress.

TABLE 5 | Moderated mediation results.

Moderator variable	Estimate	*SE*	BC 95% CI	
			Lower	Upper
Emotional intelligence low	0.073	0.035	0.007	0.144
Emotional intelligence mean	0.102	0.031	0.045	0.167
Emotional intelligence high	0.160	0.053	0.072	0.040
Index	0.035	0.023	0.006	0.099

BC, biased corrected (5,000 bootstrapping sample). Control variables (age, sex, education 2, education 3, education 4, living with parents, position, the number of job-hopping, and ownership) were added to the non-standardized mediation analysis.

be influenced by interpersonal relationship among employees within the organization. Thus, our study also helps advance the employees' psychological distress literature.

Finally, the results of this study show that neuroticism, a big five personality trait, moderates the relationship between WNG and WFC. Specifically, employees with lower levels of neuroticism have a stronger ability to control and regulate emotions and possess less extreme emotions. Therefore, they can properly deal with WNG, slow down their emotional distress, and reduce the possibility of causing WFCs. On the contrary, employees with higher levels of neuroticism have a lack of stability in their emotions and a lower ability to adjust their own emotions, and they are prone to negative psychological problems. Once they encounter WNG, they will have great psychological distress, exacerbating WFCs. In summary, the research results confirm a boundary condition that WNG causes psychological distress, further expanding the research on WNG.

Practical Implications

In practical terms, it is necessary for organizations and managers to recognize that WNG may lead to WFCs of employees, which in turn will affect the behavioral expression and work efficiency of employees in the workplace, even negatively affecting business performance. Therefore, this study proposes three specific methods to help organizations and managers pay attention to avoiding WNG, reducing WFCs of employees.

The first method is taking positive measures to tighten or close the transmission channels of WNG. Existing literature indicates that an important cause of the occurrence of gossip is when individuals discover the uncertainty of the environment in which they are located (Rosnow et al., 1988; DiFonzo and Bordia, 2007). Considering the importance of environmental uncertainty, organizations or managers should make changes accordingly, such as keeping transmission channels for information unimpeded within organizations, revealing important information about employees' interests promptly, preventing ambiguous environments from occurring, and reducing opportunities for rumors to spread within the organization. At the same time, organizations should establish a cultural atmosphere of zero tolerance toward WNG. Organizations must apply certain disciplinary measures to employees who create and disseminate negative gossip and cause significant adverse effects within the organization, such as destroying the trust of colleagues and jeopardizing internal unity. Moreover, organizations should encourage social interaction between employees within the organization, build friendliness, intimacy, and cooperation among colleagues, and avoid undesirable workplace behavior. Also, organizational rules and norms can apply pressure against the spread of WNG (Michelson et al., 2010), and organizations or managers can issue formal organizational rules and norms to constrain and manage employees' behavior within the organization.

The second path is to help employees improve their psychological endurance capacities and resistance abilities as much as possible. A large number of studies have indicated that the psychological endurance capacities of employees are closely related to their job performance. In the face of adverse external shocks, individuals with a higher psychological endurance capacity can maintain positive and stable emotions, avoiding external shocks that have adverse effects on their work and family; on the contrary, individuals with a lower psychological endurance capacity may fall into nervousness, fidgetiness, or depression and cannot alleviate the impact of adverse external shocks on their own family and work. Therefore, organizations can provide non-profit consulting services for employees with low psychological endurance capacities, help them to properly face external shocks, properly resolve the possible damage caused by shocks, and help them improve themselves and reduce the hazard to their work and organization. At the same time, all employees should receive regular psychological training to help themselves know how to cope with stress and respond to WNG.

Thirdly, neuroticism level is one of the main personality traits of individual employees, and it is also an important catalyst for the adverse effects of WNG. People with high levels of neuroticism are very sensitive to WNG. This has practical revelations for managers and organizations in that when conditions permit, managers and organizations can measure and analyze personality traits in the recruitment process and can regard their personality traits as an important factor in recruitment. For employees with high levels of neuroticism who have already been recruited, enterprises can help employees gradually improve their psychological status, maintain healthy and stable emotions, and cultivate a good work and life mentality through the organization of public welfare psychological activities.

Limitations and Future Research

Although our research has some theoretical and practical implications, there are some limitations. First of all, we take corporate employees as the object of study and do not make a sex distinction. As is well known, maintaining the balance between work and family is a difficult problem for women in the workplace. WFCs are common among women in the workplace, and the only difference is the size of the conflict. Women workers have long been in WFCs. Have they formed some special responses, and can these measures help them cope with WNG? Hence, future research can focus on the working female group and conduct a comparative study with the working male group. Secondly, this study mainly considers the negative gossip perceived or experienced by employees at

work from their colleagues. According to existing literature, gossip may also come from those in power (Gkorezis et al., 2014; Kuo et al., 2018). Employees may suffer from negative gossip from their supervisors, which may have a greater impact on individual employees and their families. After all, leaders have higher management power than the colleague. Therefore, further research can explore the impact of WNG from different sources on employees' WFCs. Finally, our research is carried out under the Chinese context, and the sample size is not enough. The Chinese situation is special in that employees' work-life and family-life are closely related and have a strong overflow effect. However, in developed countries where a more detailed labor welfare system has been established, there is a clear boundary between work and family. Do employees' perceived or suffered WNG cause conflicts between their work and families? This issue requires further study in the future. Also, future research wants to delve deeper into the results by using a bigger sample size.

CONCLUSION

Previous research generally pays attention to the adverse impact of WNG on employees' job performance and organizational efficiency, but few studies have explored the impact of WNG on WFCs. This article explores the relationship between the two in the Chinese situation. The empirical analysis validates our hypothesis that psychological distress plays a mediate role between WNG and employees' WFCs and that the neuroticism of employees is an important moderating factor. Also, the findings of our research provide a perspective for understanding the harms of WNG and can help organizations recognize the role of WNG and reduce the adverse effects through relevant initiatives.

DATA AVAILABILITY STATEMENT

The datasets for this article are not publicly available due to restrictions set by the data holder. Requests to access the datasets should be directed to ltyuan@whu.edu.cn.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee, School of Sociology, Wuhan University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

TL contributed in writing the original draft, conceptualization, data curation, formal analysis, and methodology. LW contributed in resources, data collection, and supervision of the paper. YJ and YY contributed in data curation, methodology, review, and editing. All authors contributed to the article and approved the submitted version.

FUNDING

This work was supported by the National Social Science Foundation of China (grant number 18VZL009).

ACKNOWLEDGMENTS

We are grateful to all the employees who participated in the questionnaire.

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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: 20 October 2020
doi: 10.3389/fpsyg.2020.563634

The Interplay of Emotional Intelligence Abilities and Work Engagement on Job and Life Satisfaction: Which Emotional Abilities Matter Most for Secondary-School Teachers?

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OPEN ACCESS

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

Received: *19 May 2020*
Accepted: *22 September 2020*
Published: *20 October 2020*

Citation:
Mérida-López S and Extremera N (2020) The Interplay of Emotional Intelligence Abilities and Work Engagement on Job and Life Satisfaction: Which Emotional Abilities Matter Most for Secondary-School Teachers? Front. Psychol. 11:563634. doi: 10.3389/fpsyg.2020.563634

Emotional intelligence has been underscored as a helpful personal resource in explaining life and job attitudes in human services employees. However, the joint interaction of emotional intelligence (EI) abilities with work engagement to explain life and job attitudes has not been tested. The present study aimed to explore the interactive role of EI abilities with work engagement in the prediction of job and life satisfaction in a sample of Spanish secondary-school teachers. A total of 190 teachers (125 females) participated in the study. Notably, the results showed that only emotion regulation ability (ERA) was significantly associated with work engagement, job satisfaction, and life satisfaction. Furthermore, ERA moderated the relationship between work engagement and job and life satisfaction. The present findings contribute to current knowledge on EI abilities and personal and job-related correlates of teachers' work engagement.

Keywords: work engagement, emotional intelligence, job satisfaction, life satisfaction, interaction, secondary-school teachers

INTRODUCTION

The rise of Positive Organizational Psychology has led to a greater focus on work-related occupational well-being constructs such as work engagement (Mills et al., 2013; Di Fabio, 2017). Work engagement—defined as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli et al., 2002)—has received a great deal of attention by both scholars and practitioners worldwide (Bakker et al., 2014). There is an extensive meta-analysis literature on the correlates of work engagement underlying the potential value of this construct for both employees and organizations (Bakker et al., 2014; Knight et al., 2017). In the teaching field, existing studies indicate that work engagement predicts relevant outcomes such as teacher efficacy, satisfaction, and well-being (for a recent overview, see Granziera et al., 2021).

A study with beginning teachers has demonstrated that highly engaged individuals invest more efforts in achieving their work-related goals and, thus, they perform better than their counterparts

who experience lower engagement (Bakker and Bal, 2010). When teachers feel vigorous and dedicated they are more satisfied with their job and feel more positive emotions, thereby showing more positive appraisals of their own lives (Upadyaya et al., 2016; Li et al., 2017; Granziera et al., 2021). These latter findings become particularly relevant given that teaching is an occupation at elevated risk for psychological distress (Taris et al., 2017; Harmsen et al., 2018). Despite the considerable amount of research showing the effects of work engagement on personal and work-related well-being, increasing our knowledge on the potential moderating factors in these associations is needed. This research aims to contribute to increase the current knowledge on teachers' well-being by examining the potential moderating role of emotional intelligence (EI) in the associations between work engagement and teachers' personal (i.e., life satisfaction) and work-related (i.e., job satisfaction) well-being.

Teachers' Work Engagement: Personal and Work-Related Correlates

As stated above, work engagement increasingly represents a critical job-related motivational construct as it relates to several relevant outcomes within educational settings (Taris et al., 2017; Granziera et al., 2021). For example, work engagement is positively associated with teachers' job satisfaction, which in turn impacts students' development and academic achievement (Perera et al., 2018). Furthermore, teachers' work engagement is linked to health and economic benefits associated with reduced absence or high efficacy (Bakker and Bal, 2010; Taris et al., 2017). Since work engagement affects teachers' personal and work-related well-being, studies on the link between work engagement and individual and work-related correlates of engagement are needed to improve teachers' work-related quality of life and efficacy (Upadyaya et al., 2016; Perera et al., 2018).

Regarding individual well-being, there is a wide range of affective well-being indicators partially dependent on individuals' levels of work engagement (Schaufeli and Taris, 2014). For instance, work engagement is associated with higher levels of subjective well-being as well as better physical and mental health (Saks, 2006; Hakanen and Schaufeli, 2012). The Job Demands-Resources (JD-R) theory aligns with the Conservation of Resources (COR) theory (Hobfoll, 2001) illustrating the possible spill-over effects from work to other life spheres. A research with elementary and primary teachers reported a positive association between work engagement and life satisfaction (Pena et al., 2012). Longitudinal evidence has also supported the view that engaged employees generalize their job well-being to their private lives, which is in line with empirical evidence on the causal link between work engagement and life satisfaction (Hakanen and Schaufeli, 2012; Upadyaya et al., 2016). Overall, these results suggest that feeling engaged at work may help fulfilling physical, psychological, and social needs that may positively influence global evaluations of people's quality of life.

Regarding work-related well-being, earlier research reported significant associations between work engagement with organizational commitment or job satisfaction (Saks, 2006; Schaufeli and Taris, 2014). In line with COR theory (Hobfoll, 2001), teachers with low engagement might feel less attached to their organizations, which may influence their levels of job satisfaction (Sonnentag et al., 2008). Prior research has reported a positive association between work engagement and teacher satisfaction among practicing teachers (Li et al., 2017; Granziera and Perera, 2019). Teachers who are engaged experience positive emotional states that may facilitate more positive affective responses to their work. Conversely, one might expect that teachers with low levels of work engagement would experience reduced work-related well-being (i.e., job satisfaction).

Current knowledge suggest that levels of work engagement are closely related to teachers' attitudes toward their work and life, which has key implications in educational settings (Perera et al., 2018; Granziera et al., 2021). Although work engagement might be an important factor linked to teachers' personal and work-related well-being (Schaufeli and Taris, 2014), it is shown that low work engagement does not necessarily lead to low levels of work-related indicators (Parker and Griffin, 2011). Previous research has not paid much attention to the question of how these positive outcomes related to work engagement might be moderated (i.e., to the factors that might facilitate the influence of work engagement on life and job satisfaction). In this study, we examined a personal resource that has attracted increasing attention, namely EI.

Emotional Intelligence Abilities as Moderators

Increasing research has focused on the impact of EI abilities for teaching (Vesely et al., 2013). In the scientific literature, EI is typically viewed as either an "ability" similar to cognitive intelligence involving cognitive processing of emotional information (Mayer et al., 2016) or an "enduring trait" involving a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides et al., 2016). The former approach was used in this study. Mayer and Salovey (1997) conceptualized EI as the ability to correctly perceive, facilitate, understand, and regulate emotions to promote personal growth. There is a bulk of research examining the association between EI abilities and individual and work-related well-being domains such as job and life satisfaction (Sánchez-Álvarez et al., 2016; Miao et al., 2017). Emotion regulation ability (ERA) is the most important EI dimension associated with both positive life and job-related attitudes (Joseph and Newman, 2010; Fernández-Berrocal and Extremera, 2016). Thus, the EI construct has gained increased attention with respect to teachers' work and personal domains (Vesely-Maillefer and Saklofske, 2018; Mérida-López et al., 2019).

The JD-R theory is primarily focused on the role of personal resources (e.g., self-efficacy, optimism, and emotional competences) either as individual predictors of work engagement or as moderators in the relationship between job demands and health outcomes (e.g., Schaufeli and Taris, 2014; Granziera et al., 2021). However, there are theoretical and empirical reasons to expect that EI may moderate the effects of

work engagement on employees' well-being. Considering the facilitating role of EI regarding work-related criteria, it is possible that the presence of certain personal resources such as EI might modulate the association between work engagement and employees' life and job attitudes (Côté, 2014). Arising from interest concerning the possibility of moderating factors in the consequences of work engagement, there is evidence suggesting that EI may moderate the associations between work engagement and life/job satisfaction. For instance, De Clercq et al. (2014) reported that EI moderated the association between work engagement and organizational deviance. Specifically, employees scoring low in both engagement and EI showed the highest scores in organizational deviance. This aligns with a recent study in which EI acted as a protective factor against teacher turnover (Mérida-López et al., 2020). In this work, those teachers experiencing low engagement, and scoring low in self-report ability EI reported higher turnover intentions than their counterparts with high EI levels. Although the precise place that personal resources such as EI should take within the JD-R theory still remains unclear (Schaufeli and Taris, 2014), these findings shed some light on the importance of considering EI skills as potential moderating factors in the associations between work engagement and its correlates.

Despite growing research focusing on the examination of antecedents and boosting factors of work engagement (Bakker et al., 2014), to date no study has examined whether EI abilities would increase or diminish the influence of experiencing one's job as engaging on teachers' job and life attitudes. As such, there is a need to delve deeper into the interplay of work engagement and EI to explain levels of individual and work-related outcomes. Therefore, this study aims to gain insight into the interactive effects of teachers' work engagement and EI abilities for explaining life and job satisfaction. Based upon past empirical research and the current knowledge on the moderating role of EI (e.g., Côté, 2014; Mérida-López et al., 2020), our expectation is that levels of teachers' work engagement will be linked to life and job satisfaction, with the strength of these relationships depending on teachers' EI abilities. As such, it is expected that teachers reporting low levels of engagement do not necessarily exhibit low levels of life and job satisfaction, with this relationship being moderated by available personal resources such as EI abilities. Thus, we hypothesized:

Hypothesis 1: The association between work engagement and life satisfaction (H1a) will be moderated by EI. Similarly, the association between work engagement and job satisfaction (H1b) will be moderated by EI.

PURPOSE OF THE STUDY

Based on previously mentioned studies and current knowledge on EI, work engagement, and well-being among teachers, the present quantitative cross-sectional study aims to contribute to the literature in three ways. First, it extends the application of COR theory (Hobfoll, 2001), Job-Demands Resources theory (Bakker and Demerouti, 2017), and the moderator model of EI (Côté, 2014) to the educational context. As such, it aims to provide novel evidence on the correlates of work engagement among teachers. Second, this study goes one step beyond previous works that have primarily used self-report instruments to measure ability EI (Miao et al., 2017). Although self-report measures are generally shorter and easier to be used in field studies than performance-based instruments, employing self-report tests may lead to potential inflated statistical relationships between constructs due to common source biases. This study includes a performance-based measure of EI that addresses some of the serious limitations of self-report tests in the EI field (Mayer et al., 2016). Moreover, it follows recommendations in the occupational health psychology field regarding the use of objective measures for assessing resources (Bakker and Demerouti, 2017). It thus may help researchers to gain more insight into the associations among ability EI, work engagement, and job and life satisfaction (Sánchez-Álvarez et al., 2016; Miao et al., 2017). Third, this research expands previous studies as it positions teachers' work engagement as a motivational construct linked to work-related and general outcomes (Schaufeli and Taris, 2014). In other words, this work is found among the first attempts to test whether employees' EI might influence the extent to which work engagement relates to their work-related and personal well-being. Given the impact of teaching-related demands (Taris et al., 2017; Granziera et al., 2021), findings from this study might help to develop personal interventions to increase life and job satisfaction among teachers.

MATERIALS AND METHODS

Participants

The study sample was comprised of 220 secondary-school teachers working in different centers of Southern Spain. Thirty participants did not complete the battery, which led to a final sample of 190 teachers (65.8% female) with a mean age of 45.38 years (SD = 8.03, range = 25−63 years). The marital status of the participants was: 56.8% married, 20.5% single, 11.1% separated/divorced, 9.5% couple, and 2.1% unspecified. Average teaching experience was around 17 years (M = 17.06 years, SD = 8.74), whereas organizational tenure was around 7 years (M = 6.51 years, SD = 6.28). Regarding their educational level, 86.3% of the participants held a 5-year degree, 8.4% held a 3-year degree, and a 3.2% held a doctorate.

Procedure

A battery of questionnaires was given to teachers through the assistance of members of the research staff underlying the anonymous and confidential nature of the data. The research protocol was approved as part of the project PSI2012-38813 by the Research Ethics Committee of the University of Málaga.

Measures

Along with socio-demographic variables (i.e., age, gender, academic degree, marital status, teaching experience, and

organizational tenure), a battery of questionnaires was included with well-validated measures for the main study variables.

Work Engagement

The Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002; Spanish version by Salanova et al., 2000) is a 15-item scale aimed at assessing three dimensions of work engagement (i.e., vigor, dedication, and absorption) using a Likert-type scale. We used the overall work engagement score, given our interest in the whole construct (Mérida-López et al., 2019). This scale has shown adequate psychometric properties in Spanish samples (Extremera et al., 2012). Cronbach's alpha coefficient was 0.91 in our sample.

Emotional Intelligence

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT v.2.0; Mayer et al., 2003; Spanish version by Sanchez-Garcia et al., 2016) is a 141-item scale assessing ability EI. The four dimensions of the test (i.e., emotion perception, emotion facilitation, emotion understanding, and emotion regulation) draw on different tasks including different items forms. For instance, respondents are asked to identify the emotions expressed in photographs of people's faces (emotion perception). Moreover, individuals are required to read a short story about another person and then are asked to determine how effective several courses of action would be to cope with the emotions in the story (emotion regulation). Considering the test's items heterogeneity, split-half estimates of reliability are the statistic of choice rather than coefficient alphas (Mayer et al., 2003). This instrument has shown adequate psychometric properties in Spanish samples (Sanchez-Garcia et al., 2016). In this study, the test internal consistency reliability (split-half) coefficients for all sub-dimensions were: 0.92 for emotion perception, 0.52 for emotion facilitation, 0.71 for emotion understanding, and 0.72 for emotion regulation. The split-half reliability for the overall score was 0.91.

Life Satisfaction

The Satisfaction with Life Scale (SWLS; Diener et al., 1985; Spanish version by Vázquez et al., 2013) is a 5-item instrument aimed at assessing global life. The Spanish version has shown adequate psychometric properties (Vázquez et al., 2013). In this study, Cronbach's alpha coefficient was 0.86.

Job Satisfaction

Job satisfaction was measured with a 5-item scale (Judge et al., 1998; Spanish version by Extremera et al., 2018) originally based on a job satisfaction index developed by Brayfield and Rothe (1951). This instrument has shown adequate internal consistency in Spanish samples (Extremera et al., 2018). In this study, Cronbach's alpha was 0.82.

Statistical Analyses

First, descriptive statistics and internal consistency were calculated for the main study variables. Second, Pearson bivariate correlations were tested to examine the associations among the study variables. Third, to assess the potential moderator effect of ability EI in the relationship between work engagement with job and life satisfaction, two moderator models were tested with the PROCESS macro (Hayes, 2018). Model 1 was tested for each dependent variable (i.e., life satisfaction and job satisfaction) to examine whether the effect on these variables was moderated by levels of ability EI. Bootstrapping with 5,000 re-samples and 95% bias-corrected confidence intervals was used in line with standard guidelines (Hayes, 2018).

RESULTS

Descriptive Statistics and Correlations

Table 1 shows descriptive statistics, correlations, and reliability coefficients for the main variables. As shown, the relationship between perception, assimilation, and understanding abilities with the main variables were non-significant. It is noteworthy that ERA was positively and significantly related to work engagement and job and life satisfaction. Similarly, work engagement was positively associated with both life and job satisfaction.

Moderation Analyses

To test our interaction hypothesis that ability EI levels moderate the relationship between work engagement and job and life satisfaction, we conducted two separate moderation analyses for each of the dependent variables. The results are displayed in **Table 2**. Since ERA was the only EI dimension significantly related to the study variables, analyses were conducted with this

TABLE 1 | Descriptive statistics and correlations among the study variables.

Variable	*M* (SD)	α	1	2	3	4	5	6	7	8
1. Emotion perception	100.57 (14.21)	0.92								
2. Emotion facilitation	100.05 (12.51)	0.52	0.44**							
3. Emotion understanding	103.58 (11.08)	0.71	0.21**	0.23**						
4. Emotion regulation	109.37 (10.43)	0.72	0.30**	0.45**	0.20**					
5. Overall EI	103.56 (11.45)	0.91	0.81**	0.74**	0.56**	0.63**				
6. Work engagement	4.72 (0.83)	0.91	−0.01	0.04	−0.01	0.25**	0.07			
7. Life satisfaction	4.99 (1.07)	0.86	0.03	0.10	−0.08	0.20**	0.07	0.34**		
8. Job satisfaction	5.41 (0.99)	0.82	0.03	0.08	0.07	0.25**	0.13	0.81**	0.32**	

**$p < 0.01$.

TABLE 2 | Tested moderation model with life and job satisfaction as outcomes.

	Coefficient	SE	95% CI
Life satisfaction	R^2 = 0.21, $F(5,184)$ = 9.72***		
Constant	5.92***	0.49	4.9642 to 6.878
Gender	0.06	0.15	−0.2320 to 0.0358
Age	−0.02**	0.01	−0.0414 to −0.0067
Work engagement	0.41***	0.09	0.2401 to 0.5848
Emotion regulation ability	0.02**	0.01	0.0051 to 0.0358
Work engagement × emotion regulation ability	0.03**	0.01	0.0105 to 0.0428
Job satisfaction	R^2 = 0.67, $F(5,184)$ = 73.40***		
Constant	5.75***	0.29	5.1710 to 6.3301
Gender	0.07	0.09	−0.1096 to 0.2472
Age	−0.01*	0.01	−0.0211 to −0.0001
Work engagement	0.96***	0.05	0.8519 to 1.0606
Emotion regulation ability	0.01	0.01	−0.0017 to 0.0169
Work engagement × emotion regulation ability	0.01*	0.01	0.0001 to 0.0197

SE, standard error; 95% CI, confidence interval with lower and upper limits.
**p < 0.05; **p < 0.01; ***p < 0.001.*

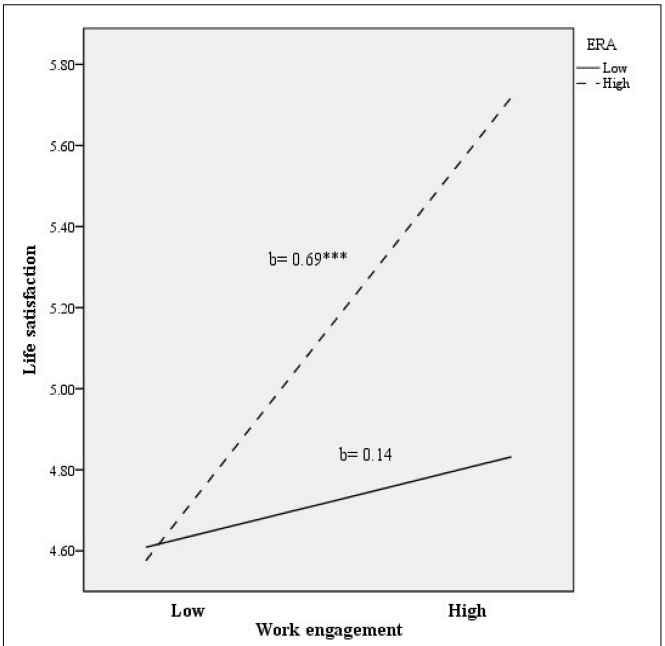

FIGURE 1 | Relationship of work engagement and ERA for predicting life satisfaction. ***$p < 0.001$.

EI dimension as a moderator. The PROCESS macro in SPSS (Hayes, 2018) was used to run a series of OLS regressions with the centered product term representing the interaction of work engagement and ERA as a predictor of life and job satisfaction. Age and gender were included as covariates.

Regarding life satisfaction, we found that age was a significant socio-demographic variable explaining variance in life satisfaction ($b = -0.02$, $p < 0.01$). Both work engagement ($b = 0.41$, $p < 0.001$) and ERA ($b = 0.02$, $p < 0.01$) were positively related to life satisfaction. Moreover, the interaction term was significant ($b = 0.03$, $p < 0.01$) and explained 4.5% of unique variance beyond the main effects of work engagement and ERA ($\Delta R^2 = 0.045$, $F = 10.57$, $p < 0.01$). The model predicted 21% of the variance in life satisfaction. Thus, results supported H1a.

To illustrate the interaction effect, we followed standard guidelines to examine the relationship between work engagement and life satisfaction regarding low vs. high scores of ERA (i.e., one standard deviation above and below the mean). As shown in **Figure 1**, the relationship between work engagement and life satisfaction increased when ERA levels were high (vs. low). The positive association between work engagement and life satisfaction was non-significant at low levels of ERA ($b = 0.14$, $t = 1.11$, $p = 0.27$), whereas it became significant at high levels of ERA ($b = 0.69$, $t = 5.63$, $p < 0.001$).

