Leadership, diversity and inclusion in organizations

Edited by
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Leadership, diversity and inclusion in organizations

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Editorial: Leadership, diversity and inclusion in organization

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Editorial on the Research Topic
Leadership, diversity and inclusion in organization

The issues surrounding the human side of managing organizations are quite varied if considering the plethora of determinants, contexts or processes that have been under consideration by researchers (e.g., Duarte et al., 2019; Koutsimani et al., 2019; Ribeiro et al., 2020; Herrera and Heras-Rosas, 2021). Leadership in organizations was, is and will continue to be a key issue for determining the functioning of organizations, regardless of their genesis or purposes of action (e.g., Semedo et al., 2018; Li et al., 2022). The starting point of this Research Topic has resided in the recognition that today's society is undergoing through deep and significant transformations, occurring at an unprecedented speed and producing severe impacts over the functioning of organizations. Within this framework, it is possible to find social transformations related to the strengthening of social and work equality. A good example over this matter is the issues of gender equality or the acceptance of diversity as a desirable societal value, along with the value of inclusion or the promotion of individual and collective freedoms. It is also within this context that we find grounds for considering the application of social values oriented toward inclusion and equal treatment of minorities as a socially relevant issue with impactful consequences in the context of work organization and the functioning of the world of organizations.

Considering this context, we believe that it was pertinent to organize a Research Topic aimed at positioning these issues within the scope of the effects of organizational leadership in promoting more inclusive and egalitarian work environments, along with the identification of the main determinants, processes and contexts supporting these issues. Guided by the reasons already portrayed, and which motivated us to organize this Research Topic, organizing the call for papers for the topic has gained proportion when we realized that the existing literature, while recognizing the "business case for diversity," does not produce convincing answers to the questions raised. This Research Topic produced a set of 14 articles that deal with different and complementary aspects of the nature of the discussion proposed to researchers.

The study by Li et al. "*Perceived overqualification at work: implications for voice towards peers and creative performance*" discusses the importance of voice toward peers in the context of stimulating creativity in organizations and the relevance of considering the team background in producing relevant organizational results. In another framework, the study by Bajcar and Babiak offers the empirical validation of the Multifactor Leadership Questionnaire (MLQ 5X Short) in the European context, namely in Poland, providing an important contribution to the future application of the instrument when studying

organizational phenomena suitable for your application. Complementarily, the study by Yin and Liu "*The relationship between empowering leadership and radical creativity*" discusses the centrality of empowering leadership in the production of effects on the creativity of workers, verifying the positive indirect influence of empowering leadership via the mediation effects of job control and willingness to take risks.

Following a similar theoretical alignment, the study by Jing et al. "*The influence of empowering team leadership on employees' innovation passion in high-tech enterprises*" discussed the impact of empowering team leadership in stimulating innovation passion among workers, finding a cross-level direct positive and indirect positive influence on innovation indicators. The study by Zhu and Chen "*Work-to-family effects of inclusive leadership: the roles of work-to-family positive spillover and complementary values*," investigated the impact of Inclusive Leadership on employees' wor-to-family positive spillover along with the positive impact on the family performance enhancement.

Another important study was presented by Wang et al. "*Can proactive confessing obtain your embrace? Exploring for leader's pro-social rule-breaking consequences based on a self-verification perspective*" in which they highlighted the relationship between leader pro-social rule breaking and leader feedback-seeking, which in turn is related to employee upward voice. Another equally relevant study was developed by Özgenel et al. "*The mediator role of organizational justice in the relationship between school principals' agile leadership characteristics and teachers' job satisfaction*," in which the authors identified the important relationship between Schools Principals' agile leadership characteristics are associated with teachers' job satisfaction.

Liu and Liu, in the study "*The implications of inefficient markets for executive pay comparison: the case of China and Poland*," the authors emphasize the importance of the impact of pay comparison among executive leaders. Lee et al. have presented an opinion article entitled "*Is authentic leadership always good for employers? The perspective of time management*," and presenting a reflection on the impact of this type of leadership on production indicators in organizations, supporting the consolidation of knowledge on the subject.

Another article equally considered in this Research Topic was developed by Choi et al. "*What hinders team innovation performance? Three-way interaction of destructive leadership, intra-team conflict, and organizational diversity*," in which the authors clarify the impact of destructive leadership on team innovation performance, and identify the conditions that contribute to the exponentiation of the relationship. An important contribution to be noted in the Research Topic was the one made by Kusku et al. entitled "*Beyond the three monkeys of workforce diversity: who hears sees and speaks up?*" and in which the authors explain the differences between those who remain indifferent to diversity works and those how see, speak and hear about them.

In another perspective, the study by Teofilus et al. "*Managing organizational inertia: indonesian family business perspective*"

provides interesting insights into the role of different actors within the framework of the determinants of inertia in organizations and associated aspects of organizational performance, and about the role of Empowering Leadership in this relationship. Another relevant research to consider under the topic considered here refers to the study carried out by Sajadi and Vandenberghe "*Supervisors' social dominance orientation, nation-based Exchange relationships, and team-level outcomes,*" in which it is explored how the orientation of social dominance of supervisors relates to relational conflicts and commitment. This Research Topic was also enriched with a brief research report article by Zhao and Zhou, entitled "*Analysis of the turnover tendencies of college teachers from the perspective of psychology,*" in which the problem of college teachers' turnover intention is discussed, and focusing on factors that contribute to understanding the underlying psychological mechanisms of teachers' resignation.

Once all the contributions received for this Research Topic have been considered, we conclude that a wide range of cumulative perspectives have been produced over the theme that motivated the organization of the topic. Indeed, it is visible that the topics brought up for discussion under the aegis of the theme of Leadership, Diversity and Inclusion in Organizations was rich and fruitful. However, the area of studies on Leadership, Diversity and Inclusion is still recent in the literature, so we hope that readers and those interested in the themes portrayed here will feel motivated and compelled to produce new research on the subject, supporting the scientific community to better respond in the face of current and future challenges related to the exercise of Leadership in Organizations.

Author contributions

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

Conflict of interest

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

Publisher's note

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Perceived Overqualification at Work: Implications for Voice Toward Peers and Creative Performance

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Drawing on the conservation of resource theory, we examined the effect of perceived overqualification on the creative performance *via* voice toward peers, and how the peer group perceived overqualification moderates the relationship between perceived overqualification and creative performance. We tested this proposal using three waves of lagged data collected from 206 company employees in Shandong Province, China. The results revealed that peer group perceived overqualification moderated the indirect effects of perceived overqualification on creative performance such that there was positive indirect effect *via* voice toward peers when peer group perceived overqualification is high and negative indirect effect *via* voice toward peers when peer group perceived overqualification is low. The implications, limitations, and future directions of these findings were discussed.

Keywords: perceived overqualification, voice toward peers, peer-group perceived overqualification, creative performance, conservation of resources theory

INTRODUCTION

As a result of the economic recession and popularization of higher education, the phenomenon of overqualification is becoming more and more common across the world. Perceived overqualification reflects the extent to which employees consider themselves possessing more education, experience, or skills than required by their jobs (Maynard et al., 2006). According to the organization for economic cooperation and development (OECD), 14.7% of employees feel overqualified for their jobs in European Union, with comparable and even higher rates of perceived overqualification in other countries, 15.6% in the United States, 30.5% in Chile and 23.7% in Greece (Organisation for Economic Co-operation and Development (OECD), 2017).