With regard to job satisfaction, the results showed that age was a significant negative predictor ($b = -0.01$, $p < 0.05$). While work engagement was significantly and positively related to job satisfaction ($b = 0.96$, $p < 0.001$), ERA did not show a significant main effect for predicting levels of job satisfaction ($b = 0.01$, $p = 0.11$). However, the interaction term was significant ($b = 0.01$, $p < 0.05$) and accounted for 0.7% of unique variance in job satisfaction beyond the main effects of work engagement ($\Delta R^2 = 0.007$, $F = 3.97$, $p < 0.05$). The model predicted 67% of the variance in job satisfaction. Results provided support for H1b.

To illustrate the interaction effect, we examined the relationship between work engagement and job satisfaction regarding low vs. high scores in ERA. As shown in **Figure 2**, the relationship between work engagement and job satisfaction increased when ERA was higher (vs. lower). Specifically, the positive association between work engagement and job satisfaction was significant at low levels of ERA ($b = 0.85$, $t = 11.57$, $p < 0.001$), whereas it became more intense at high levels of ERA ($b = 1.06$, $t = 14.29$, $p < 0.001$).

DISCUSSION

Past studies have corroborated a robust link between work engagement levels and positive individual and job-related outcomes in employees (Saks, 2006; Hakanen and Schaufeli, 2012). However, the potential role of personal resources as mechanisms that modulate this relationship remains unclear. To address this gap, this study examined the role of EI abilities as potential moderators in the relationship between work engagement and teachers' job and life satisfaction.

First, in line with previous studies in teacher samples, our results showed a positive and significant association between work engagement and job satisfaction (Granziera and Perera, 2019). Similarly, the results showed that work engagement was positively associated with life satisfaction, which is consistent with past studies (Pena et al., 2012; Upadyaya et al., 2016). Second, the findings showed ERA as the only component of EI linked to work engagement and job and life satisfaction. These results are in line with previous empirical evidence showing positive associations between ERA and both life

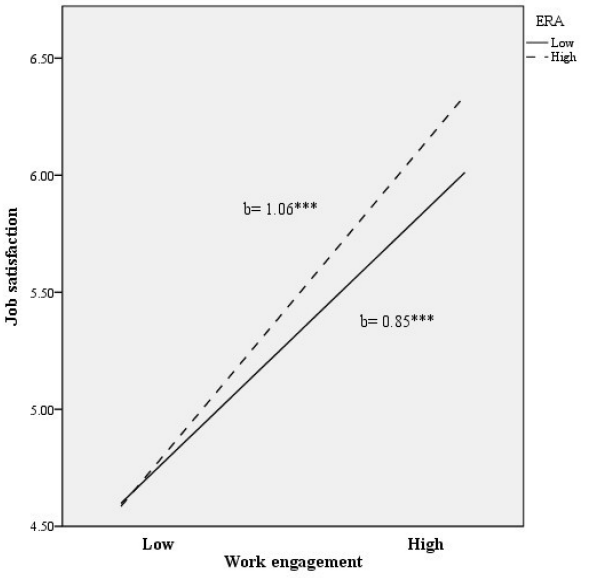

FIGURE 2 | Relationship of work engagement and ERA for predicting job satisfaction. ***$p < 0.001$.

(Fernández-Berrocal and Extremera, 2016) and job satisfaction (Brackett et al., 2010; Extremera et al., 2020). Likewise, this accords with prior research with teaching professionals in which ERA was positively associated with teachers' work engagement (Castillo-Gualda et al., 2017).

The fact that emotion regulation appears to be the solely EI dimension related with work engagement and well-being indicators may be explained in terms of the namely cascading model of EI (Joseph and Newman, 2010). Accordingly, emotion regulation may be a dimension precluding correlates of work engagement such as performance and well-being. Although EI dimensions are critical to help employees to feel committed and satisfied at work so they perform more effectively (Côté, 2014), these findings suggest that the ability to deal with own and others' emotions might play a key role in promoting well-being and positive emotions between teachers, which could influence a variety of individual and job outcomes among teachers (Mérida-López et al., 2017; Castillo-Gualda et al., 2019). For instance, if a teacher exhibit high levels in emotion regulation they would know that anger is more useful than happiness when confronting a student in an admissible situation. Likewise, when teachers set more adjusted emotion regulation goals and they also implement adaptive emotion management strategies they are more likely to attenuate the potential harmful effects of emotionally demanding situations on their health and motivation at work. In sum, high ERA might improve the way teachers appraise events and situations that might be perceived as a threat in the school, and it might interact with levels of work engagement to cope with handling pressure and stress and positively influence both life and job satisfaction levels.

Regarding the moderating effect of the ability to manage emotions in the relationship between work engagement and life satisfaction, the results showed that the highest levels of life satisfaction were found among teachers reporting high engagement and scoring high (vs. low) in ERA. Thus, although there was a slight increase in life satisfaction among teachers with high engagement, at high vs. low ERA levels, the magnitude was relatively small and non-significant. This pattern is in line with the assumption that life satisfaction is likely to be increased at higher (relative to lower) levels of ERA, and even more in teachers with high engagement. In summary, our findings suggest that although being engaged at work in the teaching profession is associated with life satisfaction, it appears that regulating emotions effectively might matter more in increasing levels of life satisfaction. Low ERA could negatively affect how teachers interpret aspects of their lives, leading to more negative stress reactions and thereby reducing their perception of overall life satisfaction.

Although the association between work engagement and job satisfaction was positive for both low and high levels of ERA, this EI dimension strengthened the relationship between the variables. This result suggests that teachers who are more skilled at shaping their own and others' emotions and perceiving their work as engaging are more satisfied with their jobs than their counterparts with lower ERA. In line with a recent meta-analytic review on EI and job satisfaction, ERA could be a potential resource through which positive work attitudes of teachers can be boosted (Miao et al., 2017).

It is noteworthy that the results suggest a differential pattern in terms of the different spheres of well-being. While the relationship between work engagement and job satisfaction remained positive for teachers scoring low in ERA, the association between work engagement and life satisfaction was non-significant for teachers scoring low in ERA. These findings could suggest that ERA, when interacting with teachers' work engagement, exerts a more intense influence when explaining levels of personal rather than job-related attitudes. One potential reason might be that, to some degree, fostering positive attitudes at work (i.e., job satisfaction) might be more dependent on organizational factors—which are external rather than internal—such as school climate, number of students, or perceived school support (Geiger and Pivovarova, 2018). Moreover, our findings showed that the interaction between work engagement and ERA significantly augmented the prediction of both job and life satisfaction. Although the full model for job satisfaction explained a higher proportion of the variance than the life satisfaction model, the interaction term explained more additional variance in the life satisfaction model than in the job satisfaction model. One tentative justification might be that, although conceptually different, work engagement is a closer theoretical construct to job satisfaction—that is, while work engagement is concerned with the employee's mood at work, job satisfaction is concerned with affect toward work (Schaufeli and Bakker, 2010). Likewise, both work-related constructs show generally higher significant shared common variance, with ERA showing a less relevant role. Pending replication, it is plausible that the joint effect of work engagement and ERA might play a particular role in explaining life and job well-being in employees. Future researchers are advised to examine this issue in depth.

Our study has some limitations. First, due to the cross-sectional nature, causal links among variables should be drawn with caution. Although the proposed hypotheses relied in previous research and in robust current theories on emotions at work and well-being, future studies are advised to replicate the present findings with longitudinal designs (Burić and Macuka, 2018). Despite this study is found among the first empirical approaches to assess the relationship between performance-based ability EI and teachers' work engagement (Castillo-Gualda et al., 2017), a second limitation relates to the relatively small sample size. Likewise, the data presented in this study represent secondary-school teachers from southern Spain. It should be noted that using a performance-based EI measure is expensive and time-consuming in comparison with a self-report instrument, which may cause practical difficulties in field studies. Moreover, equivalent sample sizes have been considered in prior research using the MSCEIT with teaching professionals (e.g., Brackett et al., 2010; Castillo-Gualda et al., 2019). Unfortunately, these studies solely measured ERA and did not report data on the remaining EI abilities. Such approach merits attention as it could advance understanding on the correlates of performance-based EI dimensions (Côté, 2014; Miao et al., 2017). Therefore, studies with larger and more representative samples are needed to replicate current findings. Future studies are advised to explore how organizational factors and emotional abilities relate to teachers' well-being (Yin et al., 2016). Third, future work should assess multiple-level factors influencing teachers' general and work-related well-being (Yang et al., 2019). Moreover, researchers are advised to test the joint contribution of personal resources (e.g., EI dimensions, self-efficacy, and resilience) to well-being and work engagement (Molero Jurado et al., 2019). Finally, researchers should assess specific teaching-related job characteristics and their relationship with work engagement and teachers' well-being (Taris et al., 2017; Salmela-Aro et al., 2019). In this regard, future studies should profitably use profession-specific measures through which teachers' knowledge and skills regarding EI key dimensions can be assessed (e.g., situational judgment tests such as the Test of Regulation in and Understanding of Social Situations in Teaching; Aldrup et al., 2020).

Theoretical and Practical Implications

This study represents a novel contribution to the literature on teachers' emotions and work-related well-being as it adds to current knowledge on the associations between ability EI and individual and job-related well-being indicators in a sample of secondary-school teachers. Although there is research that has examined interactive effects of job demands and personal resources on work engagement and burnout levels (Xanthopoulou et al., 2007), to date no study has examined the influence of certain personal variables as moderators in later stages of the JD-R theory. Thus, these results are a starting point for future studies contributing to a better understanding of the individual factors modulating the effects of work engagement on general and organizational outcomes (Schaufeli and Taris, 2014).

Given that the JD-R theory continues to be updated such as the inclusion of reciprocal relationships between job resources and work engagement, the applicability to different contexts, and the distinction between hindrance and challenge demands (Bakker et al., 2014; Bakker and Demerouti, 2017), our work makes a significant contribution by providing evidence of personal resources that facilitate both spill-over effects from work engagement to life satisfaction and effects of work engagement on job satisfaction (Côté, 2014; Miao et al., 2017). This study also contributes to the relatively scarce literature on correlates of work engagement regarding personal well-being outcomes in comparison with work-related outcomes (Upadyaya et al., 2016).

With respect to practical implications, our results could help human resources practitioners to assess potential deficits in both work engagement and ERA related to poor job and life satisfaction to identify teachers who could be at risk of developing work-related problems. Following previous and current findings, teacher engagement development would not be sufficient itself to predict the highest levels of life and job satisfaction (Bakker et al., 2014; Taris et al., 2017). Because personal resources such as emotion regulation are capacities that individuals may be able to develop or change, they provide a promising base from which interventions targeting teacher individual and work-related well-being may be developed. In fact, existing results on the benefits of interventions targeting EI to increase well-being among teachers seem promising (Castillo-Gualda et al., 2019; Schoeps et al., 2019). Thus, school practitioners are advised to address individual-organizational interface interventions for improving individual and work-related well-being (Randall and Travers, 2017). For instance, they could implement and develop programs targeted at improving educational practices or contextual characteristics that could enhance engagement at work—for example, allowing teachers to change school-related characteristics causing the most dissatisfaction among staff (i.e., job crafting; Van Wingerden et al., 2017) and increasing personal resources (i.e., emotion regulation strategies) among teachers at risk, reducing or modifying whatever maladaptive regulation strategies they use (e.g., rumination, self-blame) and offering more adaptive ones (e.g., refocus on planning or positive reappraisal) so they can develop and hold more positive attitudes toward their lives and teaching jobs.

Given that work-related stress among teachers conveys a wide range of negative outcomes, investing efforts to improve levels of work engagement and emotional resources among the teaching staff might be important to prevent from work issues with substantial health and economic burdens such as presenteeism, sickness absenteeism, or intention to quit (Taris et al., 2017; Harmsen et al., 2018). In sum, our results suggest new paths in which emotional abilities such as emotion regulation could, in combination with work motivational constructs, contribute to the prediction of teachers' well-being. Since developing work engagement and fostering emotion regulation abilities is crucial for social and personal functioning in teachers' lives, the design and implementation of training programs for improving these dimensions appears to be a promising avenue for improving teachers' quality of work life.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because the dataset has been generated regarding a funded Research Project by Junta de Andalucia/FEDER funds (UMA18-FEDERJA-147). Requests to access the datasets should be directed to NE, nextremera@uma.es.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Ethics Committee of the University of Málaga (66-2018-H). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

Both authors conceived and designed the research, analyzed the data, contributed reagents, materials, and analysis tools, wrote the manuscript, prepared the tables, and reviewed drafts of the manuscript.

FUNDING

This research has been supported and funded in part by research projects from the University of Málaga and Junta de Andalucía/FEDER (UMA18-FEDERJA-147) and PAIDI Group CTS-1048 (Junta de Andalucía). This work was also supported by the Spanish Ministry of Education and Vocational Training (FPU16/02238).

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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: 21 January 2021
doi: 10.3389/fpsyg.2020.506085

Emotional Intelligence Mitigates the Effects of Customer Incivility on Surface Acting and Exhaustion in Service Occupations: A Moderated Mediation Model

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This study contributes to the constantly accumulating evidence on the effects of customer incivility (CI) on service employee exhaustion. Previous research has demonstrated that surface acting (SA) acts as a mediating variable in the relationship between CI and exhaustion. This study extended prior findings in two ways. The results of Study 1 (315 retail sales employees, 62.2% female) demonstrated that SA mediates the positive relationship between CI and exhaustion while controlling for employees' trait positive and negative affectivity (NA). The results of Study 2 (292 customer service representatives, 51% female) supported a moderated mediation model demonstrating that trait emotional intelligence (EI) buffers the direct and indirect (through SA) effects of CI on exhaustion. Specifically, it was found that employees exposed to many uncivil customer behaviors but high in trait EI reported using less SA and, thus, experienced fewer exhaustion symptoms than their low in trait EI counterparts. These results highlight EI as an important personal resource that mitigates the adverse effects of CI on service employees' exhaustion, and suggest that organizations should consider implementing EI training programmes for their frontline service employees.

Keywords: customer service, customer mistreatment, burnout, emotional labor, emotional skills, trait affectivity

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almeria, Spain

Reviewed by:
Patrícia Lopes Costa, University Institute of Lisbon, Portugal
Danielle Van Jaarsveld, University of British Columbia, Canada

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

Received: *19 October 2019*
Accepted: *29 December 2020*
Published: *21 January 2021*

Citation:
Szczygiel DD and Bazińska R (2021) Emotional Intelligence Mitigates the Effects of Customer Incivility on Surface Acting and Exhaustion in Service Occupations: A Moderated Mediation Model. Front. Psychol. 11:506085. doi: 10.3389/fpsyg.2020.506085

INTRODUCTION

It has been widely recognized that exposure to stressful working conditions can lead to a variety of negative consequences, such as psychological distress, physical illness and mental disorders (American Psychological Association, 2018). One of the adverse effects of work stressors is job burnout, defined as a specific kind of occupational stress that occurs in response to prolonged exposure to job stressors when sufficient resources to compensate for their negative effects are not available (Maslach et al., 2001; Alarcon, 2011). The majority of research on burnout has been conducted among service sector workers who, due to the interpersonal nature of their work, have been described as being particularly susceptible to burnout (Maslach et al., 2001). Another reason for the interest in burnout among service workers is that, in most economically advanced countries, service workers are now the

largest occupational group (Wirtz et al., 2015). In the United States, for example, the share of the service sector in employment exceeded 78% in 2018 (World Bank Group, 2019). The growing role of service workers is also noticeable in Poland, a country that has been undergoing socio-economic transformation from a centrally planned system to a market system in recent decades (Gomułka, 2016). As the Polish economy becomes increasingly service-oriented, significant changes in the employment structure are also becoming clearly visible. The share of the service sector in employment increased from 38% in 1991 to over 58% in 2018 (World Bank Group, 2019). The rapidly growing number of service workers in Poland indicates the need for research on the determinants of job burnout in this occupational group.

The basic characteristics of service sector occupations are that employees have to interact with customers on a daily basis (Dormann and Zapf, 2004). On the one hand, interacting with customers can be a source of employee satisfaction, especially for those who enjoy intensive face-to-face social interaction and are guided by prosocial motives and values (Maneotis et al., 2014). On the other hand, however, there is evidence to suggest that dealing with customers can act as a stressor, and there are at least two reasons for this. First, service providers are often exposed to customer mistreatment, described as the "low-quality interpersonal treatment that employees receive from their customers during service interactions" (Koopmann et al., 2015, p. 34). Customer mistreatment can take various forms, ranging from less intense but more frequent, such as ignoring or disrespecting employees, to relatively less frequent but more intense, such as verbal or even physical aggression (Andersson and Pearson, 1999; Dormann and Zapf, 2004; Grandey et al., 2007; Skarlicki et al., 2008; Hershcovis, 2011; Sommovigo et al., 2019b).

The second reason why interacting with customers is considered stressful stems from pressure to satisfy organizational requirements expecting frontline service employees to behave "properly" when dealing with customers who are "always right." The slogan "the customer is king" defines the work of many service employees nowadays, who are expected to behave courteously and politely toward customers, regardless of the latter's behavior (Ben-Zur and Yagil, 2005). This means that, in most service contexts, customer service representatives are expected to express positive emotions and suppress negative ones, even in the face of rude and disrespectful customer treatment (Diefendorff and Richard, 2003; Ben-Zur and Yagil, 2005; Goldberg and Grandey, 2007; Diefendorff and Croyle, 2008). In order to comply with organizational requirements, in many situations, employees may need to make an effort to manage affective displays while dealing with customers; this means that they engage in emotional labor through surface acting (SA; i.e., changing their outward emotional display) and/or deep acting (DA; i.e., changing their inner feelings; Hochschild, 1983; Grandey, 2000).

Previous research has demonstrated that employee exhaustion is affected by both customer incivility (CI; for a review, see Sommovigo et al., 2019b) and SA (Hülsheger and Schewe, 2011; Huppertz et al., 2020), with SA mediating the relationship between CI and exhaustion (e.g., Sliter et al., 2010; Adams and Webster, 2012). This study aims to extend previous findings in two ways: first, by re-examining the relationship between CI and employee exhaustion and the mediating role of SA in this relationship, while controlling for employees' trait positive and trait negative affectivity (NA: Study 1); and second, by investigating whether employees' trait emotional intelligence (EI) moderates the positive relationship between CI and employee exhaustion, and the link between CI and SA (Study 2).

CUSTOMER INCIVILITY AND ITS EFFECT ON EMPLOYEE BURNOUT

Customer incivility, which refers to "low-intensity deviant behavior perpetrated by someone in a customer or client role, with ambiguous intent to harm an employee, in violation of social norms of mutual respect and courtesy" (Sliter et al., 2010, p. 468), is a widespread phenomenon in the service industry (Andersson and Pearson, 1999; Kern and Grandey, 2009; Wilson and Holmvall, 2013; Sliter and Jones, 2016; Sommovigo et al., 2019b). CI covers customer behaviors that are rude and discourteous, thereby exhibiting disrespect for other people (Andersson and Pearson, 1999; Pearson et al., 2001; Wilson and Holmvall, 2013; Sliter and Jones, 2016). Examples of uncivil customer behaviors include ignoring employees and making disrespectful comments about them, blaming employees for problems they did not cause, and making negative comments about the organization (Wilson and Holmvall, 2013).

Although most workplace incivility research focuses on interactions between co-workers (Cortina et al., 2001; Reich and Hershcovis, 2015), there is evidence to suggest that CI is more frequent, meaning that employees are more likely to experience uncivil behaviors from customers than from co-workers (Grandey et al., 2007; Sliter et al., 2012). This may be due to several reasons. First, customer service representatives interact with customers more often than with co-workers and supervisors (Dormann and Zapf, 2004). Second, unlike interactions with co-workers, interactions with customers are usually of short duration, with limited prior history, and with little expectation of future interaction (Gutek et al., 1999). Therefore, the customer-employee relationship guarantees customers a certain level of anonymity, thereby increasing the probability of uncivil behavior on their part (Grandey et al., 2007). In contrast, organizational members must take into account possible negative consequences (i.e., formal reprimands or sanctions) of expressing uncivil behaviors toward each other or their customers (Grandey et al., 2007). Third, while the members of an organization are usually equal in status, customers and employees are not (Ben-Zur and Yagil, 2005). The employee wants the customer to buy the product or service, and the customer decides whether the transaction will ultimately take place; thereby, it is the customer who has the power in this relationship. Finally, it is the customer who is asked if s/he is satisfied with the course of the interaction with the employee and not the other way around.

Customer incivility can be considered as a specific category of daily hassles (Zohar, 1997; Cortina et al., 2001; Sliter et al., 2010). A daily hassle is a term used in the stress research literature that refers to minor everyday episodes, encounters, and/or experiences that constitute a source of annoyance, frustration and irritation for an individual (Lazarus and Folkman, 1984). When daily hassles are experienced continuously and/or in great amounts, they become a considerable source of stress (Lazarus and Folkman, 1984; Zohar, 1997). This occurs because additional energy is needed to overcome daily hassles, beyond the energy used to achieve a goal and perform a job task. Dealing with rude, overly loud and complaining customers can be regarded as a daily work hassle that evokes negative emotions in employees and makes everyday tasks more difficult and demanding than anticipated, thereby leading to strain and stress (Kanner et al., 1981). This claim is consistent with the Affective Events Theory (AET; Weiss and Cropanzano, 1996), which argues that the work environment is saturated with affective events or episodes, which are the direct cause of employees' affective reactions, which in turn influence their behavior, attitudes and well-being (Connolly and Viswesvaran, 2000; Brief and Weiss, 2002).

Building on AET (Weiss and Cropanzano, 1996), one can assume that uncivil customer behaviors evoke negative emotions in employees, which ultimately lead to a deterioration of their well-being. Indeed, a recently published experimental study demonstrated that participants exposed to CI reported more negative emotions than their counterparts in a control condition (Sommovigo et al., 2020; see also Rupp and Spencer, 2006). There is also evidence that experiencing negative emotions increases one's level of physiological and psychological arousal, which, cumulatively, has a harmful effect on affective and cognitive functioning (e.g., Schröder, 1995; Szczygieł et al., 2012), mental and physical health (Lazarus and Cohen-Charash, 2001; Gross et al., 2011), and contributes to employee burnout (Wright and Cropanzano, 1998; Grandey et al., 2004; Szczygieł and Mikolajczak, 2018).

The adverse effect of CI on employee well-being can be seen across various service industry environments. Research conducted among retail employees demonstrated that CI was positively associated with stress appraisal (Kern and Grandey, 2009) and emotional exhaustion (Kern and Grandey, 2009; Hur et al., 2015). Sliter et al. (2010) reported that CI correlated positively with emotional exhaustion and negatively with customer service quality in a sample of bank tellers. Likewise, in a sample of retail and restaurant student employees, Wilson and Holmvall (2013) demonstrated that an increase in employees' perceived CI had a significant positive effect on their general psychological stress and job-specific strain. Furthermore, Sommovigo et al. (2019a) reported a positive correlation between CI and burnout among psychology students working in retail sales and restaurant services. A similar positive association between CI and employee distress was demonstrated in a sample of university alumni employed in various professions related to services, such as education, social services and health care, as well as in a sample of employees working in an engineering firm (Adams and Webster, 2012). Han et al. (2016) observed that CI resulted in restaurant frontline service employee burnout and turnover intention. The positive relationship between CI and employee emotional exhaustion was corroborated in a study conducted among customer service representatives employed in a call center (van Jaarsveld et al., 2010) and among restaurant frontline service employees (Cho et al., 2016).

According to incivility spiral effect of Andersson and Pearson (1999), employees frequently exposed to rude and disrespectful customer behaviors are more likely to retaliate against customers (van Jaarsveld et al., 2010; Walker et al., 2014, 2017), which may in turn reduce organizational performance and increases customer turnover, ultimately leading to revenue losses (Walker et al., 2014).

The above studies indicate that dealing with rude customers is costly for both individuals and organizations. The situation of service employees is further complicated by the fact that they do not have much freedom in expressing felt emotions, especially negative ones. Grandey's (2000) emotional labor model expands and complements the predictions of AET, suggesting that not merely the emotions experienced by service workers, but the regulatory effort they make to fake and/or hide them explains how uncivil customer behaviors translate into the worsening of employee well-being (see also Grandey and Gabriel, 2015; Grandey and Melloy, 2017).

THE ROLE OF SURFACE ACTING IN THE RELATIONSHIP BETWEEN CUSTOMER INCIVILITY AND EMPLOYEE BURNOUT

Hochschild (1983) introduced the term "emotional labor" to describe the process of managing affective displays in a customer service context in order to comply with organizational display rules. Hochschild (1983) differentiates between two forms of emotional labor: SA and DA (see also Grandey, 2000; Scott and Barnes, 2011). SA is a modification of one's own emotional manifestations without changing one's inner feelings; DA refers to the modification of actual feelings in order to evoke an appropriate emotional display. Grandey (2000) situated the concepts of deep and SA within the framework of Gross's emotion regulation theory (Gross, 1998, 2013) and proposed that DA corresponds to antecedent-focused emotion regulation, the aim of which is to change the situation or cognition in order to manage feelings, whereas SA corresponds to response-focused emotion regulation, the aim of which is to change expression and behavioral responses after an emotion has been felt and response tendencies have been activated (Grandey, 2000; Grandey and Gabriel, 2015; Szczygieł and Baryła, 2019). Deep and SA, defined as emotion regulation strategies, became the focal point of Grandey's (2000) model of emotional labor.

Grandey's (2000) model suggests that emotion regulation acts as a mechanism indirectly linking negative events at work, such as negative interactions with customers, to employee strain and psychological distress. First, Grandey's (2000) model proposes that negative events at work have an impact on the amount of

emotional labor that an employee has to perform. The reason for this is that if an event gives rise to emotions that are contrary to the emotions prescribed by the organization, then the employee has to engage in emotional labor in order to meet the requirements of the job. Second, Grandey's (2000) model posits that engagement in emotional labor strategies consumes a considerable amount of an employee's psychological resources (Grandey and Gabriel, 2015) and, thus, it results in psychological strain and distress. It should be emphasized that evidence constantly shows that the negative consequences of emotional labor, such as psychological stress, psychosomatic complaints and burnout symptoms, are mainly related to its surface form (Bono and Vey, 2005; Hülsheger and Schewe, 2011; Kammeyer-Mueller et al., 2013; Grandey and Gabriel, 2015; Huppertz et al., 2020). Huppertz et al. (2020) demonstrated that the main mechanisms through which SA leads to increased employee strain and burnout are: regulatory effort and a sense of unauthenticity. Moreover, research shows that employees using more SA are more likely to be mistreated by customers, which in turn increases their negative emotions and exhaustion (Zhan et al., 2016).

The assumption that SA mediates the relationship between CI and service employee well-being has been examined in a few studies. Hur et al. (2015) observed that CI was linked to SA, while SA was positively related to emotional exhaustion in a sample of retail employees. Adams and Webster (2012, Study 1) identified that SA mediated the relationship between CI and psychological distress in a sample of university alumni working in the service industry. Similar results were obtained in a study conducted by Sliter et al. (2010), who demonstrated that suppressing negative emotions and faking positive emotions fully mediated the relationship between CI and emotional exhaustion in a sample of bank tellers. Adams and Webster (2012) considered both emotional labor strategies as potential mediators in the relationship between CI and service employee occupational stress (Study 2). The results of their work demonstrated that while SA mediated the relationship between CI and employee distress, DA did not show such an effect.

It should be noted, however, that in all of the above-mentioned studies employee dispositional affectivity (or trait affectivity; Watson et al., 1988) was not controlled for, which limits the interpretation of the findings. Not including/controlling for dispositional affectivity in research is striking because there is significant evidence to show that dispositional affectivity (Watson et al., 1988) is associated with all the variables that are considered here. First, across studies, negative affectivity (NA) is related to higher levels of SA (Bono and Vey, 2005; Hülsheger and Schewe, 2011; Mesmer-Magnus et al., 2012; Kammeyer-Mueller et al., 2013). Second, there is ample evidence showing that employees higher in NA tend to report more psychological stress and burnout symptoms, while those higher in positive affectivity (PA) tend to report less stress and burnout symptoms (Zohar, 1997; Wright and Cropanzano, 1998; Grandey et al., 2004). Third, research shows that perceived CI is positively related to NA and negatively related to PA (Shin and Hur, 2019; Sommovigo et al., 2019a). Similar results were obtained by Sliter and Jones (2016), who observed a significant and positive correlation between employee neuroticism (which roughly corresponds to NA) and CI. Therefore, the correlation between CI and SA, as well as the correlation between SA and burnout scores, may be simply the result of their associations with employee dispositional affectivity (these concerns have also been raised by Bono and Vey, 2005 and Sliter et al., 2010).

In light of the concerns that CI and SA may be only spuriously associated with burnout, and that the actual "driver" of these relationships is employee trait affectivity, this study aims to contribute to the literature by investigating whether SA has a mediating effect on the relationship between CI and employee exhaustion beyond the positive and negative trait affectivity of employees. Thus, we propose the following:

> *Hypothesis* 1: Surface acting mediates the positive relationship between customer incivility and employee exhaustion while controlling for employees' positive and negative trait affectivity.

We use the term "exhaustion" rather than "emotional exhaustion" for two reasons. First, we understand exhaustion as a concept referring not only to energy loss and feelings of being emotionally drained by one's work, but also to physical fatigue and cognitive weariness (see Schaufeli et al., 2009). Second, we use the Oldenburg Burnout Inventory (see section "Materials and Methods"), which measures the exhaustion dimension of burnout (rather than emotional exhaustion).

There is another issue that we believe should be addressed. Although CI may have an important effect on employee exhaustion, it seems unlikely to affect all employees in a similar way. Therefore, the following questions arise: Does CI *always* lead to employee exhaustion? Does CI *always* increase the use of SA? In order to answer these questions, we will refer to the Job-Demands Resources theory (JD-R; Demerouti et al., 2001; Bakker and Demerouti, 2017) and Grandey's emotional labor model (Grandey, 2000; Grandey and Melloy, 2017) as a theoretical framework, and examine whether emotional intelligence (EI) mitigates (buffers) the negative effect of CI on employee exhaustion.

THE MODERATING ROLE OF EMOTIONAL INTELLIGENCE IN THE RELATIONSHIP BETWEEN CUSTOMER INCIVILITY AND BURNOUT

According to JD-R, the characteristics of a job can be broadly classified into two groups: job demands and job resources. Job demands refer to those aspects of the job that require constant physical and/or psychological effort from employees and are, therefore, linked to certain physiological and/or psychological costs, while job resources are related to job characteristics that are functional in achieving work goals and that promote personal growth and development (Demerouti et al., 2001). In the early phase of research in

JD-R, scholars emphasized the favorable role of organizational resources (e.g., social support). Later, research focused more on personal resources (Xanthopolou et al., 2007; Bakker and Demerouti, 2017). In this study, we focus on EI, an individual resource that is particularly relevant to the issues addressed here and that has drawn much scientific attention in organizational settings over the past decades (Côté, 2005; Dahling and Johnson, 2013; Lopes, 2016).

Since the notion of EI was introduced into the scientific literature (Salovey and Mayer, 1990), a number of different EI conceptualisations have been developed, which can be classified into two groups: ability models (e.g., Mayer and Salovey, 1997) and trait models (e.g., Petrides and Furnham, 2003). Ability EI (assessed by performance tests referring to maximum performance) is defined as the ability to identify, understand, regulate and utilize one's own and other people's emotions (Mayer and Salovey, 1997). Trait EI (assessed by self-report instruments referring to typical performance) is defined as a lower order personality trait relating to a set of emotion-related dispositions (Petrides et al., 2007). Thus, the former refers to ability to use emotions and emotional knowledge (i.e., what an individual is capable of doing in an emotionally charged situation), while the latter refers to people's self-perceptions of their emotional abilities, as well as their self-confidence and belief in these abilities ("emotional self-efficacy," Petrides et al., 2007). In the present study, we refer to trait EI, we are concerned about what a person is actually doing in real-life situations (i.e., how many of his or her abilities reveal themselves in emotionally charged situations).

Recent meta-analyses demonstrate that trait EI predicts positive outcomes, such as better health (Martins et al., 2010; Sarrionandia and Mikolajczak, 2019), greater sense of well-being (Andrei et al., 2016; Sánchez-Álvarez et al., 2016), better job performance (O'Boyle et al., 2011), higher job satisfaction, higher organizational commitment, and lower turnover intentions (Miao et al., 2017). There is also evidence that trait EI acts as a protective factor against the adverse effects of stressors (for a review, see Lea et al., 2019). For example, Mikolajczak et al. (2009) observed that high EI (vs. low) individuals reported a smaller increase in negative mood as a result of laboratory-induced stress. It was also demonstrated that high EI (vs. low) individuals showed significantly lower reactivity to laboratory stressors at both psychological (i.e., deterioration of mood) and physiological (i.e., salivary cortisol) levels (Mikolajczak et al., 2007a). Similar results were obtained by Laborde et al. (2014), who observed that trait EI was negatively correlated with cortisol secretion when performing tasks under pressure. Research conducted in the context of sports indicated that athletes high in trait EI exposed to a stressful stimulus (a competition-like stressor) experienced lower increase in stress (as indicated by heart rate variability) than their low in trait EI counterparts (Laborde et al., 2011). Moreover, research shows that compared to employees low in trait EI, employees high in trait EI report fewer burnout symptoms and somatic complaints, and this effect was observed in both cross-sectional (Weng et al., 2011; Szczygieł and Bazińska, 2013) as well as longitudinal studies (e.g., Mikolajczak et al., 2007b).

Building upon JD-R and trait EI theories, as well as on the above-mentioned findings, we predict that trait EI mitigates the effect of CI on employee exhaustion. Thus, we predict the following:

> *Hypothesis* 2: The relation between customer incivility and exhaustion is stronger among employees low in trait EI and weaker among employees high in trait EI.

Grandey and Melloy (2017) suggested that trait EI can weaken the link between negative events and SA. Indeed, research shows that high EI individuals are less likely to report using SA (Austin et al., 2008; Mesmer-Magnus et al., 2012). Giardini and Frese (2006) found that trait EI lessens the positive relationship between emotional demands and emotional dissonance (i.e., the discrepancy between organisationally prescribed emotions and genuinely felt ones; Bono and Vey, 2005). How can this beneficial effect of trait EI be explained?

Petrides and Furnham (2003) observed that high EI (vs low) individuals are more sensitive to emotionally laden stimuli. This suggests that emotionally intelligent individuals are more likely to pay attention to their negative emotions and, thus, can act more quickly to change unpleasant affective states, namely, early on in the emotion generation process, before emotional response tendencies become fully triggered, which is likely to protect them from using SA (Gross, 1998, 2013; Grandey, 2000). Indeed, there is evidence showing that when faced with stressful situations, high EI (vs. low) individuals, are more likely to view stressful situations as a challenge, not a threat (Mikolajczak and Luminet, 2008) and to use more adaptive strategies for regulating their emotions (for a review of the most robust studies on this issue, see Peña-Sarrionandia et al., 2015).

Accordingly, we suggest that high (vs. low) trait EI individuals are better equipped to deal with stressful customer interactions, which results in less negative emotions and, consequently, less use of SA. Thus, we propose:

> *Hypothesis* 3: The relation between customer incivility and surface acting is stronger among employees low in trait EI and weaker among employees high in trait EI.

In summary, as displayed in **Figure 1**, we hypothesize that trait EI buffers both the relationship between CI and exhaustion (H2) and between CI and SA (H3). Therefore, we predict that the indirect effect of CI on exhaustion, through SA, will be contingent on employees' trait EI. Consequently, we posit the following overall hypothesis:

> *Hypothesis* 4: Trait EI moderates the positive direct and indirect effect of customer incivility on exhaustion (through surface acting). Specifically, the indirect effect of customer incivility on exhaustion through SA depends on employee EI in such a way that the relationship is weaker for employees high in EI and is stronger for employees low in EI.

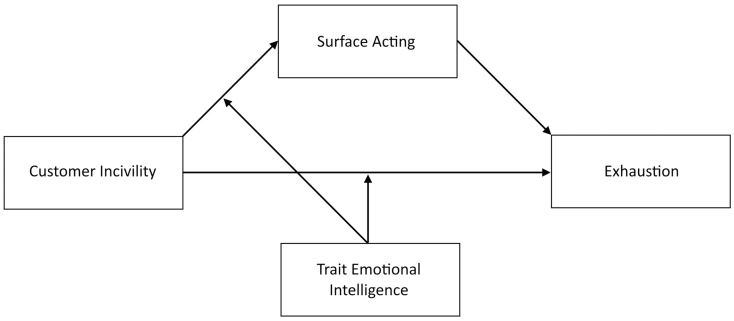

FIGURE 1 | Proposed moderated mediation model in which the effect of customer incivility on exhaustion is moderated by emotional intelligence (EI). Surface acting is the proposed mediator of the conditional effect of customer incivility on exhaustion.

EMPIRICAL STUDIES

In this section, we present two empirical studies. In Study 1, we sought to examine whether CI affects employee exhaustion through its effect on SA, while controlling for employees' trait positive and trait negative affectivity (Hypothesis 1). In Study 2, we sought to replicate the results of Study 1 and extend it by testing a moderated-mediation model in which the magnitude of the direct and indirect (through SA) relationship between CI and employee exhaustion depends on the trait EI of employees (Hypotheses 2–4).

ANALYTICAL PROCEDURE

Data were analyzed using SPSS 25.0. First, the descriptive statistics (i.e., means and standard deviations) and bivariate correlations among all key variables were computed. Then, we ran the set of mediation and moderated mediation analyses using Hayes' PROCESS macro 3.2. for SPSS (Hayes, 2018). The PROCESS macro provides point estimates, and their bias and accelerated confidence intervals (BCa CIs) for all effects. BCa CIs that exclude zero suggest a significant effect. A bootstrapping procedure based on 5,000 bootstrapped resamples was used to estimate BCa 95% CIs for the effects, according to Hayes (2018).

In order to test Hypothesis 1 (Study 1) predicting that SA would mediate the relationship between CI and employee exhaustion while controlling NA and PA, we used a simple mediation model (Model 4 from PROCESS macro). In order to examine Hypotheses 2, 3, and 4 (Study 2) on the moderating role of trait EI in the relationship between CI and exhaustion mediated by SA, we conducted a moderated mediation analysis (Model 8 from PROCESS macro) testing the moderation of both the direct and indirect paths. The predicted model is shown in **Figure 1**. Prior to the analysis, the predictors were mean-centred. Both models (Studies 1 and 2) were controlled for intensity of customer contact and socio-demographic variables (age, gender: 1 = females, 2 = males). As recommended by Hayes (2018), unstandardized regression coefficients were reported.

STUDY 1

Materials and Methods

Participants

A total of 315 retail sales employees (i.e., customer service assistants and cashiers) working in shopping centres located in northern Poland (Pomeranian District) participated in this study. The criteria for inclusion in this study were as follows: voluntary participation; working in their current position in retail sales for at least 6 months; having direct contact with customers (face-to-face) for at least 50% of the working day. The exclusion criteria were: unwillingness to participate in this study (12 persons refused to participate); returning incomplete questionnaires. A total of 354 individuals expressed an initial interest in taking part in this study, of which 315 ultimately participated (89%). Thirty-nine participants were excluded from the final sample because they either did not complete fully the questionnaires (17 individuals) or were not present at the time of collection (22 individuals). The final sample had a greater number of female respondents (62.20%) than male respondents (37.80%). The participants were on average around 30 years of age with average job tenure of 8.12 years (SD = 5.38). Their average tenure with their current employer was approximately 6.5 years (M = 6.44 years, SD = 5.10) and ranged from 1 to 19 years. Of all the respondents, 39.4% reported being graduates of vocational or high schools, whereas 60.6% reported that they had a university degree. The participants declared spending on average 80% of their time on the job in direct (face-to-face) contact with customers.

Measures

Customer Incivility

CI was measured using the Incivility from Customer Scale developed by Wilson and Holmvall (ICS; 2013). As the original items of the ICS were developed in English, they were subjected to a forward-and back-translation process. A similar solution was adopted by researchers using this scale in Korea (Shin and Hur, 2019) and Italy (Sommovigo et al., 2019a). First, the original items were translated into Polish by the first author of this study. Next, the forward translation was reviewed by a bilingual psychologist who, after introducing a few minor changes, accepted the translation.

Next, the modified version of the questionnaire was back-translated into English by an independent translator. The back-translation was found to be highly consistent with the original version of the ICS. Eventually, the final version of the questionnaire was discussed with 11 pre-test respondents, who were psychology students, working part-time as shop assistants in department stores and who were, thus, representative of the study participants. This process resulted in the Polish version of the ICS that was used in this study. The ICS consists of 10 items that inquire about the frequency of experienced uncivil customer behaviors. Participants were asked to indicate how often, over the past month, they had been confronted with rude customer behavior in their current workplace. Items were scored on a seven-point rating scale, ranging from one (never) to seven (more than three times per day). For example, participants were asked how often customers have "made gestures (e.g., eye rolling and sighing) to express their impatience," "made negative remarks to you about your organization," "blamed you for a problem you did not cause". Scores for the ICS were calculated by averaging the responses to the items.

Surface Acting

SA was measured using five items from the Emotional Labor Scale (ELS), developed and validated on the Polish population by Bazińska et al. (2010). Examples of the items are "I do not really feel the emotions I present to customers," "I show feelings that are different from what I feel inside". Participants were asked to answer items in response to the question: "In order to do your job effectively on an average day at work, how often do you do each of the following when interacting with customers?" Items are scored on a seven-point rating scale, ranging from one (seldom) to seven (always). Scores were calculated by averaging the responses to the items.

Exhaustion

Exhaustion was measured with the eight-item exhaustion subscale of the Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2003, 2010; Polish version by Baka and Basińska, 2016). Examples of the items are: "There are days when I feel tired before I arrive at work," "During my work, I often feel emotionally drained". Items are scored on a four-point rating scale, ranging from one (strongly agree) to four (strongly disagree). Scores were calculated by averaging the responses to the items, after appropriate items were reversed.

Dispositional Affectivity

Trait negative and positive affectivity were assessed using the Positive Affectivity Negative Affectivity Schedule (PANAS, Watson et al., 1988; Polish version by Brzozowski, 2010). PANAS is a 20-item scale comprising 10 negative (e.g., irritable) and 10 positive (e.g., happy) adjectives that describe emotional states. Participants were asked: "To what extent do you generally feel this way, on average, across all situations?" Items were scored on a five-point rating scale, ranging from one (very slightly or not at all) to five (extremely). Scores for the scale of negative and positive affectivity were calculated by averaging the responses to the appropriate items.

Procedure

Participants were recruited by psychology students who volunteered to participate in this project. First, the purpose of the study (i.e., an assessment of occupational stress in service occupations) was explained to the store managers. All store managers agreed that employees could be invited to participate in the study but the majority did not allow the study (i.e., filling out questionnaires) to take place during working hours. It was, therefore, agreed that the participants would be asked to complete the questionnaires at the end of their working day. Next, participants were personally (face-to-face) asked to participate in the study, and were informed about its purpose and the voluntary nature of participation. Employees who gave informed consent to participate began by filling out questionnaires on demographic data and trait affectivity. In order to ensure the anonymity of the study, participants were asked to create their own "pseudo-code." They received an envelope containing questionnaires on CI and emotional labor and were asked to complete these instruments over the course of a few days, at the end of their shift. The sealed envelopes were collected from the participants 7–10 days later by the same psychology student who initiated the study. On the day the envelopes were collected, the participants completed the burnout inventory. This procedure applied to all participants. They were also assured that the data collected would be kept confidential and would only be used for research purposes. Participants did not receive any compensation for participation in the study. Data were collected from the beginning of September until mid-December 2018. All subjects gave written informed consent in accordance with the Helsinki Declaration.

RESULTS

Preliminary Results

Table 1 contains the means, standard deviations, internal consistency coefficients (Cronbach's a) and intercorrelations of the variables measured. The pattern of bivariate correlations between the variables was in line with our expectations. CI was significantly and positively associated with exhaustion and SA. NA was positively correlated with exhaustion, CI and SA. In contrast, PA was negatively correlated with exhaustion, CI and SA. Intensity of customer contact (i.e., customer contacts/day) was positively related to burnout and SA. Younger employees reported spending more time with customers and using more SA. Female participants reported a higher score on NA than did male participants, $t(313) = 2.68$, $p < 0.01$, $M = 1.83$ ($SD = 0.57$) and $M = 1.66$ ($SD = 0.55$) respectively. Furthermore, compared to male participants, female participants reported spending more time with customers, $t(313) = 2.42$, $p < 0.01$, $M = 81.59$ ($SD = 11.86$) and $M = 78.15$ ($SD = 12.85$) respectively.

Mediation Analysis

We tested the mediation model with CI as the independent variable and exhaustion as the dependent variable. In order to

TABLE 1 | Study 1 means, standard deviations, intercorrelations, and internal-consistency reliability (Cronbach's α) of study variables.

Variable	*M*	*SD*	α	1	2	3	4	5	6
1. Exhaustion	2.50	0.60	0.76	–					
2. Customer incivility	2.78	1.02	0.95	0.30***	–				
3. Surface acting	3.44	1.48	0.84	0.46***	0.29***	–			
4. Trait negative affectivity	1.77	0.58	0.84	0.38***	0.24***	0.28***	–		
5. Trait positive affectivity	3.44	0.72	0.90	–0.28***	–0.22***	–0.12*	–0.24***	–	
6. Customer contact/day (%)	80.29	12.34	–	0.07	0.02	0.17**	0.04	0.01	–
7. Age	29.97	5.40	–	–0.06	0.01	–0.14*	–0.08	–0.08	–0.11*

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$ (all two-tailed significance tests).

rule out the possibility that associations between the variables are the result of employee dispositional affectivity, NA and PA were included as the covariates. Furthermore, given that previous research suggests that employee age and gender, as well as the intensity of customer contact may be associated with SA and burnout symptoms (Purvanova and Muros, 2010; Scott and Barnes, 2011), we included these variables into the set of covariates.

The results, as displayed in **Table 2**, showed that more CI is related to higher SA (a/B = 0.322, $p < 0.001$), which in turn was associated with higher employee exhaustion (b/B = 0.136, $p < 0.001$). The direct effect, however, remained significant (c'/B = 0.065, $p = 0.026$) showing that SA only partially mediated the relationship between CI and employee exhaustion (indirect effect = 0.044, 95% CI = 0.02–0.071). NA and PA as the covariates were found to be significant, but none of the socio-demographic variables (age and gender) and the intensity of customer contact effects was significant. These results support our H1 by demonstrating the indirect effect of CI on burnout through the mediation of SA, beyond employee negative and positive affectivity.

STUDY 2

Materials and Methods

Participants

A total of 292 customer service representatives of two mobile phone companies in Poland participated in this study. All participants worked in customer service stores servicing individual customers. The criteria for inclusion in this study were identical to those in Study 1. A total of 423 individuals initially expressed interest in this research project (out of 488 invited to participate), of which 292 (51% women) ultimately participated (69%). One hundred and thirty-one participants were excluded from the final sample because they either withdrew from the survey (42 individuals) or could not be reached due to Covid-19 Lockdown restrictions (89 individuals). The participants were on average around 36 years of age with average job tenure of 14.89 years (SD = 5.38). Of all the respondents, 33.2% reported being graduates of vocational or high schools, whereas 66.8% reported that they had a university degree. The participants reported spending on average 82% of their time on the job in direct (face-to-face) contact with customers.

Measures

In Study 2, four variables were measured: CI, SA, exhaustion and trait EI. The first three variables were measured using the same instruments used in Study 1, namely the ICS was used to measure CI, the ELS was used to measure SA, and the OLBI was used to measure exhaustion. The descriptions of these instruments can be found in Study 1. In addition to the variables listed above, in Study 2, trait EI was also measured.

Trait Emotional Intelligence

Trait EI was assessed with the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF, Petrides and Furnham, 2006; Polish version by Szczygieł et al., 2015). This questionnaire is derived from the full form of the TEIQue (for a comprehensive description of the factors and subscales, see Petrides, 2011) and contains 30 items with answers on a seven-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree). Examples of items are: "Expressing my emotions with words is not a problem for me" and "I often find it difficult to see things from another person's viewpoint" (reversed). Scores for the TEIQue-SF were calculated by averaging the responses to the items, after reversion of appropriate items.

Procedure

As in Study 1, the participants in Study 2 were recruited with the help of psychology students, who personally contacted employees during working hours, asking them to participate in the study. The employees were informed about the purpose of the study (i.e., the role of emotional competence in service work) and were assured of its anonymity. Employees who gave their informed consent to participate in the survey began by completing questionnaires on demographic data and CI. They were asked to create their own "pseudo-code" in order to ensure the anonymity of the study and to allow matching the questionnaires to the study participant. The employees then received an envelope with the questionnaires on emotional intelligence and emotional labor and were asked to complete them within the next few days, during their breaks. The sealed envelopes were collected from participants 5–8 days later. On the day the envelopes were collected, the participants completed the burnout inventory. This procedure applied to all participants. No compensation was offered for participation. Data was

TABLE 2 | Coefficients for the tested mediation model.

Predictors		Outcome *M*: Surface acting					Outcome *Y*: Exhaustion			
		Coeff.	SE	LLCI	ULCI		Coeff.	SE	LLCI	ULCI
Constant		1.473	0.912	−0.322	3.268		1.923	0.327	1.280	2.566
Co: Age		−0.029	0.014	−0.058	0.001		−0.001	0.005	−0.011	0.009
Co: Gender		−0.200	0.163	−0.520	0.120		0.005	0.058	−0.110	0.119
Co: Customer contacts/day		0.019**	0.006	0.006	0.031		0.000	0.002	−0.004	0.005
Co: Trait negative affectivity		0.558***	0.143	0.276	0.839		0.214***	0.052	0.111	0.317
Co: Trait positive affectivity		−0.069	0.111	−0.287	0.150		−0.131**	0.040	−0.209	−0.053
Me: Surface Acting		-	-	-	-	(b)	0.136***	0.020	0.096	0.176
X: Customer incivility	(a)	0.322***	0.0791	0.1174	0.5274	(c')	0.065*	0.029	0.008	0.122
			$R^2 = 0.173$***					$R^2 = 0.319$***		
			F (6,308) = 10.706; $p < 0.001$					F (7,307) = 20.532; $p < 0.001$		
		Indirect effect		**Boot SE**			**Boot LLCI**			**Boot ULCI**
		0.077		0.023			0.036			0.124

SE = standard error; 95% CI = confidence interval with lower and upper limits. $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.*

collected from mid-January to mid-March 2020 in the Masovian (central Poland) and Pomeranian (northern Poland) districts.

RESULTS

Descriptive statistics, internal consistency coefficients (Cronbach's a) and intercorrelations among the variables are presented in **Table 3**. CI was positively associated with exhaustion, SA and intensity of customer contact. Trait EI was negatively correlated with CI, exhaustion and SA. Younger employees reported more uncivil customer behaviors. In addition, compared to female participants, male participants reported more uncivil customer behaviors, $t(290) = 3.43$, $p < 0.01$, $M = 3.23$ ($SD = 1.03$) and $M = 2.83$ ($SD = 0.94$) respectively. Furthermore, male participants declared using more SA than female participants, $t(290) = 2.68$, $p < 0.01$, $M = 3.20$ ($SD = 1.27$) and $M = 2.82$ ($SD = 1.13$) respectively. Finally, the results showed that female participants reported higher scores on trait EI than male participants, $t(290) = 2.17$. $p < 0.05$, $M = 4.99$ ($SD = 0.47$) and $M = 4.87$ ($SD = 0.49$) respectively.

Moderated Mediation Analysis

In order to examine Hypotheses 2, 3, and 4 on the moderating role of trait EI in the relationship between CI and employee exhaustion, we conducted a moderated mediation analysis testing the moderation of both direct and indirect paths (i.e., mediated through SA). The results are presented in **Table 4**. In line with Hypothesis 2, the conditional direct effect (as depicted in **Figure 2**) was significant for participants low in trait EI [$B = 0.482$, $SE = 0.101$, $p < 0.001$, (95% CI = 0.282–0.682)] but not for participants high in trait EI [$B = 0.146$, $SE = 0.095$, $p = 0.125$, (95% CI = − 0.041–0.334)]. The index of moderated mediation did not pass through zero [$B = -0.030$, $SE = 0.017$, (95% CI = − 0.067 to −0.003)], which indicates, in line with Hypothesis 3, that the indirect effect of CI on employee exhaustion through SA was significantly different among participants with low and high trait EI. The inspection of the conditional indirect effect indicates, in line with Hypothesis 4, that there was a significant indirect effect of CI on exhaustion through SA only among participants low in trait EI [$B = 0.043$, $SE = 0.017$, $p < 0.001$, (CI = 0.015–0.080)] but not among participants high in trait EI [$B = 0.013$, $SE = 0.010$, (CI = − 0.004–0.035)]. There was also an interaction effect between CI and trait EI on SA, as shown in **Figure 3**. The results showed that the conditional effect of CI on SA was significant for participants with low EI [$B = 0.043$, $SE = 0.017$, $p < 0.001$, (CI = 0.015–0.080)] but not for those with high EI [$B = 0.013$, $SE = 0.010$, (CI = − 0.004–0.035)]. In sum, these results support Hypotheses 2, 3, and 4.

DISCUSSION

This study was designed to examine the effects of emotional demands in service work, namely uncivil customer behaviors and SA on employee exhaustion. Consistent with our predictions, the results of two independent studies, one of which was conducted among retail sales employees and the other among customer service representatives, demonstrated that CI significantly increased the use of SA and exhaustion.