To date, a large number of literature have shown that perceived overqualification is related to a series of negative outcomes, such as less positive work attitude and lower happiness (Harari et al., 2017), less organizational citizenship behavior (Luksyte et al., 2020), and more counterproductive work behavior (Kim et al., 2019). At the same time, there are new evidence that perceived overqualification may be associated with more positive results. For example, overqualified employees may exhibit higher task performance and more proactive behavior (Zhang et al., 2016; Lee et al., 2021). However, empirical evidence of its link with positive outcomes is still lacking and the area is under-explored (Dar and Rahman, 2020). Given that knowledge and education are important predictors of creative performance (Willey Ramos et al., 2018), employees with excess

qualifications may perform better in creative activities. Creative performance refers to the extent to which employees generate novel and useful ideas regarding procedures and processes at work (De Stobbeleir et al., 2011), which has become increasingly crucial to an organization's survival and competitive advantage in a rapidly changing environment (Carmeli et al., 2013). So, when and how perceived overqualification affects employee creative performance?

Voice behavior is defined as the behavior of proactively challenging the status quo and making constructive suggestions (Vandyne et al., 1995), which is a key driver to promote creative performance. By identifying opportunities for improvement, participating in voice behavior can provide cognitive resources for creative performance (Grant, 2013). Studies have shown that voice behavior can trigger employee positive emotions and self-cognition, which may improve the performance of employees in innovation (Shih and Wijaya, 2017). Employees with excess qualifications are important training and guidance resources, they can use their previous knowledge and experience to identify problems to assist their peers better completion (Sikora et al., 2016). In addition, overqualified employees may use their skills for others, which is often considered as a potential advantage of hiring them (Erdogan et al., 2020). In other words, overqualified employees may engage in voice behavior toward peers, which will help them exhibit higher creative performance.

According to conservation of resources theory, individuals have the tendency to obtain, maintain, cultivate, and protect their cherished resources (Hobfoll, 1989). The perception that individual resources are wasted caused by overqualification may have a negative impact on the work attitude and behavior of employees (Arvan et al., 2019; Cheng et al., 2020). However, the conditional resources provided by environment and individual resources are not independent, but to jointly affect employees' attitude and behavior (Hobfoll et al., 2018). Employees are embedded in the work team, investigating and assessing the behavior and performance of overqualified employees require consideration of their social environment (Jahantab et al., 2021). Peer group perceived overqualification represents the degree of similarity between overqualified employees and their peers (Hu et al., 2015). Similar qualifications to peers may enhance the sense of belonging of overqualified employees to the team, so as to encourage them to actively interact with peers and actively put forward suggestions that can improve peers' work (Chu, 2021). Therefore, we predict that perceived overqualification will interact with peer group perceived overqualification to determine employee voice behavior toward peers.

Taken together, the current study seeks to make three contributions to the literature. First, we attempt to supplement and enrich the research on the positive results of overqualification by revealing that overqualified employees may show higher creative performance. Second, the few studies on the positive outcomes of overqualification mainly capture the perspective of person–environment (P–E) fit theory and self-representation theory (Li et al., 2019; Erdogan et al., 2020). Based on the conservation of resources theory, this study will provide a new perspective and ideas for understanding the positive results of overqualification

by taking voice toward peers as an explanation mechanism for the impact of perceived overqualification on creative performance. Finally, previous studies mainly focused on the individual experience of overqualified employees (Dar and Rahman, 2020; Lee et al., 2021; Schreurs et al., 2021), largely ignoring the impact of team members on the overqualified employees' attitude and behavior. This study expands the research of overqualification by taking peer group perceived overqualification as the boundary condition.

THEORY AND HYPOTHESES

The Moderating Role of Peer Group Perceived Overqualification on Perceived Overqualification and Voice Toward Peers

The conservation of resources theory (Hobfoll et al., 2018) holds that individuals have the tendency to preserve, protect and obtain the resources they think valuable, such as material, time, and qualification. Whether the threat of potential resource loss or the actual resource loss will lead to the avoidance behavior of employees. In addition, the conservation of resources theory also proposes that the situation of resource loss will enlarge the value of resources, and the resources obtained during resource loss have greater positive kinetic energy. Overqualification means that employees' knowledge and skills are not fully utilized, which makes employees feel and recognize that their rich human capital is wasted, and the subsequent negative emotions will consume a lot of mental resources of overqualified employees (Lobene and Meade, 2013; Maynard et al., 2015; Erdogan et al., 2018). Similar to team members can supplement critical psychological resources for individuals, such as a sense of belonging (Chu, 2021). Depending on conservation of resources theory, overqualified employees who obtain resources may take positive behavior. Consequently, we believe that peer group perceived overqualification will affect the relationship between perceived overqualification and voice toward peers.