The first objective of the current study was to re-examine the relationship between CI and employee exhaustion and the mediating role of SA in this relationship, while controlling for NA and PA. In line with previous findings (Wright and Cropanzano, 1998; Grandey et al., 2004; Hülsheger and Schewe, 2011; Kammeyer-Mueller et al., 2013; Shin and Hur, 2019; Sommovigo et al., 2019a), the results of Study 1 demonstrated that both NA and PA were significantly related to all the variables under study. In addition, it was revealed that increases in the use of SA were related to increases in exhaustion, thus providing supporting evidence for the mediating role of SA. These results are in accordance with prior research showing an indirect effect (through SA) of CI on employee exhaustion (Sliter et al., 2010; Hur et al., 2015), as well as the assumptions of Grandey's (2000) emotional labor model. Importantly, the mediating effect of SA in the

TABLE 3 | Study 2 means, standard deviations, intercorrelations, and internal-consistency reliability (Cronbach's α) of study variable.

Variable	*M*	*SD*	α	1	2	3	4	5
1. Exhaustion	2.61	0.62	0.83	–				
2. Customer incivility	3.03	1.00	0.94	0.29***	–			
3. Surface acting	3.01	1.22	0.86	0.33***	0.31***	–		
4. Trait emotional intelligence	4.93	0.49	0.87	−0.46***	−0.22***	−0.24***	–	
5. Customer contact/day (%)	82.44	13.68	–	−0.03	0.12*	0.05	0.04	–
6. Age	35.90	7.00	–	−0.13*	−0.10	−0.01	0.02	−0.07

*$p < 0.05$; ***$p < 0.001$ (all two-tailed significance tests).

TABLE 4 | Coefficients for the tested moderated mediation model.

Variables	Outcome *M*: Surface acting				Outcome *Y*: Exhaustion			
	Coeff.	SE	LLCI	ULCI	Coeff.	SE	LLCI	ULCI
Constant	2.783	0.592	1.617	3.949	2.760	0.281	2.208	3.312
X: Customer incivility	0.314***	0.070	0.176	0.452	0.100**	0.033	0.035	0.165
Me: Surface Acting	-	-	-	-	0.088***	0.027	0.035	0.141
Mod: Emotional intelligence (EI)	−0.375**	0.144	−0.658	−0.091	−0.433***	0.067	−0.564	−0.302
(X × Mo) Incivility × EI	−0.344*	0.142	−0.623	−0.066	−0.208**	0.065	−0.336	−0.079
Co: Customer contacts/day	0.004	0.005	−0.006	0.013	−0.002	0.002	−0.006	0.002
Co: Age	0.004	0.010	−0.014	0.023	−0.009	0.004	−0.017	0.000
Co: Gender	−0.173	0.136	−0.441	0.095	0.020	0.062	−0.103	0.143
		$R^2 = 0.153$				$R^2 = 0.319$		
		$F(6, 285) = 8.576$, $p < 0.001$				$F(7, 284) = 18.990$, $p < 0.001$		

Index of moderation mediation	***Boot SE***	***Boot LLCI***	***Boot ULCI***
−0.030	0.017	−0.067	−0.003

SE = standard error; 95% CI = confidence interval with lower and upper limits. $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

CI–exhaustion relationship emerged while controlling for employee affectivity, which supports our Hypothesis 1. These are important findings, as they rule out the possibility that the relationships between the variables examined here are simply a function of employee dispositional affectivity and its effects on the rest of the variables.

The second objective of this research was to examine whether CI *always* leads to an increased use of SA and ultimately to increased employee exhaustion. The results of Study 2 support a moderated mediation model in which trait EI buffers the direct and indirect (through SA) effects of CI on exhaustion. Specifically, it was found that employees exposed to many uncivil customer behaviors but high in trait EI reported using less SA and, thus, experienced fewer exhaustion symptoms than their low in trait EI counterparts. The highest scores on SA and exhaustion were reported by employees low in trait EI. These results provide support for our Hypotheses 2 and 3 and suggest that in order to avoid/minimize personal costs resulting from interactions with rude and disrespectful customers; employees must have a particular personal resource at their disposal, namely EI. In other words, employees have to be able to deal effectively with emotionally charged situations (Petrides, 2011). This conclusion is supported by the results of earlier studies demonstrating that trait EI mitigates the effects of negative emotions felt at work on burnout (Szczygieł and Mikolajczak, 2018), as well as the effects of interpersonal conflicts at work on emotional exhaustion (Szczygieł and Baka, 2016).

Our research contributes to the literature on customer mistreatment in three ways. First, it responds to calls for studies that include EI in predictions of workplace behavior (Lopes, 2016), especially in jobs with high emotional labor requirements (Dahling and Johnson, 2013). Second, it highlights EI as important personal resources in service work and, therefore, bears some practical implications. Given that emotionally demanding interactions with customers seem to be an inevitable part of service work, organizations may want to consider providing EI training programmes for their employees to help them increase their emotional skills. Trait EI represents a relatively stable disposition, but recent findings are optimistic in their indication that EI training focusing on basic emotional competencies, such as understanding, regulation and the use of emotions, is effective even within a relatively short time span. For an overview of the most robust studies on this issue, see Kotsou et al. (2018) and for a meta-analysis, see Mattingly and Kraiger (2019).

Third, our study was conducted in Poland, thus responding to a call to extend workplace incivility research to a greater number of countries (Schilpzand et al., 2016). This is important, as most research in this area has been conducted in developed countries, whose economies have been dominated by the service industry for decades (e.g., the United States, Canada and Italy). We, therefore, believe that our research is a good complement to previous studies. The relationship between customer incivility and emotional labor, and between emotional labor and burnout, therefore, seems to be similar across

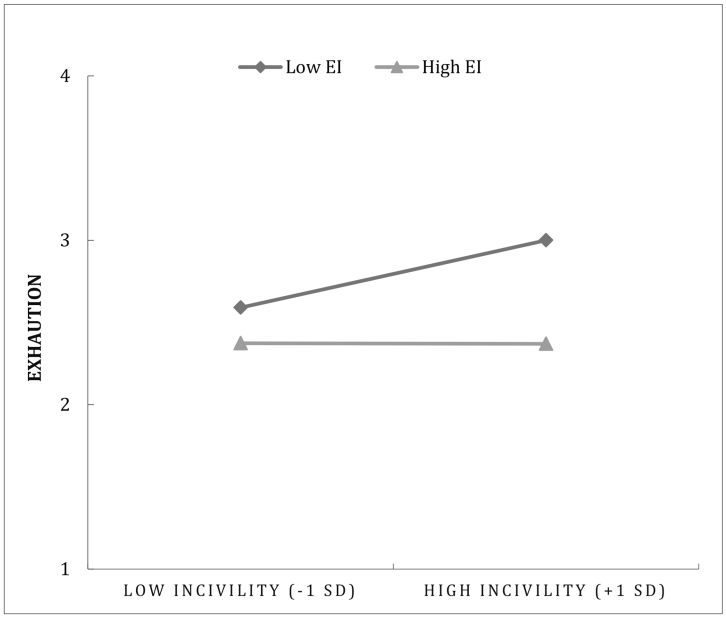

FIGURE 2 | Employee's exhaustion as a function of the interaction between customer incivility and emotional intelligence.

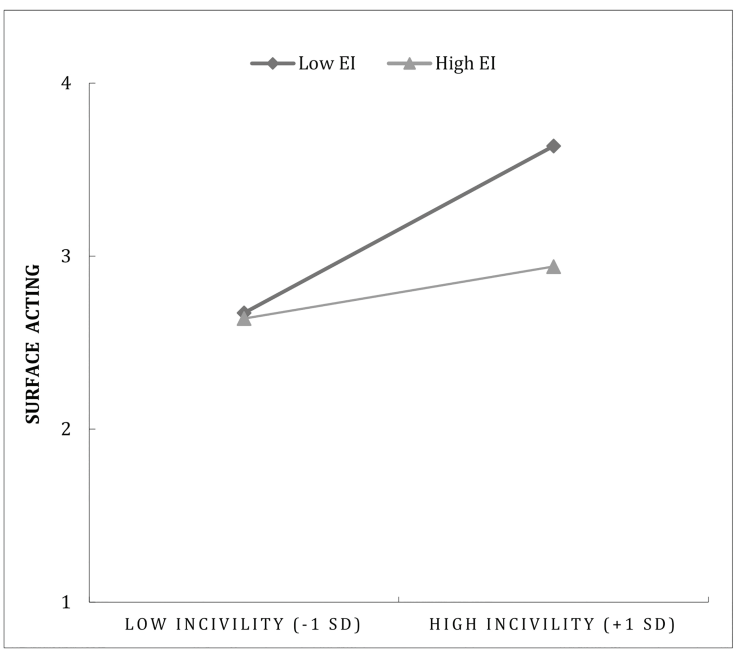

FIGURE 3 | Surface acting as a function of the interaction between customer incivility and emotional intelligence.

countries, regardless of the importance of the service sector in their economies.

It should be emphasized that our research focuses on CI, which concerns only one form of customer mistreatment. It is therefore unknown whether the effects demonstrated here would be revealed in relation to other manifestations of customer mistreatment. It is especially interesting in relation to customer aggression which is often juxtaposed with CI (Wilson and Holmvall, 2013; Sommovigo et al., 2019b). Although both CI and customer aggression violate workplace standards for treating

others in the workplace and may be covered by the general term "workplace mistreatment," they differ in terms of intensity, frequency and intentions (Wilson and Holmvall, 2013). First, incivility is ambiguous about the intention to harm the target, whereas aggression is plainly aimed at causing harm (Tepper and Henle, 2011). The intention to cause harm in an uncivil act may not be clear to the person being uncivil, the person experiencing the incivility, or the observers (Andersson and Pearson, 1999; Pearson et al., 2001; Sliter et al., 2010; Wilson and Holmvall, 2013). Second, uncivil acts are often considered less intense than aggressive behaviors (Andersson and Pearson, 1999; Wilson and Holmvall, 2013). Third, given that aggressive behaviors are more intense and intentional, they are likely to be less frequent and their impact on the target is potentially more direct than the effect of uncivil behavior (Wilson and Holmvall, 2013).

There are several limitations to the current study that suggest directions for future research. First, the cross-sectional design of the data collection precludes causal interpretations. A certain causal order of the variables was assumed, such as exhaustion resulting from the experience of CI, but other causal directions are also possible, i.e., exhausted employees may perceive customers as ruder. Future longitudinal studies might capture the reciprocal nature of these relationships well. Second, our data were based solely on self-report instruments, which could lead to concerns about common method variance (Podsakoff et al., 2003). The measured predictors, however (CI, SA, and trait EI) and the outcome variable (exhaustion) at different points in time reduced the likelihood that the results of this study were caused exclusively by common method variance. Dispositional affectivity was also controlled for (Study 1), as it constituted a more conservative test of the relationships between the variables analyzed in the study. Additional data sources, such as reports from colleagues or supervisors, as well as observational techniques, could be used in future studies to strengthen the findings. Third, we did not take into account other factors that are relevant for the relationships analyzed here. In our model we focused on the mediating role of SA in the relationship between CI and exhaustion, but research suggests that there are other potential mediators that could play an important role in this relationship (e.g., the frequency and intensity of employees' negative and positive emotions during interactions with customers; Glomb and Tews, 2004; Zellars et al., 2004; Rupp and Spencer, 2006). There is also evidence showing that there are other factors that could moderate the relationship between CI and exhaustion. For example, research demonstrates that organizational and supervisory support mitigates the adverse effects of customer verbal aggression on emotional exhaustion among call centre workers (Li and Zhou, 2013). Likewise, sharing feelings with team members (a climate of authenticity) has been linked to reduced burnout resulting from SA (Grandey et al., 2012). There is also evidence that exposure to customer mistreatment increases cooperative and prosocial behaviors towards co-workers and customers, although this effect depends on customer orientation (Yue et al., 2017). Finally, we asked the survey participants about their experience with uncivil customer behaviors over the past month and, thus, we obtained an aggregate measure of CI. Recently, however, research increasingly moves beyond aggregated measures of CI and focuses more on specific CI encounters (event perspective) in order to gain insight into the dynamic nature of customer–employee interactions (Walker et al., 2014, 2017). Therefore, it would be advisable for further research to advance a more sophisticated research model that would capture the complexity of the potential factors (at organizational, individual, as well as service-episodic levels) that may affect the relationship between CI, SA and exhaustion more fully.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the SWPS University of Social Sciences and Humanities (Poland), WKE-S-19-VIII-60. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

DS developed the study design, coordinated the data collection, and drafted the manuscript. DS and RB contributed to data interpretation. RB supervised the methodology, computed the analyses, wrote the Results section, and commented on the first draft of the manuscript. Both authors approved the final version of the manuscript.

FUNDING

This research was supported with a grant no. WSO/2018/A/09 awarded to DS by the SWPS University of Social Sciences and Humanities (Poland). We thank SWPS University of Social Sciences and Humanities for providing funding for the publication fee which allowed this paper to be open access.

ACKNOWLEDGMENTS

We thank all students who participated in this research project and participants who kindly took the time to complete the questionnaires used in this research. We also thank the reviewers for their valuable comments and suggestions that improved the quality of the previous version of this manuscript.

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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 March 2021
doi: 10.3389/fpsyg.2021.530297

Linking Self-Control to Voluntary Behaviors at Workplace: The Mediating Role of Job Satisfaction

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Voluntary work behavior (VWB) refers to spontaneous workplace behaviors that extend beyond role norms, including extra-role behaviors that benefit the organization (i. e., organizational citizenship behavior, OCB) and negative behaviors that may harm the organization (i.e., counterproductive work behavior, CWB). This study examined the relationship between self-control and VWB and the mediating role of job satisfaction. A total of 1,101 full-time employees from China completed a battery of self-report measures online. The results show that self-control positively predicts employees' OCB and negatively predicts employees' CWB. Moreover, job satisfaction significantly mediates the relationship between self-control and OCB/CWB. The results confirm that employees with high self-control are more public-spirited, which previous studies have described as being "highly committed" (high OCB) or "less harmful" (low CWB). This finding closely relates to the observation that employees with high self-control tend to have more satisfying work outcomes or higher workplace status than those with low self-control.

Keywords: self-control, job satisfaction, voluntary work behavior, OCB, CWB, employee

OPEN ACCESS

Edited by:
José Jesús Gázquez, University of Almeria, Spain

Reviewed by:
Joseph Andrew Allen, The University of Utah, United States
Weijiong Wu, Guangdong University of Technology, China

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

Received: *28 January 2020*
Accepted: *10 February 2021*
Published: *23 March 2021*

Citation:
Wang Y-J, Chen K-Y, Dou K and Liu Y-Z (2021) Linking Self-Control to Voluntary Behaviors at Workplace: The Mediating Role of Job Satisfaction. Front. Psychol. 12:530297. doi: 10.3389/fpsyg.2021.530297

INTRODUCTION

Voluntary work behavior (VWB) refers to spontaneous behaviors that extend beyond specific role requirements, including desirable (i.e., organizational citizenship behavior, OCB) and undesirable behaviors (i.e., counterproductive work behavior, CWB) (Fay and Sonnentag, 2010; Mekpor and Dartey-Baah, 2017). OCB is employees' behavior that extends beyond usual job duties and expectations and that can promote organizational effectiveness (Organ et al., 2010; Miao et al., 2020). It is associated with a range of positive organizational-level outcomes (e.g., productivity, efficiency, reduced costs, and customer satisfaction) (Podsakoff et al., 2009). CWB refers to behavior that is intended to have a negative effect on organizations and their members (Fox et al., 2001). It can take many different forms, such as theft, fraud, absenteeism, physical aggression, and substance use (Marcus and Schuler, 2004), which can cause a large share of organizational losses (Braun et al., 2016).

Over the last decade, growing empirical research has highlighted other environmental factors that may affect VWB, such as leadership style and organizational justice (Wu et al., 2016; Newman et al., 2017), and that are typically observed at the organizational level. However, research on the impact of personal factors on VWB is very limited (Guan et al., 2019). One personal trait, self-control, has been a prominent concept in different areas of research in psychology because of its various beneficial effects for human functioning (de Ridder et al., 2012). The famous Chinese

idiom "self-controlling and public-spirited" links self-control ability to commitment to the public interest. This context leads us to ask whether self-control ability will lead to more behaviors that will benefit the organization. Correspondingly, will self-control ability be related to less CWB? In the current study, we aim to explore the relationship between self-control and OCB/CWB and the possible mediating role of job satisfaction.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Self-Control and OCB/CWB

Self-control is the capacity to override, modify, or suppress desirable behavior when pursuing long-term goals (de Ridder et al., 2012; Situ et al., 2016). Individuals who have higher levels of self-control tend to experience more positive outcomes (such as better interpersonal relationships and better emotional responses) and fewer negative outcomes (such as less binge eating, alcohol abuse, crime, and juvenile delinquency) (Tangney et al., 2004; Walters, 2016; Wolfe et al., 2016). OCB refers to behavior in which employees voluntarily sacrifice their short-term interests for the organization's long-term interests (Joireman et al., 2006). When choosing to demonstrate OCB, such as helping colleagues and saving organizational resources, employees may have to resist instinctive impulses toward selfishness. To override their automatic selfish impulse, individuals need to utilize the ability of self-control (Dewall et al., 2008). Correspondingly, studies have shown that it is easier for people with higher levels of self-control to regulate negative emotions, manage conflict (Hofmann et al., 2014), control impulses and temptation (de Ridder et al., 2012), and achieve long-term goals (Frederick et al., 2003). OCB is related to the psychological process of self-control, which includes overcoming inner resistance, resisting distractions, and suppressing impulsiveness (Diestel and Schmidt, 2012; Rivkin et al., 2015). This view is supported by recent empirical studies suggesting that self-control is positively related to OCB (Joosten et al., 2015; Wang et al., 2017). As noted above, we hypothesize the following:

Hypothesis 1a*: Self-control is positively related to OCB.*

When employees engage in CWB, such as purposely performing work incorrectly, being late, and stealing from the organization, they are potentially harming the interests of the organizations or its members (Marcus and Schuler, 2004; Shoss et al., 2016). What motivates individuals to display these harmful acts? Previous studies have suggested that CWB is a behavioral strain response to provocation at work (i.e., workplace stress, organizational constraints, and interpersonal conflict) because individuals anticipate that these behaviors will make them feel better emotionally (Fox et al., 2001; Spector and Fox, 2002). CWB is an attempt to cope with stress and negative events, which may relieve employees' negative emotions (Reynolds et al., 2015). To avoid displaying CWB, employees need to utilize self-control ability to minimize the undesirable impact of stress and negative emotions, suggesting that low self-control is linked to counterproductive work behavior (Marcus and Schuler, 2004; Hofmann et al., 2014). Given the reasons mentioned above, we assume that employees who have a higher level of self-control can regulate their personal emotions and therefore display less CWB. Thus, we hypothesize the following:

Hypothesis 1b*: Self-control is negatively related to CWB.*

Job Satisfaction as a Mediator

Although there may be various mechanisms whereby self-control relates to OCB and CWB, we would argue that one of the mechanisms is carried through the mediating role of employees' job satisfaction. Job satisfaction refers to the positive feelings about one's working conditions or outcomes that arise from one's work (Saari and Judge, 2004). Despite the large amount of literature suggesting the benefits of self-control in various aspects, such as work, academic performance, and interpersonal relationships (de Ridder et al., 2012), remarkably limited research concerned the possible links between self-control and subjective well-being (Hofmann et al., 2014). Hofmann et al. (2014) reported that people with higher levels of self-control are more likely to be satisfied with their lives because they are better able to regulate negative emotions, manage conflict, and balance their daily lives. This argument leads us to suggest that employees' self-control ability can also contribute to their job satisfaction as work takes up a large part of life. As a significant part of life for adults, work is an important factor that can influence people's perception about their lives and well-beings. However, to the best of our knowledge, little study has directly examined the relationship between self-control and job satisfaction. A preliminary study confirmed the positive relationship between self-control and job satisfaction in a Chinese sample working in different cities (Dou et al., 2016). Another study by Rothman and Coetzer (2002) also suggested individuals' personality traits, such as self-discipline, can influence one's job satisfaction through cognitive, affective, and behavioral process. The possible explanation could be that the ability of self-control may lead to better regulation of employees' daily lives, including negative emotions, stress, and interpersonal relationships, which might be associated with higher job satisfaction.

Well-established literature has demonstrated the positive relationship between job satisfaction and OCB. An important driver of OCB is the extent to which employees feel satisfied with their job (Bowling, 2009). For example, a recent study found that employees' job satisfaction can enhance their willingness to perform positive work activities (De Clercq et al., 2019). A meta-analysis also confirmed the positive relationship between job satisfaction and OCB (LePine et al., 2002). Job satisfaction is an important factor that can fuel employees' ability to do beneficial extra-role activities (Bowling, 2009). Thus, we argue that the accumulation of job satisfaction might steer employees toward doing more OCB.

Social exchange theory provides insight into the relationship between self-control and VWB. Based on social exchange theory, individuals will reciprocate with attitudes and behaviors that match the expectations of their employers (Özbek et al., 2016). Because employees with high self-control tend to have better work outcomes and higher life satisfaction (Tangney et al., 2004; Hofmann et al., 2014; Dou et al., 2016), they are more likely

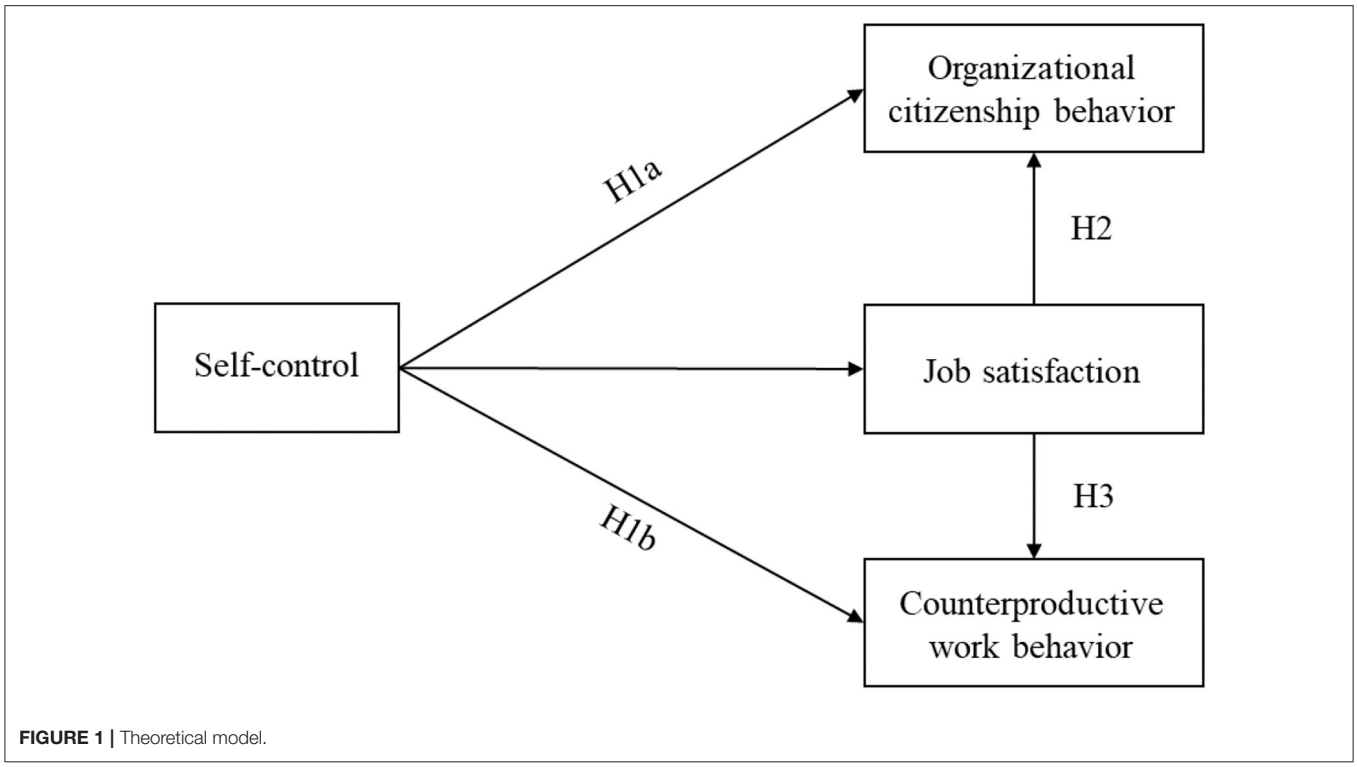

FIGURE 1 | Theoretical model.

to perceive their relationship with the organization as a fair social exchange. Therefore, they tend to increase their attachment to the organization, leading to more OCB (Cardona et al., 2004; Jena and Goswami, 2013). Another explanation for why job satisfaction is positively linked to OCB is that the positive emotion derived from job satisfaction contributes to OCB (Miles et al., 2002).

According to social exchange theory, job dissatisfaction implies a perceived imbalance in which the benefits that employees gain from the organization cannot compensate for their contribution. Employees who are dissatisfied with their jobs are more likely to display CWB because they are more inclined to perceive an imbalance in the workplace and make negative attributions (Zhang and Deng, 2016; Cohen and Diamant, 2019). Hofmann et al. (2014) reported that people with higher levels of self-control are more likely to be satisfied with their lives because they are better able to regulate negative emotions, manage conflict, and balance their daily lives. This argument leads us to suggest that employees' job satisfaction can contribute to their self-control ability. That is, employees with higher levels of self-control are better able to regulate their negative emotions from work, which might lead to higher job satisfaction, and these employees may therefore be less likely to display CWB. Another possibility is that employees who have low level of job satisfaction did not care about losing their jobs as much as those who have a high level of job satisfaction. On the other hand, satisfied employees did not risk losing their job by displaying CWB (Bowling, 2009). Finally, low level of job satisfaction may generate negative emotions that would contribute to CWB. This explanation is consistent with previous studies suggesting an emotion-centered model to explain extra-role behaviors (Spector and Fox, 2002). Based on the above considerations, the following can be hypothesized:

Hypothesis 2*: Job satisfaction mediates the relationship between self-control and OCB.*

Hypothesis 3*: Job satisfaction mediates the relationship between self-control and CWB.*

The Present Study

In the present study, we aimed to investigate the relationship between self-control and VBW and the mediating role of job satisfaction among Chinese employees (see in **Figure 1**). In line with the aforementioned literature, we expected that (1) trait self-control is positively related to OCB and negatively related to CWB; (2) job satisfaction mediates the trait self-control-OCB link; and (3) job satisfaction mediates the trait self-control–CWB link. By exploring the relationship between self-control and VWB and the possible mediating role of job satisfaction, the present study aimed to contribute to the current limited literature on the relationship between self-control and OCB/CWB and add to the understanding of the underlying mechanisms of OCB/CWB.

METHODS

Participants and Procedures

Data were collected from a variety of organizations in southeastern China. In total, 1,167 full-time employees (536 males, 631 females) were willing to complete the surveys via an online advertisement (www.wjx.cn). After some copies of questionnaires were excluded because they contained too

TABLE 1 | Descriptive statistics, correlations, and reliabilities among variables.

	M	*SD*	1	2	3	4	5	6	7
1. Age	29.96	6.67	—						
2. Gender	0.45	0.50	0.11***	—					
3. Monthly income	4558.26	4758.20	0.12***	0.03	—				
4. Self-control	3.41	0.69	0.11***	−0.05	0.02	(0.78)			
5. Job satisfaction	3.51	0.64	0.03	−0.01	0.06*	0.22***	(0.93)		
6. OCB	5.60	0.97	0.11***	−0.04	0.08*	0.40***	0.49***	(0.78)	
7. CWB	1.49	0.47	−0.04	−0.06*	0.06*	−0.41**	−0.33***	−0.38***	(0.87)

N = 1,101. Gender was dummy-coded as 0 (=female) and 1 (=male). Cronbach's alpha are reported along the diagonal.
**p < 0.05; **p < 0.01; ***p < 0.001.*

many identical answers, 1,101 valid surveys remained for the analysis (a response rate of 94.3%). Among these 1,101 employees (493 males, 608 females), the participants ranged in age from 18 to 64 years (M = 30.03 years, SD = 6.53 years), and the average work tenure was 4.47 years (SD = 5.07). These individuals provided consent prior to answering self-report measures online to enter a drawing for 100 RMB (∼15 U.S. dollars).

Due to the cross-sectional nature of the design, we implemented several procedures to mitigate concerns of common method bias and social desirability bias (Podsakoff et al., 2003). According to the recommendations proposed by Podsakoff et al. (2003), which are aimed at reducing demand characteristics and evaluation apprehension, all participants were assured that their responses would be confidential, and the data they provided would be used only for research purposes. We also followed recommendations suggested by Conway and Lance (2010), which include utilizing counterbalancing of measures and demonstrating adequate evidence of measure reliability. All procedures involving human participants were reviewed and approved by the research ethics committee in the School of Education at Guangzhou University (Protocol Number: GZHU2017002).

Measures

All English-based measures were translated into Chinese based on translation/back-translation procedures. The coefficient alpha for each scale is presented in **Table 1**.

Self-Control

Self-control was measured with the 8-item scale revised by Maloney et al. (2012), which from the 13-item *Brief Self-Control Scale* (BSCS) developed by Tangney et al. (2004). The items were rated on a 5-point scale from 1 (*not like me at all*) to 5 (*very much like me*). The average score for all items was calculated, and a higher score indicates better self-control. BSCS has been shown to have good psychometric properties in different cultures (Dou et al., 2016; Situ et al., 2016; Singh and Göritz, 2019). Sample items include "I am good at resisting temptation" and "I do certain things that are bad for me, if they are fun."

Job Satisfaction

Job satisfaction was measured with a short form of the *Minnesota Job Satisfaction Questionnaire* (MSQ) developed by Arvey et al. (1989). This scale includes 20 items measured on a 5-point scale from 1 (*very dissatisfied*) to 5 (*very satisfied*). The average score for all items was calculated, and a higher score indicates greater job satisfaction. The MSQ can be applied to evaluate job satisfaction, drawing attention to key work facets and grouping them into two dimensions: intrinsic satisfaction (e.g., being able to keep busy all the time) and extrinsic satisfaction (e.g., the way my boss handles people).

Organizational Citizenship Behaviors

Positive voluntary behavior at work was measured with the *Organizational Citizenship Behavior Scale* (OCBS) developed by Aryee et al. (2002). This scale consists of 9 items rated on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The average score for all items was calculated, and a higher score indicates more OCB. Sample items include "makes suggestions to improve work procedures" and "expresses opinions honestly when others think differently."

Counterproductive Work Behavior

Negative voluntary behavior at work was measured with the 10-item short version of the *Counterproductive Work Behavior Checklist* (CWBC) developed by Spector et al. (2010). This measure lists a set of behaviors and asks respondents how often they have engaged in such behavior on a 5-point scale from 1 (*never*) to 5 (*every day*). A higher score indicates more negative voluntary behavior at work. Sample items include "Purposely wasted your employer's materials/supplies" and "Insulted or made fun of someone at work."

Control Variables

Consistent with previous research (Ng et al., 2016), we measured *age*, *gender*, and *income* to control for their potentially spurious effects.

Data Analysis

The percentage of missing data was under 2% in the valid sample, and missing data points were handled by using the full information maximum likelihood (FIML; Acock, 2005). First, descriptive statistics were performed in SPSS 22.0 to estimate

TABLE 2 | Model fit results for measurement model comparison.

Variable	χ^2	*df*	$\Delta\chi^2$ (Δdf)	RMSEA	CFI	NNFI	SRMR
M_1: SC; JS; OCB; CWB	3011.69	998	–	0.04	0.91	0.90	0.07
M_2: SC + JS; OCB; CWB	7132.31	1,031	4120.62 (33)	0.07	0.72	0.71	0.09
M_3: SC + JS; OCB + CWB	9247.97	1,033	6236.28 (35)	0.09	0.63	0.61	0.10
M_4: SC + JS + OCB + CWB	11570.65	1,034	8558.96 (36)	0.10	0.52	0.50	0.10

N = 1,101. SC, self-control; JS, job satisfaction; OCB, organizational citizenship behavior; CWB, counterproductive work behavior. All alternative models were compared with the hypothesized four-factor model. All $\Delta\chi^2$ are significant at $p < 0.01$.

the levels of participants' self-control, job satisfaction, OCB, and CWB. Second, correlation analyses were carried out to capture the associations among self-control, job satisfaction, OCB, and CWB. The correlation coefficients of 0.10, 0.30, and 0.50 represent small, medium, and large effect sizes, respectively (Cohen, 1992). Finally, the hypothesized mediation model was tested via path analysis using Mplus 7.0. We drew 5,000 bootstrapping samples and used 95% confidence intervals to determine the significance of the mediation. The mediating effect was considered significant if the 95% confidence interval excluded zero (Preacher and Hayes, 2008). Furthermore, we initially conducted confirmatory factor analyses (CFAs) to test for construct distinctiveness.

RESULTS

Measurement Model and Common Method Variance

By following the recommendations of Conway and Lance (2010), we conducted a series of CFAs to examine the discriminant validity of the employees' four self-reported variables (both independent and dependent).

As shown in **Table 2**, the assumed four-factor model (self-control, job satisfaction, OCB, and CWB) provided a better fit to the data than any other model, including a model in which self-control and job satisfaction were combined but the two dependent variables were modeled as separate factors (M_2), $\Delta\chi^2$ (33) = 4,120.62, $p < 0.001$, including a model in which self-control and job satisfaction were combined and the two dependent variables were combined (M_3), $\Delta\chi^2$ (35) = 6236.28, $p < 0.001$. The four-factor model was also superior to a one-factor model that combined all four variables into one factors (M_2), $\Delta\chi^2$ (36) = 8558.96, $p < 0.001$. We concluded that the four variables were empirically distinct from one another, representing four distinct constructs. Therefore, results did not provide evidence for common method bias.

Descriptive Statistics and Correlations

Means, standard deviations, correlations, and coefficient alphas of the variables are presented in **Table 1**. The results show that self-control was positively related to job satisfaction ($r = 0.22$, $p < 0.001$) and OCB ($r = 0.40$, $p < 0.001$) and negatively related to CWB($r = -0.41$, $p < 0.001$). Job satisfaction was positively association with OCB ($r = 0.49$, $p < 0.001$) but negatively associated with CWB ($r = -0.33$, $p < 0.001$). These findings provide preliminary support for the hypothesized relationships.

Testing the Direct and Mediational Pathways

Direct Effects

We first assessed the direct effect of self-control on OCB/CWB. Model results consistent with Hypotheses 1a and 1b indicated that self-control was associated with higher levels of employees' OCB ($\beta = 0.41$, $p < 0.001$) but associated with lower levels of employees' CWB ($\beta = -0.40$, $p < 0.001$) after controlling for age, gender, and monthly income.

Mediational Effects

Next, the mediational model was tested which included employees' job satisfaction. The model fit to the data well, $\chi^2 = 3.97$, $df = 3$, RMSEA = 0.017 with 90% CI = (0.001, 0.057), CFI = 0.99, SRMR = 0.011. As shown in **Figure 2**, employees' job satisfaction mediated the relationship between self-control on OCB and CWB after controlling for age, gender, and monthly income. That is, self-control significantly predicted employees' job satisfaction ($\beta = 0.22$, $p < 0.001$). Also, employees' job satisfaction was positively related to OCB ($\beta = 0.44$, $p < 0.001$), while it was negatively related to CWB ($\beta = -0.22$, $p < 0.001$). Finally, as shown in **Table 3**, the bias-corrected bootstrapping test of the indirect effects indicated that job satisfaction significantly mediated the link between self-control and OCB [estimate = 0.094, S.E. = 0.016, 95% CI = (0.063, 0.125)] also significantly mediated the link between self-control and CWB [estimate = −0.057, S.E. = 0.011, 95% CI = (−0.077, −0.036)]. Thus, Hypotheses 2 and 3 were supported.

DISCUSSION

The present research sought to reveal the relationship between self-control and VWB (OCB/CWB) and the mediating role of job satisfaction in Chinese employees. As expected, we found that self-control was positively related to OCB and negatively associated with CWB, consistent with the findings of previous studies (Bolino et al., 2012; Fehr et al., 2017; Wang et al., 2017). We further found that job satisfaction mediated the relationship between self-control and OCB/CWB. This finding reveals the internal mechanism of the effect of self-control on employees' VWB. Our results enrich and broaden the literature

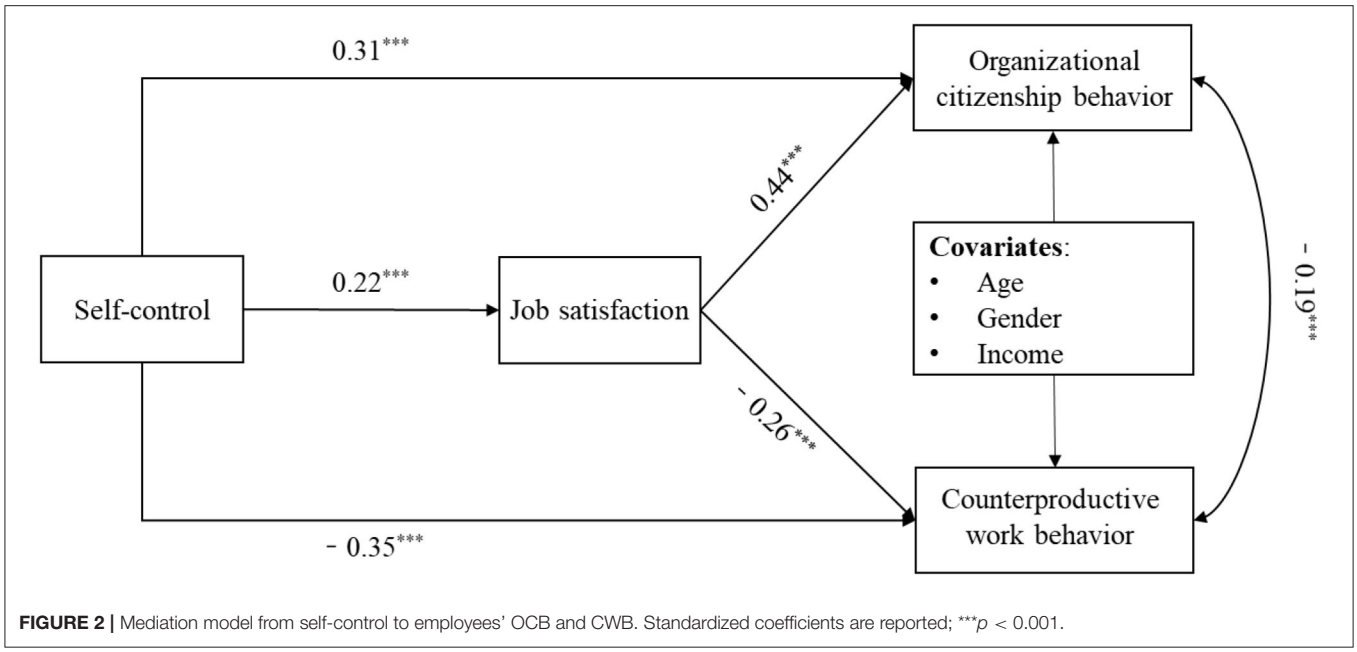

FIGURE 2 | Mediation model from self-control to employees' OCB and CWB. Standardized coefficients are reported; ***$p < 0.001$.

TABLE 3 | The specific indirect effect for each indirect pathway in the model based on the bias-corrected bootstrapped estimates.

Specific pathways tested in the model	Bias-corrected bootstrapped estimates for the effects			
	Unstandardized	SE	95% CI	Standardized
Direct pathway				
Self-control → OCB	0.545	0.041	(0.463, 0.625)	0.404
Self-control → CWB	−0.275	0.022	(−0.320, −0.234)	−0.403
Indirect pathways				
IND 1: self-control → job satisfaction → OCB	0.094	0.016	(0.063, 0.125)	0.137
IND 2: self-control → job satisfaction → CWB	−0.057	0.011	(−0.077, −0.036)	−0.082

OCB, organizational citizenship behavior; CWB, counterproductive work behavior. Indirect pathways are significant based on the bias-corrected bootstrapped 95% CI. According to Kenny (2012), standardized indirect effects around 0.01 were "small," effects around 0.09 were "medium," and effect around 0.25 were "large".

on employees' VWB in a collectivist cultural background from the perspective of employees' personal traits and work attitudes.

Theoretical Implications

There were some notable theoretical implications of the present study.

First, consistent with Wang et al. (2017), we confirmed the relationship between self-control and OCB and confirmed that employees with high self-control were more likely to refrain from detrimental behavior than employees with lower levels of self-control. Therefore, the Chinese idiom "self-controlling and public-spirited" was verified from the positive and negative aspects; that is, compared with employees with lower levels of self-control, employees with better self-control ability contribute more to the organization by not only demonstrating more OCB but also refraining from CWB.

Second, the present study contributes to the growing literature on trait self-control and VWB. The present research found that in addition to external approaches, such as organizational climate and leadership style [e.g., Wu et al. (2016) and Newman et al. (2017)], personal traits such as self-control can enable employees to engage in OCB or refrain from CWB. As personal factors, self-control provides a novel way to understanding employees' behavior in the work setting.

Another theoretical contribution of the present study is that we revealed the mediating role of job satisfaction, which helps to better understand the mechanism underlying the relationship between self-control and VWB. This finding supports social exchange theory, suggesting that compared with employees with low self-control, employees with better self-control ability tend to have a higher satisfaction with their work, which in turn motivates employees to engage in more OCB (Bolino et al., 2012). In contrast, if employees do not feel that they are gaining the expected benefits from their organization, they tend to engage in more CWB (Cardona et al., 2004).

Practical Implications

The current research has several implications for human resource management practices:

First, the study highlights the important effect of employees' personal traits (self-control) on their behavior in the organization. Based on this finding, organizations should pay more attention to employees' self-control ability. For example, in the process of employee recruitment, organizations can take interviewees' self-control ability into account by applying self-control tests. Second, when selecting candidates for promotions, important positions, or assignments, organizations can consider employees' self-control ability as a predictor of greater OCB. Additionally, organizations can provide specific training to improve employees' self-control ability, which can benefit both the organization and employees in the long term.

Previous studies have shown that motivation can have an impact on the implementation of self-control (Baay et al., 2014). From this perspective, an organization can motivate employees to implement their self-control ability by using certain strategies. For example, organizations can guide employees to combine their career planning with organizational development. By developing greater attachment to the organization, employees will feel more motivated, leading to an increase in the application of self-control.

Limitations and Future Directions

Several limitations of the current study should be noted. First, because the present study was cross-sectional, the causal relationship between self-control and VWB could not be revealed. Thus, future studies could adopt a longitudinal design. A second limitation concerns the self-reported nature of the study. Although every effort was made to avoid the problem of common method variance by assuring anonymity and employing unified instructions, we still cannot exclude the potential issues with employees' self-reported data. Therefore, to improve the ecological validity of the research, future study is needed to further extend and optimize the measurement (e.g., by self-reports, peer assessments, and behavioral experiments). Third, the literature on the mediating mechanism in the relationship between self-control and VWB is limited. Future studies may also examine other possible mediators to better understand VWB. Finally, given the practical implications of our findings, several practical issues require further attention. Although we revealed that self-control plays an important role in OCB, research on methods for self-control inventions is needed to better apply self-control for practical use.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Review Committee of Education School, Guangzhou University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

Y-JW and KD: conceptualization, data curation, and investigation. Y-JW, K-YC, and KD: formal analysis, methodology, software, and writing—original draft. KD: project administration. Y-JW, KD, and Y-ZL: resources. KD and Y-ZL: supervision. Y-JW, K-YC, KD, and Y-ZL: writing—review and editing. All authors contributed to the article and approved the submitted version.

FUNDING

This research was funded by the National Natural Science Foundation of China (31970990) to Y-ZL, Natural Science Foundation of Guangdong Province (2018A030313406) to KD, the 13th Five-Year Plan of Philosophy and Social Science of Guangzhou (2020GZYB92) to KD, and the HKUST- GZU Joint Research Collaboration Fund to KD.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.530297/full#supplementary-material

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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: 11 May 2021
doi: 10.3389/fpsyg.2021.566516

Psychological Well-Being, Knowledge Management Behavior and Performance: The Moderating Role of Leader-Member Exchange

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Knowledge is considered an essential resource and key to competitiveness. The behavior of sharing knowledge is an essential activity for the prosperity of the organization. For individuals, however, sharing knowledge can present a dilemma by giving up the exclusive right to certain knowledge that they own. This study identifies the psychological well-being as a leading factor in facilitating knowledge-sharing in dilemma situations. The author classified knowledge management behavior into sharing, hiding, and manipulating behavior, and studied them as mediators linking psychological well-being and performance. And to check the influence of the quality of the exchange relationship, leader-member exchange was used as a moderator. For the empirical analysis, 333 members from 12 organizations were surveyed by using different sources and times. Hierarchical regression analysis and bootstrapping analysis were conducted for verification of hypothesis. Results demonstrated that the psychological well-being influence directly on knowledge-sharing, -hiding, and -manipulating behaviors and indirectly on performance. In the multi-mediation test, only knowledge-sharing behavior mediated the relationship between psychological well-being and performance. And the moderating effect of leader-member exchange was significant only in the relationship between psychological well-being and knowledge-sharing behavior. This study contributes to the performance, knowledge management and positive psychology research fields, and suggests practical implications.

Keywords: psychological well-being, knowledge-sharing behavior, knowledge-hiding behavior, knowledge-manipulating behavior, job performance, leader-member exchange

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Cristinel Vasiliu, Bucharest Academy of Economic Studies, Romania
Gabriela Topa, National University of Distance Education (UNED), Spain

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

Received: *28 May 2020*
Accepted: *09 April 2021*
Published: *11 May 2021*

Citation:
Kim CY (2021) Psychological Well-Being, Knowledge Management Behavior and Performance: The Moderating Role of Leader-Member Exchange. Front. Psychol. 12:566516. doi: 10.3389/fpsyg.2021.566516

INTRODUCTION

Since the early Hawthorne studies in business literature, the causes of high productivity and the performance of happy employees have been widely known (Roethlisberger and Dickson, 1939). The happier the members, the more they dedicate themselves to their task, produce creative ideas, and participate in organizational citizenship behaviors. Traditionally, this causal relationship has been accepted because of the mutually beneficial relationship in which a person exchanges favor with favor (Eagly and Chaiken, 1993; Jena et al., 2018). However, this causal relationship, unlike the direction the theory points out, has not been demonstrated. Until the 1950s, the relationship was not proven in empirical analysis (Brayfield and Crockett, 1955), and until the 1990s empirical

analyses of the significance of the relationship were mixed (Shore and Martin, 1989; Keaveney and Nelson, 1993). There are two reasons why this relationship is difficult to demonstrate despite the seemingly clear theoretical direction. First, the definition of happiness varies by study. Happiness has been defined as satisfaction with an organization or job, a positive emotion, or mental health. Because the concept of happiness is so wide and each scholar uses different definitions and measures, the study direction varies according to the research and the empirical results differ. Second, because happiness is the overall psychological state of the members, it is conceptually distant from the performance that results from behavior. Various behavioral and situational factors, including leadership, are involved in job performance, and the causal relationship between happiness and performance is distorted in this process. Therefore, this paper aims to investigate the process concerning member happiness and performance by using psychological well-being concepts to define happiness, identifying processes that lead to performance, and analyzing the impact of leadership.

Knowledge is a key resource for the performance of individuals and organizations (Lin, 2007), essential for generating new information, correcting errors, analyzing tasks, and creating value (Ohlsson, 2011). It is also a key element in innovation, which is essential for organizations in modern society (Lin, 2007). Unlike other material resources for organizational performance, knowledge does not diminish in the process of sharing with others; rather, the possibility of new knowledge being created and receiving knowledge from others increases. From an organizational perspective, knowledge-sharing is an act of expanding the resources of the entire organization and is a major way of improving organizational performance (Darroch, 2005). Moreover, in the current business environment where digitization, homework, and online activities are increasingly spreading, the importance of knowledge sharing among employees is increasing (Chumg et al., 2015; Ordieres-Meré et al., 2020). However, from each member's point of view knowledge-sharing is not an absolute good. Rather, it is a dilemma. A knowledgeable individual is highly-valued as a human resource and receives greater rewards. Sharing knowledge is the act of giving up one's exclusive position in that unique knowledge area. Thus, an organization member has an incentive to hide knowledge without sharing it. The motivations to share or hide knowledge are often studied as a conflict between individual interests and group interests (Kimmerle et al., 2011). Members who dedicate themselves to the organization and internalize the goals of the organization are active in knowledge-sharing, whereas members who strive to preserve position or status will hide their knowledge and seek profits from knowledge-exchange by overstating their knowledge and underestimating others' knowledge.

Which members of the organization are more actively sharing knowledge without hiding or manipulating it? Despite existing studies of knowledge management behavior, there is a research gap on the factors that solve this knowledge sharing dilemma. This study was conducted with the aim of solving the knowledge sharing dilemma in two psychological aspects. First, the higher the psychological well-being, the easier it will be to overcome the dilemma. Second, the higher the quality of the exchange relationship with the leader, the more actively participate in the exchange relationship and more easily overcome the dilemma. In other words, this paper aims to confirm that employees with high psychological well-being and leader-member exchange are more active in sharing knowledge and will eventually achieve higher performance.

THEORY AND HYPOTHESIS

Knowledge-Management Behavior

Knowledge is essential to organizational competitiveness and growth (Grant, 2002). It is a key resource for value-added processes and a major catalyst for innovation. The organization seeks to hire and acquire members as important human resources for acquiring knowledge, and knowledgeable individuals are managed as major human resources in the organization and enjoy relatively high status and rewards (Brown and Duguid, 1991). The knowledge formed by the individual members is propagated in the organization through knowledge-sharing behaviors, and the knowledge that is sufficiently shared remains in the organization and becomes social capital (organizational knowledge). According to previous research, organizations with rich knowledge can reduce production costs, develop new products quickly, have high innovative capabilities, and generate high-quality products and services (e.g., Cummings, 2004; Collins and Smith, 2006). Therefore, organizations seek to promote knowledge-sharing behavior in several ways.

Contrary to the wishes of the organization, however, its members have two different motives for distributing their knowledge and employ three behavioral strategies according to each combination. The first motivation is to actively distribute knowledge. This motivation is expressed based on two rewards. The knowledge provided to others is directly returned to respect and recognition and indirectly rewarded with valuable knowledge. By sharing knowledge externally, they reveal their knowledge to the organization, receive verification of value, and receive monetary compensation, promotion, and expansion of authority. If this incentive is strong, members become active in knowledge-sharing behavior. Accordingly, knowledge-sharing behaviors are defined as the provision of work information or know-how to help others (Wang and Noe, 2010).

The second motivation is the desire to reject knowledge circulation and monopolize knowledge. Knowledge is a valuable intangible resource that contributes to the effectiveness of an individual or organization and contributes to creating new knowledge. If competitors have access to the knowledge of an organization, the scarcity of knowledge decreases and undermines the organization's relative position by promoting the performance of its competitors. If a particular member monopolizes certain knowledge, others must obtain permission from him or her to gain access to the knowledge (Wang et al., 2019). The more valuable the knowledge, the more valuable that member's status will be. Knowledge-hiding behavior is thus defined as the exclusive use of knowledge requested by others (Connelly et al., 2012). Members with strong first motivations

will actively engage in knowledge-sharing behavior, and members with strong second motivations will engage in knowledge-hiding behavior. These two motivations may occur simultaneously based on the circumstances. A one-sided deal cannot occur. Members must share their knowledge for others to receive it. Consequently, members have an incentive to overestimate the validity of their knowledge and to underestimate the importance of others' knowledge to promote profit in the transaction–they balance the incentive to share knowledge with the incentive to monopolize it through the benefit of knowledge transactions. This is defined as knowledge-manipulation behavior (Bettis-Outland, 1999), one of three types of knowledge-management behaviors, the others being knowledge-sharing and knowledge-hiding (Rhee and Choi, 2017).

The two motivations that cause the three knowledge-management behaviors vary by context. First, the culture, institutions, and atmosphere of the organization affect the two motives. Trust in members was studied to mitigate the adverse effects of knowledge-sharing and increase the frequency of communication, thus boosting motivation for sharing knowledge (Kankanhalli et al., 2005). Organizations with a knowledge-management system remove the physical barriers to facilitating knowledge-sharing (Chiu et al., 2006; Collins and Smith, 2006). Members in an atmosphere that rewards or actively encourages knowledge-sharing are also motivated to share knowledge (Bock et al., 2005), and knowledge-sharing is active in organizations with a learning culture (Taylor and Wright, 2004). If an organization does not have a compensation system for knowledge, it will stimulate motivation for monopoly knowledge (Yao et al., 2007). Conversely, the use of knowledge-management systems is stimulated in organizations with monetary rewards such as promotions and salary increases (Kankanhalli et al., 2005). In Korean corporate samples, collective pay systems stimulate knowledge-sharing (Kim and Lee, 2006). However, research results are mixed regarding monetary compensation. Several studies suggest that external rewards, such as monetary rewards, weaken intrinsic motivations and promote knowledge-hiding: intrinsic motivation is more important in knowledge-sharing behavior (Bock and Kim, 2002; Kwok and Gao, 2005). In addition to these organizational and external factors, factors within individuals also affect the two knowledge-management motivations. The exchange ideology affects the exchange of knowledge (Lin, 2007). Among personality factors, the more openness to experience, the greater the knowledge-sharing motivation (Cabrera et al., 2006). The more a member is familiar with information technology (IT), the more actively he or she uses the knowledge-management system (Jarvenpaa and Staples, 2000). The more educated and knowledgeable the members, the more they pursue growth through knowledge exchange (Constant et al., 1994).