When the level of peer group perceived overqualification is high, overqualified employees may think they are a member of the team, resulting in a sense of belonging and trust in the work team (Chu, 2021), which increases employees' emotional and social resources. The increase of supportive social resources enables overqualified employees more willing to exchange work-related professional knowledge and experience with peers and put forward constructive opinions on peers' work (Shih and Wijaya, 2017). In addition, the similar level of qualification between overqualified employees and peers may become an adhesive to encourage them to appreciate each other (Hu et al., 2015). The harmonious atmosphere within the team makes overqualified employees feel that giving advice to peers will not be misunderstood and rejected by peers, and their opinions will be valued even if there are differences of opinion (Shih and Wijaya, 2017).

On the contrary, if an employee feels that he or she is one of the few overqualified people in the group, the focal employee may stay away from their peers and experience more negative emotions (Li et al., 2022). Putting forward suggestions and trying

to change the status quo are social risks, which require time and energy (Detert and Burris, 2007). Therefore, overqualified employees will protect their existing social capital and prevent further loss of resources by inhibiting their voice behavior toward peers. Moreover, the difference between overqualified employees and their peers lead to nervousness of interpersonal relationships in the team (Sierra, 2011). The low trust and low emotional connection among team members in a tense atmosphere may cause overqualified employees to give up their voice toward peers for fear of causing conflicts with peers and damaging their social support resources (Shih and Wijaya, 2017). Based on the above arguments, we propose the following hypothesis.

> *H1*: Peer group perceived overqualification moderates the relationship between perceived overqualification and voice toward peers, such that this link is positive (*vs.* negative) when peer group perceived overqualification is high (*vs.* low).

Voice Toward Peers and Creative Performance

The conservation of resources theory may be particularly useful in explaining how voice toward peers is related to the implementation of new ideas and creative performance (Ng and Feldman, 2012). Various resources are needed in the creative process, including psychological and cognitive resources, and rich resources can make individuals more creative (Shalley and Gilson, 2004).

From the perspective of cognitive resources, employees involved in problem identification have a more accurate understanding of work, so they can put forward more useful and unique ideas (Yang et al., 2021). Besides, employees can get feedback on their opinions from other people in the team, and obtain additional information and knowledge by speaking out (Shih and Wijaya, 2017), so then further promote the generation of divergent thinking in the process of creative cognition.

From the perspective of psychological resources, voice is an indicator of good citizenship, employees who exhibit voice behavior toward peers are more likely to attract attention, get more appreciation, more respect, and higher evaluation from their peers, thus improving their confidence (Chen and Hou, 2016). Studies have shown that confident employees are more likely to generate new ideas (Steele et al., 2018). Furthermore, when employees express their views and concerns to peers,

they are likely to experience positive emotions by truthfully speaking their views and acting according to their beliefs and values (Avey et al., 2012). Employees with positive emotions are more inclined to think creatively and divergently, thereby showing high creative performance (Song et al., 2017).

To summarize, voice toward peers can obtain the cognitive resources (information) and psychological resources (self-confidence and positive emotion) required for creative process, integrating and utilizing these resources will promote the creative performance of the speaker. Hence, we propose that voice toward peers has a positive impact on creative performance.

> *H2*: Voice toward peers is positively related to creative performance.