Psychological Well-Being, Knowledge-Management Behaviors, and Performance

The psychological well-being of organizational members is a field of happiness research that has been studied for thousands of years since Aristotle–at a macroscopic level–and a central theme of psychological research of members in business administration since the Hawthorne study–at a microscopic level. The definition of psychological well-being differs slightly among scholars.

This study deals with the evaluation of the members themselves in organizational situations and the resulting behavioral changes, thus realizing and completing each member's potential in job situations base on the definition of Ryff (1989), which is widely accepted in this respect. Psychological well-being is high for those who learn and identify new ways of solving problems in the process of achieving their goals, performing their jobs successfully, and solving problems. First, members with high psychological well-being have a strong belief in themselves. Through self-efficacy, they enjoy challenges, are engaged in work, and strive to reach goals (Bandura, 1997; Garg and Rastogi, 2009). Because they recognize themselves as members of the organization and feel happy, they internalize the organization's goals more easily. They align their goals with the organization's goals and share their knowledge for organizational success. Because of their high self-evaluation and not judging themselves by others, their motivation to overestimate and manipulate their information to gain profits in knowledge-sharing is weak.

Second, members with high psychological well-being are optimistic about the consequences of knowledge-sharing. The relationship between cost and reward in social exchange is the most widely-studied topic in social exchange relations, including knowledge-sharing (Wang and Noe, 2010). People with high psychological well-being are optimistic about the exchange. A strong optimist perceives the outcome of events in a positive direction and reduces the impact of negative events. They set higher goals with higher quality norms of reciprocity, quickly eliminating frustration (Luthans et al., 2004). Therefore, they consider the rewards of knowledge-sharing valuable and the cost small, and they have a strong motivation to reward knowledge-sharing from others. They will actively participate in knowledge-sharing and will not hide or manipulate knowledge.

Hypothesis 1. Psychological well-being and knowledge-sharing behaviors are positively related.

Hypothesis 2. Psychological well-being and knowledge-hiding behaviors are negatively related.

Hypothesis 3. Psychological well-being and knowledge-manipulating behaviors are negatively related.

Members who actively use their knowledge for the goals of the organization are likely to perform well. From an intrinsic perspective, they have a positive evaluation of themselves and identify resources to dedicate themselves toward reaching their goals. Instead of hiding or manipulating knowledge, they actively use their knowledge without considering others. Knowledge-sharing stimulates peer knowledge-sharing, increases the total amount of knowledge across the organization, and contributes to organizational performance (Collins and Smith, 2006). Members participating in knowledge-sharing behavior are likely to receive valuable knowledge from their peers. According to the signaling effect, exposing knowledge also increases evaluation and status in the organization and thus increases the likelihood of receiving necessary resources (Cropanzano and Mitchell, 2005). Increasing organizational knowledge, in turn, leads to an increase in

personal knowledge, and tacit knowledge is revealed and clarified. Consequently, performance increases.

Conversely, knowledge-hiding behavior makes it difficult for members to reveal their knowledge or encourage others or leaders to devalue the knowledge. Their status in the organization is lowered and, in particular, separated from the knowledge-sharing network (Rhee and Choi, 2017). Knowledge is not distributed in social exchange relationships with colleagues, which makes it difficult to acquire the resources necessary for a member to increase performance. Inherently, they have a "free ride" in organizational knowledge, which lowers their self-evaluation and makes them feel unfair in their relationships with others. Consequently, performance decreases.

Knowledge manipulation behaviors are strategic actions to share knowledge while seeking benefits in the process. Members who engage in these behaviors exaggerate their knowledge, underestimate the risks, and emphasize the benefits. They cannot dedicate themselves to the process and are less likely to contribute to the goals of the organization. The distortion of knowledge they cause inevitably leads to degradation of performance.

Hypothesis 4. Knowledge-sharing behavior and performance are positively related.
Hypothesis 5. Knowledge-hiding behavior and performance are negatively related.
Hypothesis 6. Knowledge-manipulating behavior and performance are negatively related.
Hypothesis 7. The relationship between psychological well-being and performance is mediated by (a) knowledge-sharing behavior, (b) knowledge-hiding behavior, and (c) knowledge-manipulating behavior.

The Moderating Effect of Leader-Member Exchange

The leader is the symbol of the organization and the source of resources (Yukl, 1989). Organizational leadership has a direct impact on the knowledge-sharing motivation of members. The higher management evaluates the knowledge, the greater the knowledge-sharing among the members (Lee et al., 2006). Perceived organizational support and empowering leadership increase the effectiveness of knowledge-sharing (Cabrera et al., 2006; Srivastava et al., 2006). Transformational leadership encourages members to dedicate themselves to the organization, internalize organizational goals, and share knowledge for their own growth (Bryant, 2003). Therefore, the relationship with the leader is an important situational factor in the behavior of members.

Leader-member exchange (LMX) is part of social exchange theory (Blau, 1964). Leaders do not form a homogeneous exchange relationship with their members. They form a reciprocal exchange relationship by in-grouping some of the members, and some of the members are out-grouped to create an unequal exchange relationship (Dansereau et al., 1975). Members form their own standards of behavior according to the quality of this exchange relationship. Members with high LMX form a reciprocal exchange relationship with the leader. They communicate frequently with leaders and receive resources. Consequently, satisfaction increases for both leaders and subordinates (Liden and Graen, 1980). Members are actively immersed in the organization based on their trust in the leader. If members with high psychological well-being have a high quality of relationships with their leaders, they are optimistic about the outcome of the exchange and confident that they will be highly regarded by the organization through knowledge-sharing. They think the leader will acknowledge their contribution, and they take more risks in the exchange relationship based on a belief in their leader. They also regard knowledge-hiding and knowledge-manipulating behaviors as betrayals of the leader, making an effort to reduce these actions. Even though they have low psychological well-being, they can actively participate in knowledge-sharing behavior based on their trusting relationships with leaders. However, members with low LMX tend to do the opposite. Members who think they are an outsider finds it difficult to take the risk of sharing knowledge, even if their psychological well-being is high. Because they are not satisfied with their exchange relationship with the leader, it is difficult to engage in knowledge-exchange relationships in the organization. They seek to protect themselves by hiding their knowledge, or they exaggerate and seek the benefit of the knowledge-exchange process, rather than risk lowering their position by exposing their knowledge.

Hypothesis 8a. The relationship between psychological well-being and knowledge-sharing behavior, are moderated by LMX. such that the relationship is stronger when LMX is high rather than low.
Hypothesis 8b. The relationship between psychological well-being and knowledge-hiding behavior, are moderated by LMX. such that the relationship is weaker when LMX is high rather than low.
Hypothesis 8c. The relationship between psychological well-being and knowledge-manipulating behavior are moderated by LMX. such that the relationship is weaker when LMX is high rather than low.

MATERIALS AND METHODS

Data Collection and Study Subjects

Data for the empirical analysis was collected through a pencil-and-paper survey from organizations in South Korea. Twelve companies from financial, manufacturing, distribution, IT, construction, and public institutions participated in the study to secure the generalizability and external viability of results without being biased to specific industries. Participants were informed that a researcher at Seoul National University would conduct research on working conditions and employee happiness. To reduce common method variance. I distributed surveys to 450 leader–member dyads at two points in time. At Time 1 members rated their psychological well-being, perceived LMX, and demographic data. At Time 2 (1 month later) members rated their knowledge management behaviors, and leaders rated subordinates' in-role performance. All participants were assigned random numbers to match the first and second set

of questionnaires with the answers of the leaders and members. The questionnaires were distributed to leader-member dyads. 382 copies were received from the first questionnaire and 366 from the second questionnaire. After matching the questionnaires, the remaining 333 samples were used for hypothesis testing: 70.3% are male and 29.7% female, 72.1% are married, 51.7% are college graduates, and 40.2% work in R&D jobs.

Measures

All measures were translated into Korean by two organizational behavior professors. A seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used to assess all measures.

Psychological Well-Being

Psychological well-being, an independent variable, was measured using the 18-item scale proposed by Ryff and Keyes (1995). One example includes "For me, life has been a continuous process of learning, changing, and growth." It was collected in the first survey in the form of a self-report. The reliability (Cronbach's α) was 0.85. This measure was previously used in Joo et al. (2016), and the reliability was 0.91.

Job Performance

Job performance, a dependent variable, was measured using the seven-item job performance measuring tool proposed by Williams and Anderson (1991) and used in Bernerth et al. (2012, α = 0.87). In the second survey, the supervisor responded about the subordinate. Examples include "He/She adequately completes assigned duties" and "He/she engages in activities that will directly affect his/her performance evaluation." The Cronbach's α was 0.91.

Knowledge-Sharing Behavior

All three knowledge-management behaviors were measured using the four-item scales proposed by and used in Rhee and Choi (2017). The reliability of knowledge-sharing behavior in that study was 0.81. Knowledge-sharing behavior was answered by subordinates in the second survey. Examples include "I looked into the request to make sure my answers were accurate" and, "I told my coworker exactly what he/she needed to know." The Cronbach's α was 0.91.

Knowledge-Hiding Behavior

Knowledge-hiding behavior was measured by subordinates responding to the second survey. Examples include "I pretended that I did not know the information" and, "I said that I did not know even though I did." The Cronbach's α was 0.88, slightly higher than the previous study's 0.86 (Rhee and Choi, 2017).

Knowledge-Manipulating Behavior

Knowledge-manipulating behavior was measured by subordinates responding to the second survey. Examples include "I padded my knowledge to make it greater than it actually is" and "I omitted potential problems inherited from my knowledge." The Cronbach's α was 0.81, which was the same as the previous study (Rhee and Choi, 2017).

Leader-Member Exchange

Leader-member exchange, which is a moderating variable, was measured in the first questionnaire by subordinates responding using the seven-item LMX scale proposed by Graen and Uhl-Bien (1995) and used in Chaurasia and Shukla (2013, α = 0.85). Examples include "How well does your leader understand your job problems and needs?" and "Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?." The Cronbach's α was 0.78.

Data Analysis

Using R 3.5.2 software, I tested hypotheses 1 through six using multiple regression analysis. I controlled for gender and age for all models at step 1 and entered the main effect at step 2. The main effect should explain a significant amount of the variance of the dependent variable for supporting hypotheses. And I tested mediation hypothesis 7 using PROCESS macro developed by Preacher and Hayes (2004). The 95% bias-corrected confidence interval should not be containing zero for supporting hypothesis. Lastly, I tested the moderation hypothesis 8 using multiple regression analysis. For supporting the moderation effect, the interaction term between psychological well-being and LMX should explain a statistically significant amount of the variance of the dependent variable. In addition, the effect size of psychological well-being should increase as LMX increases in a sensitivity analysis.

RESULTS

To verify the discriminant validity of the translated measures, the factor structures of each variable measured at the individual level were checked through confirmatory factor analysis (CFA). The hypothesized six-factor model yielded an acceptable fit to the data (χ^2 = 1,344.72, $p < 0.01$, comparative fit index = 0.92, Tucker-Lewis index = 0.93, root mean square error of approximation = 0.054, Hu and Bentler, 1999).

Hypothesis Testing

Table 1 reports the means, standard deviations, and correlations for all variables. Reliability is high, at greater than.78 for all variables. The correlation between knowledge-sharing and knowledge-hiding behavior is −0.24. The relationship between LMX and performance is significant. As a result of correlation analysis, most variables have the same direction as the hypotheses.

A hierarchical regression analysis was performed for testing hypothesis. Gender and age were controlled for all models. The analysis results of the three knowledge-management behaviors (knowledge-sharing, knowledge-hiding, and knowledge-manipulating) are displayed in **Table 2**.

The regression coefficient of psychological well-being is positive on knowledge-sharing behavior (Model 2, $b = 0.64$, $p < 0.01$) and negative on knowledge-hiding behavior (Model 4, $b = -0.44$, $p < 0.01$) and knowledge-manipulating behavior (Model 6, $b = -0.47$, $p < 0.01$). In the three models, the

regression coefficients for psychological well-being are statistically significant, supporting hypotheses 1, 2, and 3. The analysis results of the three knowledge-management behaviors (knowledge-sharing, knowledge-hiding, and knowledge-manipulating) on job performance are displayed in **Table 3**.

The results show that knowledge-sharing behavior (Model 8, $b = 0.44$, $p < 0.01$) is significantly positive and knowledge-hiding behavior (Model 9, $b = -0.14$, $p < 0.05$) and knowledge-manipulating behavior (Model 10, $b = -0.27$, $p < 0.01$) are significantly negative on job performance. Hypothesis 4, 5, and 6 is supported.

TABLE 1 | Means, standard deviations, and correlations for all variables.

	Variables	Mean	SD	1	2	3	4	5	6	7	8
1	Gender	0.28	0.45	1.00							
2	Age	37.21	6.78	−0.19**	1.00						
3	PWB	4.31	0.72	−0.07	0.03	(0.85)					
4	KSB	4.84	1.18	−0.14**	−0.06	0.40**	(0.91)				
5	KHB	4.03	1.06	0.04	0.00	−0.30**	−0.24**	(0.88)			
6	KMB	3.64	1.14	0.08	−0.01	−0.30**	−0.42**	0.47**	(0.81)		
7	Performance	4.60	1.16	−0.12*	−0.06	0.12*	0.46**	−0.13*	−0.27**	(0.80)	
8	LMX	4.59	1.06	−0.13*	−0.04	−0.14*	0.13*	0.18**	0.00	0.40**	(0.78)

PWB, psychological well-being; KSB, knowledge sharing behavior; KHB, knowledge hiding behavior; KMB, knowledge manipulating behavior; LMX, leader-member exchange.
**p < 0.05; **p < 0.01.*

TABLE 2 | Results of hierarchical linear regression analysis for hypothesis 1, 2, and 3.

Variables	Knowledge sharing behavior				Knowledge hiding behavior				Knowledge manipulating behavior			
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	b	s.e.	*b*	s.e.	*b*	s.e.	*b*	s.e.	*b*	s.e.	*b*	s.e.
Constant	5.56**	0.37	2.82**	0.49	3.95**	0.34	5.83**	0.46	3.59**	0.37	5.61**	0.50
Gender	−0.41**	0.15	−0.34*	0.13	0.09	0.13	0.04	0.13	0.20	0.14	0.15	0.14
Age	−0.02	0.01	−0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PWB			0.64**	0.08			−0.44**	0.08			−0.47**	0.08
R^2	0.03		0.18		0.01		0.09		0.01		0.09	
$\triangle R^2$			0.15				0.08				0.08	
Adj. R^2	0.02		0.17		0.01		0.08		0.01		0.09	
F-value	4.70*		23.80**		0.25		10.85**		1.01		11.35**	

*PWB, psychological well-being. n = 333; *p < 0.05; **p < 0.01.*

TABLE 3 | Results of hierarchical linear regression analysis for hypothesis 4, 5, and 6.

Variables	Job performance							
	Model 7		Model 8		Model 9		Model 10	
	b	s.e.	*b*	s.e.	*b*	s.e.	*b*	s.e.
Constant	5.26**	0.37	2.84**	0.43	5.82**	0.43	6.23**	0.40
Gender	−0.36*	0.14	−0.18	0.13	−0.35*	0.14	−0.31*	0.14
Age	−0.02	0.01	−0.01	0.01	−0.02	0.01	−0.02	0.01
Knowledge Sharing Behavior			0.44**	0.05				
Knowledge Hiding Behavior					−0.14*	0.06		
Knowledge Manipulating Behavior							−0.27**	0.05
R^2	0.02		0.21		0.04		0.09	
$\triangle R^2$			0.19		0.02		0.07	
Adj. R^2	0.02		0.21		0.03		0.09	
F-value	3.79*		29.90**		4.48**		11.22**	

*n = 333; *p < 0.05; **p < 0.01.*

To verify the mediation effects of the three knowledge-management behaviors (knowledge-sharing, knowledge-hiding, and knowledge-manipulating), the indirect effects were analyzed by creating a multi-mediation model with three behaviors simultaneously. The results are presented in **Table 4**.

From the bootstrapping analysis, only indirect effects through knowledge-sharing behavior are significant in the multi-mediation model, and the path through the knowledge-hiding or knowledge manager is not significant. Thus, hypothesis 7 is partially supported. The results of the moderating effect analysis are presented in **Tables 5**, **6**.

Although the regression coefficients of the interaction term between psychological well-being and LMX is significant for knowledge-sharing behavior (Model 12, $b = 0.22$, $p < 0.01$), regression coefficients of the knowledge-hiding and knowledge-manipulating behaviors are not statistically significant.

The effect size of psychological well-being on knowledge-sharing when the LMX relationship is low is 0.526 and increases to 0.761 and 0.997 as the LMX relationship increases. Thus, hypothesis 8a is supported. Hypotheses 8b and 8c, which have insignificant regression coefficients, are rejected.

DISCUSSION

This study classified knowledge-management behavior into three actions: knowledge-sharing, knowledge-hiding, and knowledge-manipulating. This study hypothesized a change in performance based on psychological well-being through these knowledge-management behaviors. The LMX relationship was regarded as a situational factor. From the empirical analysis, the direct effects of psychological well-being on knowledge-sharing, knowledge-hiding, and knowledge-manipulating behavior are all significant, and all of these behaviors are related to performance. The multi-mediation bootstrapping analysis, which confirmed the mechanism for the relationship between psychological well-being and performance, found that knowledge-sharing is the most important route because its path is the only significant path. In previous studies, the mediating effect of knowledge management behavior has been discussed, but the difference between the three types of knowledge management behavior has not been studied (e.g., Rhee and Choi, 2017). The results of this study show differences in the relative importance of knowledge management behaviors. The moderating effect of LMX is significant only for the relationship between psychological well-being and knowledge-sharing behavior. The role of LMX as the primary route for knowledge-sharing behavior is supported. This is consistent with previous studies that LMX acts as an important context variable in the relationship between knowledge donating and knowledge collecting (Dysvik et al., 2015).

TABLE 4 | The bootstrapping results of mediation.

Predictor: psychological well-being **Outcome: job performance**			**Bias corrected bootstrap 95% confidence interval**	
Mediator:	**Indirect effect**	**Boot SE**	**Lower**	**Upper**
Knowledge sharing behavior	0.233	0.047	0.169	0.389
Knowledge hiding behavior	−0.001	0.029	−0.063	0.056
Knowledge manipulating behavior	0.055	0.034	−0.004	0.131

Bootstrapping based on n = 20,000 subsamples.

Contributions and Implications

This paper has several academic contributions. First, the relationship between psychological well-being and performance was less supported by empirical analysis than by theory (Carolan et al., 2017). This paper identifies the causal relationship between the two concepts through three types of knowledge-management behaviors. The knowledge-sharing, hiding, and manipulating behaviors are determined by the degree of psychological well-being, and these behaviors determine job performance. This paper also identifies which path is more important between the three behaviors through multi-mediation analysis. The results find that knowledge-sharing behavior better explains the relationship between psychological well-being and performance than the other two behaviors. This contributes to the research fields of psychological well-being and performance.

Second, although extensive research on the antecedents of knowledge-management has been conducted, there is a lack of research on the effects of psychological well-being on all categories of knowledge-management (Chumg et al., 2015). Psychological well-being is a manifestation of one's strengths and a direct assessment of growth, directly affecting the attitudes and behaviors of members. Knowledge-sharing is a voluntary contribution to knowledge exchange in which psychological well-being must be taken into account because it greatly affects the internal motivation of members. This study contributes to the field of knowledge management by identifying the effects of psychological well-being on three dimensions of knowledge-management behavior.

Third, this paper contributes to the field of leadership research by identifying the impact of LMX as a contextual factor. Leaders should motivate subordinates to share knowledge. This study examined the influence of LMX to identify how different manifestations of leadership affect knowledge-management behavior. From the analysis, the better the relationship with the leader, the greater the participation in knowledge-sharing and the better the outcome. Therefore, if an organization strives to improve the performance of individuals through active knowledge-sharing and the performance of the organization, it is necessary to improve the quality of exchange relationships with members.

This paper has several practical implications. First, the dilemma of the knowledge-sharing situation experienced by the members of the organization was identified. Existing knowledge-management systems attempt to promote knowledge-sharing by providing intrinsic and extrinsic rewards. This paper finds that knowledge-sharing is not simply an action caused by

TABLE 5 | Results of moderating analysis for hypothesis 8.

Variables	Knowledge sharing behavior				Knowledge hiding behavior				Knowledge manipulating behavior			
	Model 11		Model 12		Model 13		Model 14		Model 15		Model 16	
	b	s.e.	*b*	s.e.	*B*	s.e.	*b*	s.e.	*b*	s.e.	*B*	s.e.
Constant	1.69**	0.59	5.96**	1.47	4.97**	0.56	7.06**	1.41	5.84**	0.61	5.76**	1.54
Gender	−0.27*	0.13	−0.25	0.13	0.09	0.13	0.10	0.13	0.13	0.14	0.13	0.14
Age	−0.02	0.01	−0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PWB	0.68**	0.08	−0.26	0.31	−0.41**	0.08	−0.86**	0.29	−0.48**	0.08	−0.46	0.32
LMX	0.19**	0.06	−0.84*	0.33	0.14**	0.05	−0.36	0.31	−0.04	0.06	−0.02	0.34
PWB*LMX			0.22**	0.07			0.11	0.07			−0.01	0.07
R^2	0.21		0.23		0.11		0.12		0.10		0.10	
$\triangle R^2$			0.02				0.01				0.00	
Adj. R^2	0.17		0.24		0.10		0.11		0.08		0.08	
F-value	21.22**		19.47**		10.12**		8.65**		8.61**		6.87**	

*PWB, psychological well-being; LMX, leader-member exchange. n = 333; *p < 0.05; **p < 0.01.*

the amount of a reward. Instead, knowledge-sharing is a conflict between the motive for expressing one's ability by sharing and seeking recognition and compensation, and the desire to maintain exclusive rights by hiding and monopolizing knowledge to increase bargaining power and status. This paper has the same direction as the academic attempt to interpret knowledge sharing using game theory (Kong et al., 2020). Therefore, knowledge-management systems should be improved not only by providing compensation but also by eliminating the risk of sharing knowledge and securing the right to own knowledge. This is consistent with previous studies of knowledge ownership.

Second, this paper identified the process of the virtuous circle relationship between the happiness and performance of the members of the organization. According to the theory of positive organizational behavior, the happiness of members is the goal of organizations, but the continuous growth of the organization is essential to accomplish this. Knowledge-management is essential to organizational sustainability. This paper suggests a virtuous cycle between sustainable management and promoting the happiness of members by linking happiness-management to knowledge-management.

TABLE 6 | Sensitivity analysis of results on the moderating effect of the leader-member exchange.

Predictor: psychological well-being Outcome: knowledge sharing behavior					Bias corrected bootstrap 95% confidence interval	
Moderater	**Effect size**	**SE**	***T***	***p***	**Lower**	**Upper**
Low LMX	0.526	0.094	5.62	<0.01	0.341	0.710
Mid LMX	0.761	0.085	8.98	<0.01	0.594	0.928
High LMX	0.997	0.129	7.73	<0.01	0.743	1.25

LMX, leader-member exchange. Bootstrapping based on n = 20,000 subsamples.

Third, LMX is the quality of exchange between leaders and members. As a result of this paper, if LMX plays a major role in knowledge sharing, it could play a big role not only in sharing knowledge among members but also in sharing knowledge between leaders and members. Knowledge sharing is possible in vertical as well as horizontal. Therefore, leadership training should be conducted with the core of the exchange relationship with the members (Dysvik et al., 2015).

Limitations and Future Research

Despite these implications, this study has several limitations. First, various factors that could affect the relationship between psychological well-being and performance through knowledge-management behavior were not included in the research model. As explained earlier in the literature review, various factors influence knowledge-management behaviors, such as organizational culture or atmosphere, industry, policy, type of job, the existence of knowledge-management systems, and personality (Mustika et al., 2019). To analyze the relationship between psychological well-being, knowledge-management activities, and performance, the effects of these factors should be included or controlled. Second, this study's context was Korean organizations and reflected the characteristics of Korean organizations. Korean organizations are collectivistic, and their members have relatively rigid relationships with leaders. The tendency to express psychological well-being outwardly is also conservative. In a culture where emotions are free to be expressed, the causality of the results of this study may be stronger. In the future, cross-validation should be carried out for multiple cultures. Third, this study tried to eliminate the common method bias by separating measurement time points and measuring performance from leaders, but psychological well-being and knowledge-management behaviors are self-reported and are not free from bias. If possible, future studies should use a comparison with indicators measured from peers or supervisors.

CONCLUSION

The study findings contribute to the existing theory on organizational psychology, knowledge management, and leadership. The relationships between psychological well-being and three-types of knowledge management behavior were examined and the moderation effect of LMX on the relationship was verified. Also, knowledge management behavior-performance relationship was tested. The research findings imply that psychological well-being has a positive effect on the knowledge-sharing behavior, and negative effects on the knowledge hiding and manipulating behaviors. LMX enhances this positive effect. Also, knowledge-sharing behavior has a positive impact on individual performance while knowledge-hiding and manipulating behavior have a negative impact. Knowledge-sharing behavior significantly mediated the relationship between psychological well-being and performance. Psychological well-being has been empirically confirmed as the solution to the knowledge sharing dilemma. This study findings also suggested that LMX is an essential factor of solving knowledge sharing dilemmas. This study contributes to the field of positive psychology and presents empirical evidence that can be used to develop leadership and knowledge sharing motive.

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 Seoul National University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

CK conceived, designed, and awarded the grant for the study. CK analyzed the data and wrote and discussed the manuscript.

FUNDING

This work was supported by 2019 Research Fund of Myongji University.

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Conflict of Interest: The author declares 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: 08 November 2021
doi: 10.3389/fpsyg.2021.539582

When Work Conflicts With Personal Projects: The Association of Work-Life Conflict With Worker Wellbeing and the Mediating Role of Mindfulness

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The negative emotional and health effects of work-life conflict (WLC) have been demonstrated in numerous studies regarding organizational psychology and occupational health. However, little is known about WLC's relationship with positive wellbeing outcomes, including emotional, psychological, and social aspects of workers' thriving. Furthermore, the mediating processes underlying the effects of WLC remain mostly unknown. The current study investigated the associations of perceived time- and strain-based WLC with positive mental health and thriving at work, as well as the mediating role of mindfulness in these associations. It is argued that WLC causes reduced mindfulness capacities among workers, which is in turn associated with lower positive wellbeing given the importance of mindfulness in emotion regulation. A sample of 330 workers based in Québec, Canada, completed an online survey including a measure of strain- and time-based interference with personal projects (i.e., the goals and activities that define the daily life of an individual) and validated scales of wellbeing outcomes and mindfulness. Results of structural equation modeling revealed negative associations between time- and strain-based WLC with positive mental health and thriving at work. Work-life conflict was related to lower mindfulness, which played a mediating role in the associations between time-based WLC with positive mental health and thriving at work, as well as strain-based WLC with positive mental health. The mediation was complete for the time-based WLC and positive mental health association, but partial for the other mediated pathways, highlighting the need for more research to identify additional mediators. These results highlight that beyond resulting in negative emotional/health outcomes often studied in previous research, WLC may be associated with workers' reduced potential to live a fulfilling life, in general and in the workplace. Recommendations (e.g., mindfulness intervention to promote emotional regulation, personal project intervention) for workplace policymakers and practitioners are identified.

Keywords: work-life conflict, workplace, mental health, personal projects, mindfulness

OPEN ACCESS

Edited by:
María del Carmen Pérez-Fuentes, University of Almería, Spain

Reviewed by:
Ying Ma, Shaanxi Normal University, China
Yvonne Heerkens, HAN University of Applied Sciences, Netherlands

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

Received: *01 March 2020*
Accepted: *01 October 2021*
Published: *08 November 2021*

Citation:
Pacheco T, Coulombe S and Meunier S (2021) When Work Conflicts With Personal Projects: The Association of Work-Life Conflict With Worker Wellbeing and the Mediating Role of Mindfulness. Front. Psychol. 12:539582. doi: 10.3389/fpsyg.2021.539582

INTRODUCTION

In 2016, 47% of working Canadians considered their work to be the most stressful part of daily life (Canadian Centre for Occupational Health and Safety, 2016). Canadian workers also reported work-related stress as the primary cause of their mental health concerns (Shepell and Mental Health Commission of Canada, 2018). Approximately 500,000 Canadian workers take sick leave from work within a given week (Centre for Addiction and Mental Health, n.d.). In European countries, work-life conflict (WLC) has been shown to have maladaptive effects on both mental and physical health (Borgmann et al., 2019). Evidence from German and Austrian samples, for example, have supported the relationship between WLC and mental health concerns, such as depression (Haggag and Geser, 2012; du Prel and Peter, 2015). Of the stressors that can cause mental health concerns, researchers have found that forms of WLC (e.g., time- and strain-based conflicts) negatively affect workers' emotional wellbeing and health (Haar et al., 2014). However, more research is needed to understand the psychological processes explaining how WLC influences wellbeing. By identifying these processes, interventions to counteract these processes can be developed and implemented in order to support workers' wellbeing. This research explores the association between WLC and workers' positive mental health (including positive emotions) and workplace wellbeing in Québec, Canada, as well as the mediating role of mindfulness in that relationship.

Work-Personal Project Conflict and Workers' Wellbeing

The relationship between work and personal life is generally viewed from two different perspectives, the first being the conflict that workers experience between various work and life demands (Barnett, 1998; Reynolds, 2005) and the second being their ability to balance these demands, thus achieving a higher degree of wellbeing (Reynolds, 2005). In the present article, a work-life conflict perspective is used given that the larger study in which this article is nested included a measure of that construct.

Work-life conflict is characterized by the conflicting roles required by the organization someone is employed by and their own family or personal life (Aslam et al., 2011). Work-life conflict includes two important dimensions, strain- and time-based conflict. As described by Greenhaus and Beutell (1985), time-based conflict refers to the multiple roles that compete for a worker's time. In this dimension, time pressures that are associated with one's role (e.g., worker) may make it difficult to comply with the demands in other roles (e.g., parent, partner). Previous research has illustrated the connection of work-related time commitment with WLC, as work-family conflicts increase with working more in a given week (Pleck et al., 1980; Greenhaus and Beutell, 1985). Strain-based WLC refers to the fact that stressors in one domain (e.g., work) lead to negative emotions and physical strain (e.g., tension, anxiety, depression, energy depletion), which reduces one's capacity to accomplish their roles in the other domains (e.g., personal life; Greenhaus and Beutell, 1985; Steiber, 2009; Kirby, 2017).

When examining conflict between work and personal life, a significant amount of research has focused specifically on work-family conflicts and how demands in the workplace can clash with the demands of family roles (e.g., parent, spouse; Kossek and Lee, 2017). However, exploring work-family conflicts may not always be the most appropriate, as some workers may be single or not have children (Keeney et al., 2013). In comparison to work-family conflict, WLC explores the tensions between work demands and the array of other roles in workers' lives, including family-related roles, but also roles in other areas such as friendship, self-care, education, and community participation (Kossek and Lee, 2017). Work-life conflict has been related to a greater likelihood of experiencing mental health concerns, even when considering the contributions of other established factors that are associated with impacting workers' wellbeing (i.e., job characteristics such as demands, control, and support; Neto et al., 2018). Scales used to measure work-life conflict usually include relatively generic items exploring the impacts of work demands on home activities, relationships with friends and family, and a vast array of other life domains outside of work (Keeney et al., 2013). While the findings gained with generic measures are insightful, in the current study, we argue for an idiosyncratic approach that considers the unique goals and interests that matter for each individual, i.e., their personal projects. Varying from one person to another, personal projects are the goals and activities that define the daily life of an individual (Little, 2014, 2017; Little and Coulombe, 2015). The sustainable pursuit of one's idiosyncratic personal projects has been shown to be associated with higher levels of sense of meaning and happiness (Little, 2014, 2017; Little and Coulombe, 2015). As such, interference of work with personal projects is likely to have an important toll on one's mental health. Although past research has suggested that an approach for measuring work-life conflict with a focus on personal projects may be useful (Grawitch et al., 2011), it has rarely been implemented, to our knowledge, in empirical studies. A study conducted by Wiese and Salmela-Aro (2008) explored interference between work goals and personal goals. However, the latter were focused on family-related personal goals specifically. Focusing on work interference with what really matters to a person (whether it is family-related or related to other important pursuits, e.g., leisure, self-development, community involvement) has the potential to provide a more nuanced and ecologically valid representation of how WLC affects worker wellbeing.

Wellbeing as More Than the Absence of Mental Health Concerns

Keyes and colleagues (Keyes, 2005; Provencher and Keyes, 2011) have discussed the complexity of mental health as a holistic construct. Their work suggests that complete mental health should be assessed on two dimensions that are only moderately correlated: the absence of mental health concerns (i.e., negative symptoms such as depression and anxiety),

and the presence of positive mental health, including positive emotions (e.g., satisfaction, interest), psychological functioning (e.g., purpose, autonomy), and social functioning (e.g., social integration, social contribution). In a study by Coulombe et al. (2016), and contrary to expectations, some people living with common mental health concerns displayed relatively high levels of positive wellbeing despite dealing with significant symptoms of anxiety or depression at the same time. This exemplifies a certain level of independence between the two dimensions of mental health, and the inability to determine one's level of positive wellbeing solely from measures evaluating negative wellbeing.

Based on these findings, it is evident that conclusions about the relationship between WLC and wellbeing should not be made just by exploring indicators related to negative aspects of wellbeing. Rather, a holistic perspective is crucial. Based on a recent review of the literature on WLC and its outcomes (Gisler et al., 2018), a diverse range of negative outcomes have been considered, such as burnout, anxiety, and depression, while the considered positive mental health indicators (i.e., positive emotions, job satisfaction) seem to be more limited.

Mindfulness and Its Potential Mediating Role

Summarizing the findings of their review on work-life conflict research, Kossek and Lee (2017) identified that while there is evidence on the antecedents and consequences of WLC, there is still a scarcity of research exploring mediators in this body of research. In the current research, we focus on mindfulness as a potential mediator of the effect of WLC on wellbeing outcomes.

Mindfulness refers to "the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145). As a personal disposition, it has been understood as a cognitive style that supports being aware of one's thoughts and emotions and actively engaging in "being" instead of "doing" (Kostanski and Hassed, 2008). In the current study, we consider mindfulness specifically in the workplace, representing the degree to which one is mindful specifically in their work setting(s) (Dane and Brummel, 2014). As expressed by Dane and Brummel (2014), this degree is considered to be tied to one's general mindfulness disposition in life, but it is also impacted by other factors, such as contextual elements of work that may "cue" mindfulness for some people.

While we focus our attention on mindfulness as a "state or quality of mind" (Lomas et al., 2017, p. 492), it is also important to note that the term mindfulness is also frequently used to refer to meditation practices or interventions intended to cultivate mindfulness skills, either in a formal therapeutic context or not (see also Glomb et al., 2011). Although the current study does not focus on a mindfulness intervention, findings from such studies are important to note given that they demonstrate that one's level of mindfulness may change. For example, interventions have been associated not only with increased experiences of state mindfulness, but also with positive changes in participants' mindfulness dispositions (Kiken et al., 2015; Tang, 2017). Interestingly, although mindfulness can be considered a trait (i.e., disposition) as in the current study, it has been highlighted to be more malleable than other individual differences (Xu et al., 2021). We will argue later that mindfulness levels at work could increase or decrease depending on one's levels of WLC.

Recent reviews of workplace- and organizational-focused research suggests that mindfulness is associated with positive outcomes for workers and organizations (Lomas et al., 2017; Passmore, 2019). A key process underlying the positive association of mindfulness with positive outcomes is the emotion regulation enhancement associated with higher mindfulness (Guendelman et al., 2017). A few studies have focused on mindfulness in relationship with WLC (or work-life balance); however, these studies explored mindfulness primarily as an intervention rather than a natural state or quality. Mindfulness-based training interventions (i.e., cognitive, emotional, behavioral) have been shown to be associated with improvement of work-family balance (Michel et al., 2014; Kiburz et al., 2017). In a study by Michel et al. (2014), 208 participants received training on exercises related to mindfulness-based cognitive therapy and mindfulness-based stress reduction. Findings indicate that the training positively affected WLC by alleviating their struggles with workplace-related negative cognitions and emotions, as well as energy depletion (Michel et al., 2014). Further, the effects of mindfulness on work-family conflict have been demonstrated by Kiburz et al. (2017) as workers who received mindfulness-based workshops showed a decrease in work-family conflict. These two studies explored the effectiveness of a mindfulness intervention on WLC. However, for the current study, we expand on this work by focusing on mindfulness at work as a cognitive skill that different workers exhibit to varying degrees, in their natural work environment, without an intervention (Dane and Brummel, 2014).

In the workplace context, mindfulness involves workers being conscious of the internal and external stimuli related to the efforts they deploy in their work (Dane and Brummel, 2014; Herda et al., 2019). There is formative research evidence suggesting that mindfulness could play a role in the relationships between WLC and workers' wellbeing outcomes. First, there is a substantial body of evidence supporting a positive association between levels of mindfulness and workers' positive outcomes, including higher work performance, work satisfaction, quality of life, and resilience. There is also an association with reduced anger, anxiety, depression, stress, and burnout (see reviews by Good et al., 2016; Lomas et al., 2017; Mesmer-Magnus et al., 2017).

Secondly, increased WLC may be associated with reduced levels of mindfulness. However, to our knowledge, no research has been conducted with a direct focus on the relationship between WLC and workers' mindfulness. As stated prior, in previous research, mindfulness has mostly been studied as an intervention to reduce WLC, rather than as a cognitive style that should be considered in non-intervention contexts. However, it has been argued that although it has its roots in dispositional mindfulness, workplace mindfulness is likely conditioned (reduced or amplified) by organizational factors (Dane and Brummel, 2014; Reb et al., 2015). Reb et al. (2015)

argued that when constrained by negative organizational factors or stressors, workers will experience higher stress and will devote their mental energy to dealing with the stressors, thereby depleting their energy reserve, which is essential to enable being mindful at work. Similarly, Lawrie et al. (2018) explained that psychological demands related to energy loss, time pressure, and thoughts being absorbed by multiple deadlines at the same time would lead to the diminution of the cognitive resources necessary to monitor and focus their attention and awareness, which is key to experiencing mindfulness. The two groups of authors just mentioned found empirical evidence that organizational stressors (e.g., job demands such as requirements to work very hard; Lawrie et al., 2018; poor equipment, inadequate training, conflicting job demands, Reb et al., 2015) relate to lower levels of mindfulness (measured as a trait or a state depending on the study). In another study, busyness and fatigue (in general, not workplace-specific) was found to be significant negative predictors, respectively, of momentary awareness (i.e., being aware of present moment experience) and non-reactivity (i.e., having a non-elaborative, open, and accepting orientation), two aspects involved in mindfulness processes (Suelmann et al., 2018). In the workplace context of the current study, it is plausible to think that, over time, WLC as a workplace organizational factor having an impact on both busyness (time-based WLC) and fatigue (strain-based WLC) would impede the possibility to devote cognitive resources to attention focus, awareness, and non-reactivity, hereby reducing workplace mindfulness.

This is also aligned with several studies suggesting a negative association of stress with one's level of mindfulness. For example, Crosswell et al. (2019) recently published findings suggesting that higher chronic stress levels were associated with greater levels of mind wandering, a construct negatively related with mindfulness (Mrazek et al., 2012). Another study found that workload was associated with lower levels of mindfulness (Hülsheger et al., 2018). The mediating role of mindfulness that is proposed in the current research is also aligned with a dissertation study conducted with teachers that identified mindfulness as playing a statistically significant (albeit small) mediating role in the relationship between perceived stress and burnout (Hanley, 2017). Finally, a study focusing on the construct of work-family conflict (Davis et al., 2017) showed that the effect of conflict on several outcomes (i.e., life satisfaction, positive and negative affect, perceived health) was mediated by the experiences of repetitive and intrusive thoughts. Although the study did not measure mindfulness *per se*, it is reasonable to extrapolate the study findings' applicability to the notion of mindfulness as intrusive thoughts are associated with lower mindfulness scores (Catak, 2012) and reduced rumination is considered a key mechanism underlying mindfulness (Svendsen et al., 2017).

When considering the established connections between mindfulness and workers' wellbeing, a negative relationship between WLC and mindfulness may translate into more negative wellbeing outcomes. Given the proposed role of mindfulness in emotion regulation (Guendelman et al., 2017), reduced mindfulness could be a major factor explaining the relationship between WLC and workers' wellbeing. In line with theories and research on workers' coping with affective events in the workplace (see Scheibe and Zacher, 2013), less efficient emotion regulation likely makes workers more vulnerable to the negative effects of WLC.

Objectives and Hypotheses

In North America, the majority of research exploring WLC has studied the conflict between the demands of the workplace and family among English-speaking workers (e.g., Minnotte, 2012; Shen et al., 2015), but relatively little is known about the experiences of other cultural groups in North America. Using data collected from francophone participants, the largest linguistic group in Québec, Canada, the present study expands our understanding of the relationship between WLC and wellbeing with a population that is culturally distinct from most other provinces in Canada and jurisdictions in North America.

The aim of the present study is to examine the effects of WLC on positive and negative indicators of wellbeing by focusing on the interference of work with personal projects in a sample of francophone workers in Quebec, Canada. Two research questions act as a foundation for the present study: (1) how does WLC (i.e., time- and strain-based conflict between work and personal projects) relate to the positive mental health and workplace wellbeing of workers in Québec, Canada? (2) Is workplace mindfulness a mediator in the association between WLC and workers' positive mental health and workplace wellbeing? It is further hypothesized that: (a) there are negative associations between time- and strain-based WLC and positive mental health and wellbeing at work; and (b) that these negative associations are explained by the fact that WLC is associated with reduced mindfulness, which in turn is related to lower levels of positive mental health and wellbeing at work.

MATERIALS AND METHODS

Participants

A total of 330 participants based in Québec were surveyed for the purposes of the study, which is nested in a larger study focused on mental health in the workplace (see Meunier et al., 2018, for another published article from that study, focused on strengths use at work and work functioning). The collected sample had an average age of 33.6 years (SD = 11.64), with the lowest and maximum age being 18 and 70. A high proportion of the participants were women (82.2%), heterosexual (86.7%), born in Canada (86.1%), living with at least one more person in their household (78.3%), and had no children (71.5%). Participants were more likely to hold a university degree (56.3%) than a lower degree (34.9% of the participants held other forms of degrees beyond regular secondary diploma, such as college/trade school degrees). The majority of participants perceived themselves as comfortable financially or having sufficient income (73.7%), while 26.3% reported being poor or very poor. The majority of participants held office jobs (25.2%), while others held other positions as professionals (e.g., engineers, psychologists; 21.7%), blue-collar workers (9.9%), technicians (9.3%), managers/leaders (7.1%), or reported being in other jobs (26.7%). Of the

participants, 51.4% worked full-time and 48.6% worked part-time.

Procedure

The study was approved by two university Research Ethics Boards where the authors were employed at the time of the study (Université du Québec à Montréal REB #1044_2019; Wilfrid Laurier University REB #5063). De-identified data are available from the authors upon request. Participants were recruited through the help of community organizations within Québec, Canada, who posted an advertisement on their websites. The advertisement was also posted in other local classified online platforms (e.g., Kijiji, Craigslist) and on social media websites (e.g., Facebook). Interested participants had to complete screening questions to determine whether or not they met the inclusion criteria. If they did, participants could continue with completing the survey. Participants had to meet the following inclusion criteria: 18 years of age or older, working 10 hours or more, and be able to read and understand French (language of the majority in Québec). If participants met the inclusion criteria, the website redirected participants to the full online survey on a survey platform. All participants read a consent form and checked a box to indicate their consent to participate. At the end, participants were entered in a random draw to win one of six $50 Amazon gift cards. Given that the advertisement of the study was disseminated to numerous organizations who were invited to share the advertisements as widely as possible, the number of people that could have been reached or were actually reached by the advertisements are not known.

Measures

All the following measures were provided to participants in French.

Positive Mental Health

Positive mental health was measured using the validated short form of the Mental Health Continuum (Keyes, 2002). The 14-item short-form scale, constructed by Keyes (2009), measures the frequency of experienced components of wellbeing within the previous month, including symptoms of emotional (e.g., happy), psychological (e.g., feeling that one likes most parts of their personality), and social (e.g., feeling of belonging to a community) wellbeing. Items are answered on a five-point Likert scale ranging from 0 (*never*) to 5 (*every day*). The Canadian Community Health Survey conducted by Statistics Canada (see Gilmour, 2014) uses the French version of the Mental Health Continuum Short Form, which is what we used in the presented study. In our study, the scale achieved a high level of internal consistency ($\alpha = 0.93$).

Psychological Wellbeing at the Workplace

As a way of measuring psychological wellbeing within the workplace, a subscale was used (Thriving at Work) from a questionnaire originally developed in French by Dagenais-Desmarais and Savoie (2012). That subscale utilizes five items (e.g., "I find my job exciting," "I find meaning in my work") that participants answer on a six-point scale ranging from 0 (*disagree*) to 5 (*fully agree*). The scale had a high level of internal consistency ($\alpha = 0.86$).

Work-Life Conflict

The perceived conflict of work commitments with workers' personal projects was measured using an adapted six-item scale from Carlson et al. (2000) that was developed to measure work interference with family. The scale includes two subscales that measure the effect of strain- and time-based conflict in the workplace on family life. The original scale also includes a subscale related to an additional dimension (i.e., behavior-based conflicts), but it was not included for the purpose of the study. The scale was recently identified as one of the most commonly used measures to assess work-family conflict (Bansal and Agarwal, 2020). Carlson et al. (2000) have shown the reliability of each subscale, as well as their construct validity (e.g., time-based WLC related positively to the level of work involvement, strain-based WLC related negatively to family and life satisfaction).

In the current study, to capture work-personal project conflict (rather than general work-family conflict), items had to be altered to ask about the effect of work on participants' own personal projects rather than on family life in general. Participants were thus asked to identify and focus on the most important personal projects in their life when answering the work-personal projects conflict scale. To accomplish this, an adaptation (i.e., a shortened version) of Little (1983)'s personal projects analysis approach was included, which asked participants to write down three personal projects, defined as daily life activities and goals (outside of work), that are important to the participants. It is important to note that the personal project measurement approach is intended to be modular and flexible, and the approach can – and should be – adapted to different research questions and contexts (Little and Balsari-Palsule, 2020), like in the current study.

The elicitation of personal projects followed an adapted French version (Houlfort and Sauvé, 2010) of the work-family interference strain- and time-based subscales developed by Carlson et al. (2000). Each subscale included three items that we adapted to focus on work-personal project conflict (rather than the focus on family in the original scale), for example "I am often so emotionally drained when I get home from work that it prevents me from doing my personal projects" (strain-based) and "I have to miss activities related to my personal projects due to the amount of time I must spend on work responsibilities" (time-based). Items were measured on a five-point Likert scale from 1 (*totally in disagreement*) to 5 (*totally in agreement*). Although the personal project-focused version of the strain- and time-based WLC subscales is a new measurement development proposed in the context of our study, our data supports the reliability and validity of this modified version of Carlson et al.'s (2000) subscales. We found a high level of consistency for both strain- and time-based conflict subscales ($\alpha = 0.84$ and 0.88, respectively). Further, the correlations (see **Table 1**) between the subscales and outcome variables measured in the study follow an expected pattern (i.e., negative moderate correlations with positive mental health and thriving at work), which supports the concurrent validity of the subscales.

TABLE 1 | Descriptive statistics and correlations between core variables and control variables (n = 288–330).

Measures	*N*	*M*	*SD*	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9	10	11	12
Core Variables																	
1. Psychological wellbeing at work	330	3.74	0.91	−0.88	0.61	–											
2. Positive mental health	328	3.18	0.99	−0.45	−0.65	0.53**	–										
3. Mindfulness	321	4.37	0.99	−0.52	0.10	0.25**	0.41**	–									
4. Time-based conflict	290	3.09	1.18	−0.16	−0.96	−0.23**	−0.14*	−0.20**	–								
5. Strain-based conflict	291	3.22	1.14	−0.08	−0.81	−0.32**	−0.40**	−0.44**	0.50**	–							
Control Variables																	
6. Gender (1 = women; 2 = men)	325					−0.03	−0.05	−0.00	−0.02	−0.09	–						
7. Age	329	33.61	11.64	0.85	−0.26	0.08	0.04	0.08	−0.07	0.07	0.19**	–					
8. Perceived financial situation	320	2.15	0.66	0.28	0.24	−0.09	−0.22**	−0.09	0.05	0.11	0.06	−0.09	–				
9. Employment status (1 = full time; 2 = part-time)	321					−0.08	−0.05	0.02	0.02	−0.08	−0.12*	−0.44**	0.18**	–			
10. Duration (years) at current employer	322	5.37	6.74	2.19	5.66	0.12*	0.06	0.04	0.02	0.10	0.02	0.56**	−0.21**	−0.35**	–		
11. Neuroticism	330	4.06	1.50	0.02	−0.78	0.31**	0.43**	0.39**	−0.06	−0.29**	0.22**	0.16*	−0.10	−0.11	−0.01	–	
12. Perceived health status	330	6.36	1.99	−0.55	0.02	0.24**	0.43**	0.26**	−0.13*	−0.39**	0.02	0.05	−0.21**	−0.02	0.05	0.31**	–

*$p \leq 0.05$; **$p \leq 0.01$.

Mindfulness

Mindfulness in the workplace was measured using an adaptation of the Mindful Attention Awareness Scale, measuring dispositional mindfulness, developed by Brown and Ryan (2003). A translated French version was developed by Jermann et al. (2009). That scale, however, only assesses mindfulness in one's life, generally speaking. The original English items had been altered by Dane and Brummel (2014) to refer specifically to mindfulness in the workplace, e.g., "When working. . . I find it difficult to stay focused on what's happening in the present." We applied the same adaptations made by Dane and Brummel (2014) to the French version (Jermann et al., 2009) of the original scale (Brown and Ryan, 2003) in order to obtain a French version focused on mindfulness in the workplace. The resulting score represents mindfulness at work, which, arguably, based on Dane and Brummel's (2014) conceptualization, is dependent upon one's level of dispositional mindfulness in life and other contextual factors affecting mindfulness specifically in one's workplace. Participants answered the items using a six-point Likert scale ranging from 1 (*almost never*) to 6 (*almost always*). When implemented within our study, the workplace-adapted Mindfulness Attention Awareness Scale had a Cronbach's alpha of 0.81.

Control Variables

In order to control for other variables that may influence the wellbeing variables, questions were added to account for different contextual and work-related factors. Gender was included as a binary variable, coding 1 for women and 2 for men. Participants also reported their age and answered a question asking to rate their perceived financial situation on a scale from 1 (*financially comfortable*) to 4 (*very poor*). Additionally, participants indicated if they work full-time (1) or part-time (2) and for how many years they have had the same position with the same employer (if they were not doing freelance work). Additionally, participants completed the Ten Item Personality Measure (TIPI; Gosling et al., 2003), which includes two items measuring each of the five personality traits of the Big 5 (extroversion, agreeableness, openness, conscientiousness, neuroticism), for a total of 10 items. As will be explained below, the neuroticism score (r = 0.40 between the two items of that subscale, which suggests adequate internal consistency, Briggs and Cheek, 1986) was used in the analysis. Finally, three items (α = 0.95) related to physical health from the PERMA-Profiler instrument (Butler and Kern, 2016) were included to obtain an indicator of the perceived health status of participants.

Data Analysis

The hypotheses were explored by testing two full structural equation models using the Mplus software (Muthén and Muthén, 1998–2011). Each model focused on a different independent variable: one model with strain-based WLC and another one with time-based WLC. In each model, the measurement part included the observed indicators of WLC (i.e., conflict items) loading on the conflict latent construct, the mindfulness items loading on the mindfulness latent construct, and the psychological wellbeing at work and positive mental health items, each loading

on their respective latent construct. The structural component of the model included unidirectional pathways from: (1) the WLC latent construct to the mindfulness latent construct, (2) the mindfulness latent construct to the psychological wellbeing at work latent construct and to the positive mental health latent construct, and (3) from the WLC construct to the psychological wellbeing at work latent construct and to the positive mental health latent construct (i.e., direct effects of the independent variables on the outcomes). In addition, to control for the effects of relevant control variables (age, gender, financial situation, full-time vs. part-time work, and length of current employment), pathways from each of these variables to the psychological wellbeing at work latent construct and to the positive mental health latent construct were included. The model also included a correlation between the two dependent latent constructs (psychological wellbeing at work and positive mental health). The software automatically allows the correlations between all independent variables (including control variables too) to be estimated.

The models were tested using Maximum Likelihood estimation with robust standard errors. Given that conflict variables were missing more than 5% of data (approximately 12% were missing on each), the Full Information Maximum Likelihood approach was used to deal with missing values. The Full Information Maximum Likelihood approach is recognized to be one of the best available means of reducing biases that could arise from missing values (Enders, 2010). The information available from all cases is used in the analysis without imputing data. To reduce missing data-related biases as much as possible, it is recommended to add auxiliary variables in the model in order to increase the likelihood of satisfying the missing condition at random (Enders, 2010). Auxiliary variables do not need to be of substantive interest, however, they need to be correlated with the variables with missing values or with the missingness of these variables. Enders (2010) suggests selecting auxiliary variables that have moderately large (or more) correlation coefficients. In our case, correlations were the largest (0.16 and more) for the TIPI neuroticism score and the perceived health status variable. As such, these variables were incorporated in the models using the Mplus dedicated auxiliary (*m*) command.