Finally, in order to summarize the previous assumptions, we expect voice toward peers to mediate the relationship between perceived overqualification and creative performance. Perceived overqualification and peer group perceived overqualification should interact to affect voice toward peers. The degree to which they participate in discretionary actions that making constructive comments to peers should in turn relate to the individual's creative performance. Perceived overqualification is expected to have positive indirect effects when peer group perceived overqualification is high and negative indirect effects when peer group perceived overqualification is low.

> *H3*: Peer group perceived overqualification moderates the indirect effect of perceived overqualification on creative performance through voice toward peers, such that this indirect effect is positive (*vs.* negative) when peer group perceived overqualification is high (*vs.* low).

The overall studied relationships are shown in **Figure 1**.

MATERIALS AND METHODS

Sample and Procedure

We collected data at multiple times (T1, T2, and T3) by combining field survey and online questionnaire survey. Participants came from a manufacturing enterprise, a communication enterprise, and a financial enterprise in Shandong Province, China. We contacted the heads and human resources directors of these

FIGURE 1 | Study model.
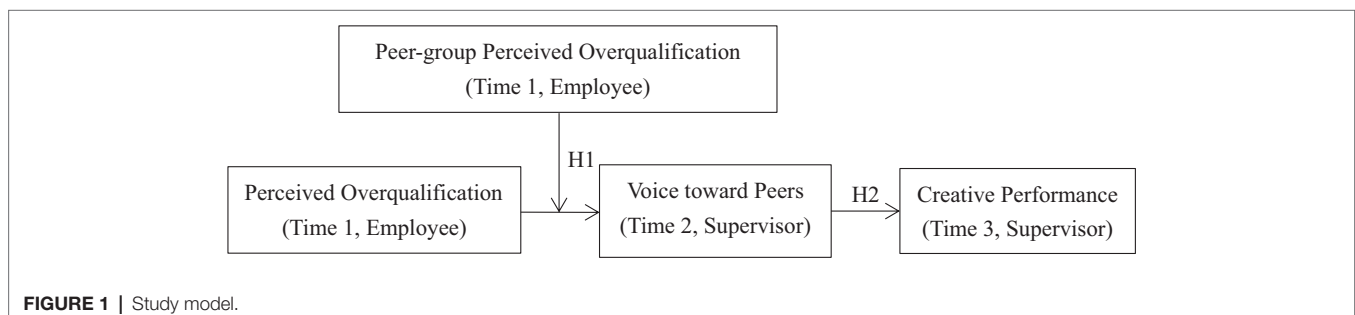
enterprises and introduced the purpose of the research, then obtained the support of them. Through preliminary interviews, we found that the recruitment requirements of these companies were relatively high in the industry, such as the level of education, but the salary has no obvious advantage. These characteristics make the participants suitable for our research.

Due to the uncertainty of employee access of computers, in order to ensure the collection of sufficient data, we used paper surveys to collect data at T1. We randomly invited 320 subordinates to fill in the questionnaires in the conference room in batches from the list of incumbents provided by the human resources department of each company. We assigned a unique number to each employee and recorded the names of them and their direct supervisors. We distributed the questionnaire by one-to-one correspondence between the questionnaire number and the employee number, and ensure that the correct number is listed in each survey to match the surveys at different times. We explained that the survey conclusions are only used for academic research and the survey results will be completely confidential to reassure the participants. More importantly, we encouraged employees and their direct supervisors to provide a valid e-mail address or WeChat ID (the popular Chinese mobile messenger app) and to actively participate in the second stage of online research. After each survey, we launched a raffle online and sent the link of the raffle to each participant's e-mail or WeChat to increase the response rate. The winner of the raffle was eligible for one of three alternative prizes, which including a phone, tablet, or trendy shoes.