When testing the models, several indicators were considered to assess the adequacy of each model: Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) $\geq$ 0.90; Root Mean Square Error of Approximation (RMSEA) $\leq$ 0.07; Standardized Root Mean Square Residual (SRMR) $\leq$ 0.08 (Hooper et al., 2008). For the initial testing of the first model (i.e., the model focused on time-based strain), modification indices were requested from the software. Modification indices help identify potential improvements that could be made to the model to provide better fit. Modification indices need to be considered with caution and theoretical considerations should be taken into account to make sure the final model's substantive meaning is theoretically sound (Schumacker and Lomax, 2010).

Once the final model was obtained, the mediation hypothesis was tested. While it is recommended to implement bootstrapping of direct and indirect effects to assess mediation effects in a structural equation modeling environment (Cheung and Lau, 2008), it was not possible to perform bootstrapping in the current study given the inclusion of auxiliary variables: the (*m*) command necessary for the inclusion of such variables cannot be used in conjunction with bootstrapping in the Mplus software. As an alternative, the Monte Carlo Method for Assessing Mediation (MCMAM) was used (MacKinnon et al., 2004). It provides a confidence interval based on a Monte Carlo simulation from which to assess the significance of the indirect effect. The confidence interval was calculated using an online calculator developed by Selig and Preacher (2008), requesting 20,000 repetitions for the simulation.

RESULTS

Descriptive Statistics and Univariate Correlations

As shown in **Table 1**, the main study variables were normally distributed, based on indices of skewness and kurtosis. The percentage of missing values for each variable varied between 0 and 12.12%. The two variables with the most missing values were the strain-based and time-based WLC variables. The personal project measure (Little, 1983) presented before these conflict items required participants to answer questions by entering a few words (i.e., short open-ended answers) describing their projects. It was observed that participants seemed more likely to skip these questions compared to other sections of the questionnaire, and as a result they could not answer the WLC questions because they referred to people's personal projects.

Univariate correlations between the main study constructs were all significant at $p \leq 0.05$ and are shown in **Table 1**. Mindfulness was positively correlated with both psychological wellbeing at work and positive mental health. Furthermore, positive mental health was positively correlated with psychological wellbeing at work. Time-based WLC was found to be negatively correlated with psychological wellbeing at work, positive mental health, and mindfulness. Strain-based WLC was positively correlated with time-based WLC, and negatively correlated with psychological wellbeing at work, positive mental health, and mindfulness.

The possibility of a common methods bias was examined by implementing the Harman's single factor test using a) an exploratory approach (i.e., principal component analysis) and b) a confirmatory factor analysis approach. To do so, we conducted a principal component analysis in the SPSS software in which the individual items of relevant measures (model 1: mindfulness, time-based work-life conflict, positive mental health, thriving at work; model 2: same variables except that strain-based work-life conflict items were used instead of time-based items) were forced to load on one unrotated factor. The percentage of variance explained by the factor was, respectively, 33.4% and 33.9% for models 1 and 2. The fact that this percentage is below 50% suggests that common methods bias is not an issue (see Archimi et al., 2018). The same two models (i.e., models in which all items are loaded on a single shared construct) were also tested using the Mplus software and the fit indices were retrieved. The fit indices were not satisfying for model 1 and for model 2, respectively: $\chi 2$

(377) = 2529.66, TLI = 0.49; CFI = 0.53; RMSEA = 0.13 (90% CI [0.13, 0.14]); SRMR = 0.12, and $\chi 2$ (377) = 2407.55, TLI = 0.52; CFI = 0.56; RMSEA = 0.13 (90% CI [0.12, 0.13]); SRMR = 0.12. The lack of fit suggests that common methods bias is not an issue in this dataset (see Malhotra et al., 2006).

Main Analysis

The first tested model was the one including the time-based conflict construct as the independent variable. The initial fit of the model was relatively high, but not excellent: χ^2 (501) = 1086.34, TLI = 0.87; CFI = 0.89; RMSEA = 0.06 (90% CI [0.06, 0.06]); SRMR = 0.06. Modification indices suggested adding correlation links between the sixth and the eighth item of the positive mental health measure, as well as between the seventh and the eighth item of that same measure. In addition, modification indices suggested adding a link between the first and the second item of the psychological wellbeing at work measure. The three identified items from the positive mental health measure were all related to the person's relationship to society. As such, it made theoretical sense that these items would share additional variance beyond the general construct of wellbeing. The two identified items from psychological wellbeing at work both measured emotional responses in relation to work, i.e., excitement and satisfaction, thus it was understandable that these items would share additional variance beyond the general psychological wellbeing at work construct. These five suggested additional pathways were thus added. This resulted in better indicators of fit for the final model: χ^2 (498) = 925.40, TLI = 0.92; CFI = 0.91; RMSEA = 0.05 (90% CI [0.05, 0.06]); SRMR = 0.06. That final model is shown in **Figure 1**. Only the significant pathways ($p \leq 0.05$) between the core study variables are presented. As shown in the figure, all the observed indicators loaded as expected on their respective latent construct. There was a significant negative association between time-based WLC and mindfulness. That latent construct was associated positively with positive mental health and psychological wellbeing at work, which were positively associated with each other. While the direct effect of time-based WLC on positive mental health was not significant, there was a remaining significant direct, negative effect of time-based WLC on psychological wellbeing at work.

For the second model, involving strain-based WLC as the independent latent construct, we integrated in the initial tested model the correlations that were added above based on the modification indices concerning positive mental health and psychological wellbeing at work items. The model showed satisfactory fit: χ^2 (498) = 963.44, TLI = 0.90; CFI = 0.91; RMSEA = 0.05 (90% CI [0.05, 0.06]); SRMR = 0.06. No modifications were made. That final model is represented in **Figure 2**, with only significant pathways shown in the figure. As in the previous model, each indicator loaded as expected on their respective latent construct. There was a significant negative association between strain-based WLC and mindfulness. That latent construct was associated positively with positive mental health, but not associated with psychological wellbeing at work. There were significant direct negative effects of strain-based WLC on both positive mental health and psychological wellbeing at work.

For both models, MCMAM was used to assess the confidence intervals around the indirect effects of the mediator (i.e., mindfulness). For the indirect effect of time-based conflict on positive mental health through mindfulness, the Mplus-provided (unstandardized) estimate was −0.069 and the MCMAM-based confidence interval (95%) was [−0.118, −0.014]. Given that this interval did not include 0, we concluded that there was a significant negative effect of time-based conflict on positive mental health through mindfulness. Time-based conflict was related to lower mindfulness at work, and in turn, lower mindfulness was related to lower positive mental health. The fact that in the structural equation model (**Figure 1**) the remaining direct effect of time-based conflict on positive mental health was not significant suggests a complete mediation effect through mindfulness. The indirect effect of time-based conflict on psychological wellbeing at work was also significant and negative, but small: the Mplus-provided estimate was −0.047 and the MCMAM-based confidence interval was [−0.092, −0.002]. Time-based conflict was related to lower mindfulness at work, and in turn, lower mindfulness was related to lower psychological wellbeing at work. In that case, there was a remaining significant effect of time-based conflict on psychological wellbeing at work, suggesting a partial mediation effect.

For strain-based conflict, the indirect effect on positive mental health was significant and negative (Mplus-provided estimate: −0.141; MCMAM-based confidence interval: [−0.235, −0.047]). Strain-based conflict was related to lower mindfulness at work, and in turn, lower mindfulness was related to lower positive mental health. The fact that the remaining direct effect of time-based conflict on positive mental health remained significant (**Figure 2**) suggests a partial mediation effect. The indirect effect on psychological wellbeing at work was not significant (Mplus-provided estimate: −0.097; MCMAM-based confidence interval: [−0.213, 0.028]), which is consistent with the structural equation modeling results showing a non-significant pathway between mindfulness and psychological wellbeing at work in that model.

DISCUSSION

The study aimed to examine the associations of time- and strain-based work-life projects conflict with positive mental health and psychological wellbeing at work and to explore the role of mindfulness in these associations. Data were collected as part of an online survey conducted with a sample of francophone workers from Québec, Canada, allowing us to explore the topic of work-life conflict with a linguistic minority population within the larger North American context.

The first dependent variable considered was positive mental health, which represents symptoms of positive wellbeing at the emotional, psychological, and social levels (Keyes, 2005; Westerhof and Keyes, 2010; Provencher and Keyes, 2011). Both time- and strain-based conflicts of work with personal projects were found to be associated (directly and/or indirectly) with lower positive mental health. This suggests that, in addition to the associations demonstrated extensively in previous research between WLC and negative indicators of wellbeing (i.e., distress,

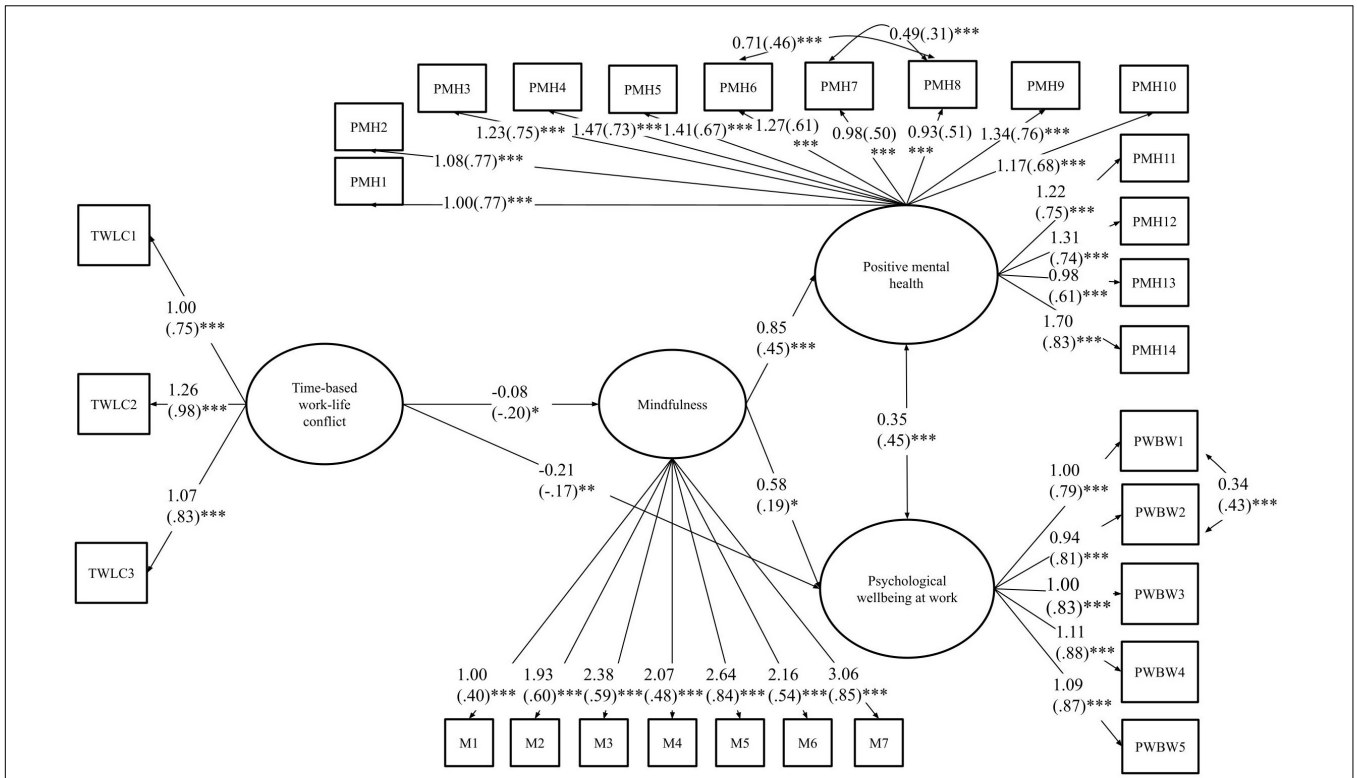

FIGURE 1 | The (in)direct effect of time-based WLC on positive mental health and psychological wellbeing at work. The figure includes the unstandardized estimates accompanied by standardized estimates in brackets. Only significant links between core study variables are shown in the figure. Control variables described in the methods section were also included, but not represented to facilitate ease of reading. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

anxiety, burnout, depression, Gisler et al., 2018; Neto et al., 2018), WLC could be detrimental to positive wellbeing. Previous research shows that positive and negative indicators of wellbeing tend to be correlated, although they do not necessarily have the same antecedents (Keyes, 2005; Karademas, 2007). Although no indicator of negative wellbeing was used in the present study, it is interesting that positive mental health was found to be associated negatively with WLC; it is expected based on previous research (Gisler et al., 2018; Neto et al., 2018) that WLC would also be associated with negative indicators (e.g., anxiety, depression) in our sample. Keyes (2013) argues that a comprehensive perspective on mental health and wellbeing needs to include an intention to study both positive and negative indicators, as they interact and can reinforce each other through time. More neglected by researchers and practitioners compared to negative indicators, positive mental health has been associated with reduced risk of developing future mental health issues (Keyes, 2013). In the workplace, workers' positive mental health could be protective against work stressors (see Page et al., 2014). In contrast, reduced positive mental health related to work-life conflict could actually put a worker at risk of developing mental health issues in the future. Although research on workers' positive mental health is still in its infancy, the results found in this study confirm and extend recent findings (Page et al., 2014; Fan et al., 2019; Hori et al., 2019). Particularly, Hori et al. (2019) identified a negative association of occupational stress (i.e., mental workload) with positive mental health; our results seem to suggest that workload and occupational stress could affect positive mental health through work-life conflict mechanisms.

The second dependent variable that we considered was psychological wellbeing at work, which also focuses on positive experiences, but specifically in the workplace context. Time- and strain-based WLC were both (directly and/or indirectly) related to lower psychological wellbeing at work. As highlighted in a review authored by Gisler et al. (2018), most studies have focused on the relationship between WLC and general indicators of psychological health outcomes, although some research has examined domain-specific indicators, such as those related to the workplace. Studies have highlighted the negative effects of WLC on job satisfaction, which in turn would affect general life satisfaction (Gisler et al., 2018). To our knowledge, our study is one of the first studies (or even the first study) to assess the association between WLC and workplace-specific wellbeing indicators beyond job satisfaction. In addition to including items related to feelings of satisfaction and excitement, the measure that we used (Thriving at Work subscale; Dagenais-Desmarais and Savoie, 2012) included items related to meaning, pride, and accomplishment in the workplace, which tap into what is called "eudaimonic wellbeing", referring to individuals actualizing their potential and finding purpose. This aspect of wellbeing has only recently started to be recognized by organizational and work psychology researchers/practitioners as a central dimension

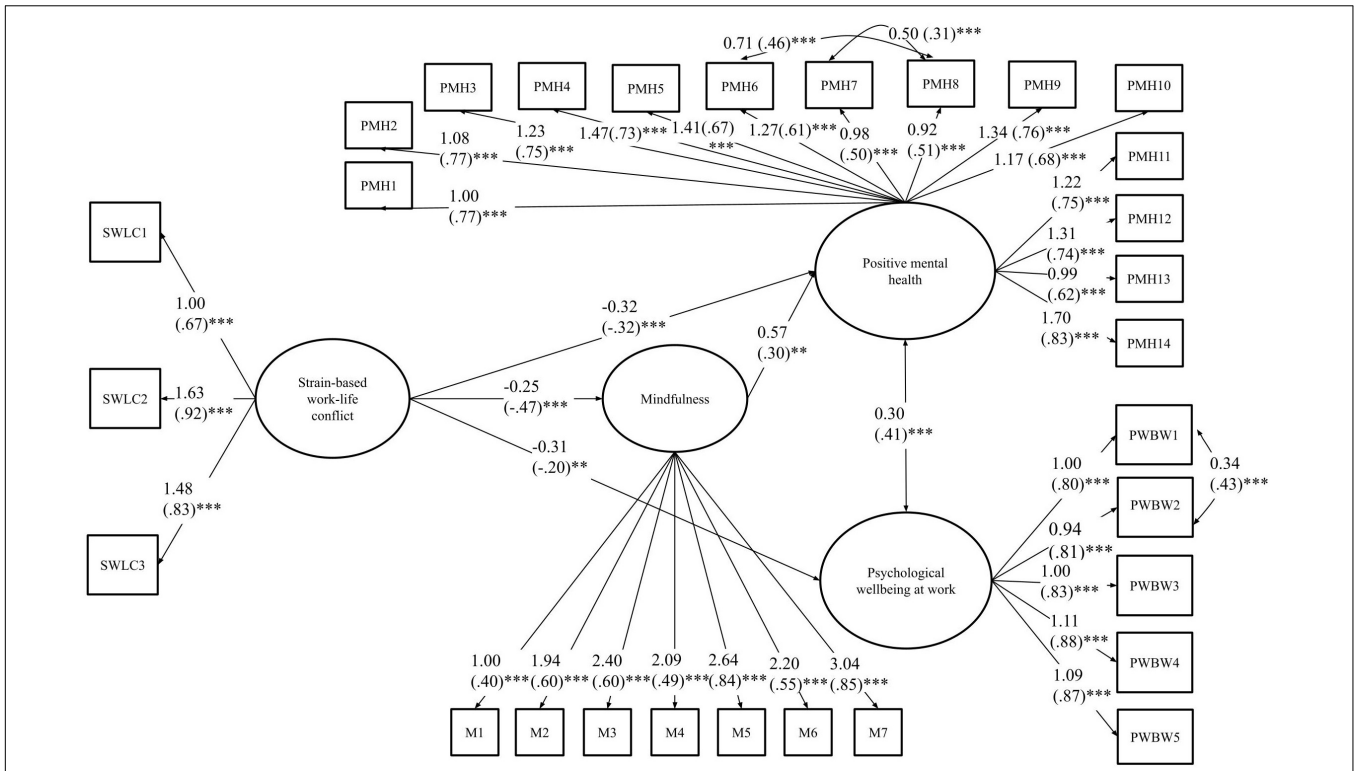

FIGURE 2 | The (in)direct effect of strain-based WLC on positive mental health and psychological wellbeing at work. The figure includes the unstandardized estimates accompanied by standardized estimates in brackets. Only significant links between core study variables are shown in the figure. Control variables described in the methods section were also included, but not represented to facilitate ease of reading. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

of workers' health (Bartels et al., 2019; Lysova et al., 2019). Our results contribute to this developing body of literature by identifying WLC as an important factor that may contribute to reduced psychological wellbeing at work. Further, the correlation we found between psychological wellbeing at work and positive mental health suggests that WLC may have synergistic effects, with workplace wellbeing and positive mental health being associated with each other and potentially reinforcing the influence of WLC.

Two interesting observations can be made when comparing the findings from the two models. A first observation is that strain-based WLC seemed to be more related to other variables in the model (e.g., wellbeing) than time-based WLC. This is consistent with findings from a meta-analysis of a small number of available studies in which it was found that strain-based conflict is more strongly related to exhaustion than time-based conflict (Reichl et al., 2014). Based on the interpretation provided by the authors of that meta-analysis, strain-based conflict is thought to directly impact the person's stress system, while time-based conflict's impact(s) on the stress system would have to be mediated through its effects on other life stressors, thus leading to some dilution of its measured effect on wellbeing (Reichl et al., 2014). Second, another observation is that the association between mindfulness and psychological wellbeing at work was not significant in the model focused on strain-based WLC while it was significant in the model focused on time-based WLC. However, a closer observation of the standardized estimates suggests only a small difference (magnitude of the difference: 0.06) in the strength of that association between the two models. This may represent a methodological artifact, or it could be due to the fact that inclusion of a different form of WLC has led to changes in the amount of remaining variance to explain in the psychological wellbeing at work variable.

The mediating role of mindfulness in the relationship between time- and strain-based WLC and positive mental health and psychological wellbeing at work was also examined. While most previous research has examined mindfulness as an intervention to reduce WLC or its effects (Michel et al., 2014; Kiburz et al., 2017), our study is the first one to explore the association between WLC and mindfulness (specifically at work) as a cognitive processing style in the workplace, and how in turn, this association relates to wellbeing outcomes. Overall the results confirm that WLC is associated with reduced mindfulness, which is associated with more negative wellbeing outcomes, i.e., reduced positive mental health and psychological wellbeing at work, in line with a few recent studies suggesting that workplace stressors could lead to decreased mindfulness (Davis et al., 2017; Hanley, 2017; Hülsheger et al., 2018; Crosswell et al., 2019).

In terms of the time-based dimension, there was no significant direct effect remaining in relation to positive mental health, suggesting a full mediation effect of mindfulness for that particular outcome. However, a significant remaining direct effect

was found between time-based WLC and psychological wellbeing at work, after mindfulness was accounted for. Thus, mindfulness only partially mediated the effect of WLC on psychological wellbeing at work. For strain-based WLC, a similar pattern underlining a partial mediation effect was found for positive mental health. The measure of mindfulness used in the present study (Dane and Brummel, 2014) focused on mindfulness one demonstrates in work-related activities; it is possible that also considering the level of mindfulness that workers demonstrate at home or in their personal life could have led to a complete mediation effect. One could also argue that WLC is likely associated with workers' wellbeing outcomes through multiple other pathways beyond reduced mindfulness. For instance, Bowen and Zhang (2020) suggest that work-life conflict may be associated with increased substance use and reduced sleep, which for example, we argue, could lead to lower wellbeing as well.

Importantly, WLC was framed around the notion of personal projects as workers were asked to reflect on the extent to which their work interferes with pursuing the projects that matter for them. As personal projects are thought to be highly idiosyncratic and central to people's sense of who they are (Little, 1983, 1987), it is plausible that interference with personal projects has profound psychological effects on workers by hindering their potential to live in accordance with their personally valued ideals and goals and their authentic self. Future research should explore how the indirect effect of WLC through mindfulness interacts with other potential action mechanisms underlying the association between WLC and wellbeing outcomes, including goal-, value-, and identity-related processes.

Limitations

The study has several limitations. Firstly, the study used a convenience sampling approach, limiting the generalizability of the results to the population of workers in Québec, Canada. In particular, the sample is relatively homogeneous in nature. For example, the sample consisted of young professionals ($M = 33.6$) who mostly were heterosexual and Canada-born. Thus, our results do not allow us to understand how time- and strain-based WLC and mindfulness may affect the wellbeing of workers that are not members of these dominant categories. For example, LGBTQ+ and newcomers may have different experiences and these are not necessarily represented in the current research (Ali et al., 2017; Kelliher et al., 2019). A recent Canadian study suggests a lack of knowledge of Indigenous perspectives on work-family conflict (Julien et al., 2017). More research with marginalized groups is needed. Additionally, different occupations and positions may present different stressors and expectations, altering WLC experiences and wellbeing (e.g., Higgins et al., 2008). This may not be appropriately captured within the presented study as only 9.9%, 9.3%, and 7.1% of participants reported being blue-collar workers, technicians, or managers/leaders, respectively.

Furthermore, the cross-sectional design of the study prevented us from asserting with certainty the directionality of the identified relationships (e.g., causality). Although the hypothesized directionality of the effects is plausible and based on our review of previous empirical and theoretical work, the study's cross-sectional, correlational design explored the associations of time- and strain-based WLC with simultaneously measured mindfulness and wellbeing. Due to this, temporal precedence cannot be determined, nor can causality. It could be argued that mindfulness influences the perceived level of WLC (in addition to, or rather than, the opposite direction we put forward in this article). Future studies should investigate these relationships on a longitudinal basis by prospectively following workers over several months or years, with at least three measurement times to allow for a fully longitudinal cross-lagged mediation model to be tested (Selig and Preacher, 2009).

As it may be argued that some factors (e.g., change in leadership, working for a new company, completing a personal project) may lead to concomitant variations in both WLC and mindfulness, future research should also explore potential third variables that could account for the relationship between WLC and mindfulness in order to better establish the causal pathway between these two constructs. Additionally, the current sample size prevented us from examining how both time- and strain-based WLC related to outcomes within a single model. Important knowledge may be gained by incorporating both in a single analysis in order to capture and better understand their potentially interactive impacts on workers' wellbeing. In the current study, the ratio of the sample size on the number of free parameters in each tested model was approximately three, which is lower than the recommended minimum guidelines (i.e., ratio of 5 or 10, Wang and Wang, 2019). This could have reduced statistical power, and future research is important to further establish the stability of the results.

More research is also needed to better understand how pursuing personal projects may actually play a moderating role on the relationship between WLC and wellbeing. From an existential perspective, it could be argued that if one's personal projects are meaningful, this could buffer the effect of work-related stressors on the person's health and wellbeing, given that meaning in life has been identified to be a buffering factor against the impact of stress (Halama, 2014).

The interference of personal projects on work should also be considered. Little's (1983) personal projects analysis includes a cross-impact matrix that could be adapted in the future to elicit workers' personal and occupational projects and the reciprocal influence/interference between these goals based on participants' perceptions (see Wiese and Salmela-Aro, 2008 for an example focused on work and family goals). While the use of a personal project analysis-inspired approach proved to be worthwhile in the present study, the open-ended component (i.e., project list elicitation) may have been perceived to be a burden to some participants, explaining the higher level of missing data on the project-related WLC questions. Future research should explore innovative ways to promote greater participation on these projects-related questions in online survey contexts.

Practical Implications

The study provides cross-sectional evidence that WLC is associated with workers' lower positive wellbeing in their general life, as well as in the workplace. Furthermore, the results suggest that reduced mindfulness may play a central role in

the relationship between WLC and wellbeing outcomes. While more research is needed to firmly establish the directionality of the effects observed in the study, the findings allow us to formulate preliminary recommendations for policymakers, occupational health professionals, and leaders. First, the study adds to the demonstration of the importance for policymakers and workplace leaders to implement programs and policies to institutionalize practices that could help reduce WLC (e.g., allowing flexwork, reducing workload; Higgins et al., 2008); not only can WLC be associated with risks of mental health issues as demonstrated in previous research, but it can also affect workers' capacity to live a fulfilling personal and professional life. Second, mindfulness-based interventions (e.g., Wolever et al., 2012; Grégoire and Lachance, 2015; Huang et al., 2015) offered in the workplace may be beneficial for workers as they could counteract the negative effects of WLC on workers' wellbeing by promoting emotion regulation skills (Guendelman et al., 2017). Third, our results suggest that employers should consider devoting more attention and time to listening to workers' concerns about the effects of their work on the pursuit of the projects that matter in their personal lives. By learning about workers' personal goals and aspirations, organizations would be better positioned to co-design innovative and efficient means to reduce work-life conflict and to meaningfully support workers in developing themselves outside of work.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The study was reviewed and approved by the Comité Institutionnel d'Éthique de la Recherche Avec des Êtres Humains from Université du Québec à Montréal and by Wilfrid Laurier University's Research Ethics Board. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

TP wrote most parts of the manuscript, based on his original research idea. SC supervised manuscript writing, conducted the analysis with TP, and wrote the Results section. SM co-developed the study with SC, supervised data collection/cleaning, and helped to develop the knowledge mobilization plan. All authors contributed to the article and approved the submitted version.

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