Three hundred employees filled out the survey that contained demographic characteristics and overqualification ratings at Time 1, with a response rate of 93.75%. In order to improve the efficiency of our research, we used an online survey website (Wenjuanxing, the Chinese version of Qualtrics) to conduct the survey 1 month later (T2). Drawing on previous studies on overqualification (Chu, 2021), we chose a 1 month interval to conduct the investigation to reduce the priming effects. Wenjuanxing generated a unique ID for each questionnaire, which was used along with the participant's work number and e-mail address to match the online questionnaire to the paper questionnaire. Then, we emailed the link of the questionnaire to the immediate supervisors of the employees who completed the first survey and provided a list of names that matched the code for them to rate. After receiving the questionnaire, 61 supervisors rated voice behavior toward peers of 238 employees. One month later (T3), the 54 supervisors were asked to complete the third phase of the investigation using the same channels as T2. Then, a total of 54 supervisors rated the creative performance of 207 subordinates. Our final sample consisted of 206 subordinates and 53 supervisors after removing invalid dyads, constituting an overall response rate of 68.67%. Of the 206 subordinates, 164 (79.6%) were male. On average, subordinates were 33.46 years of age ($SD = 5.21$) and the working time with their supervisor was 19.44 months ($SD = 17.72$). A total of 199 (96.6%) subordinates reported that they had a junior college degree or above.

Measures

The subordinates' voice toward peers and creative performance were rated by the direct supervisors, while the perceived overqualification was rated by subordinates. The English scale was translated into Chinese by using the back translation procedure recommended by Brislin (1986). All measures were anchored on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Perceived Overqualification

Perceived overqualification was assessed using the nine-item scale developed by Maynard et al. (2006). It measures the perceived overqualification in terms of knowledge, education, and abilities. Sample items are: "I have more abilities than I need in order to do my job" and "I have a lot of knowledge that I do not need in order to do my job." Cronbach's alpha was 0.84.

Voice Toward Peers

We adopted six-item scale developed by Van Dyne and LePine (1998)[1] and followed previous research to ask supervisors to evaluate their subordinates' voice behavior toward peers (Erdogan et al., 2020). Sample items are: "This person communicates his or her opinions about work issues to colleagues even if his or her opinion is different, and colleagues disagree with him or her" and "This person gives constructive suggestions to colleagues to improve their work." Cronbach's alpha was 0.92.

Peer Group Perceived Overqualification

Peer group perceived overqualification was obtained by averaging the scores of all members of the same peer group on the perceived overqualification, after excluding the focal employee's own score. The procedure of computing the average score after excluding the focal employee's score provides an estimate of work group scores, which are not contaminated by common method variance problems caused by the use of self-reporting (Glomb and Liao, 2003). An existing study has shown that focal employees have the ability to detect the level of perceived overqualification reported by their peers (Hu et al., 2015), which provides support for us to use the average of perceived overqualification scores reported by peers to measure peer over qualification.

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[1]First, when controlling for employee age, gender, education and job tenure, the regression analysis results showed that the relationship between the interaction of perceived overqualification and peer-group perceived overqualification and voice toward peers was significantly positive ($\beta = 0.60$, $p < 0.05$); The relationship between the interaction of perceived overqualification and peer-group perceived overqualification and voice toward peers was still significantly positive ($\beta = 0.70$, $p < 0.01$) without any of the controls.

Second, the relationship between voice toward peers and creative performance was significantly positively with ($\beta = 0.55$, $p < 0.001$) and without control variables ($\beta = 0.55$, $p < 0.001$)

Finally, we found that the 95% confidence interval between the groups to test the moderated mediation effect with ($\beta = 0.55$, $p < 0.001$) and without control variables ($\beta = 0.55$, $p < 0.001$) both exclude 0 and were significant.

TABLE 1 | Model fit results for confirmatory factor analyses.

Model	χ^2	df	χ^2/df	TLI	CFI	RMSEA	SRMR	$\Delta\chi^2$
Three-factor model	81.01	41	1.98	0.96	0.97	0.07	0.04	
Two-factor model	395.45	46	8.60	0.67	0.72	0.19	0.22	314.44
Single-factor model	971.28	52	18.68	0.22	0.27	0.29	0.32	890.27

Three-factor model: conceptual model. Two-factor model: perceived overqualification and voice toward peers combined, Single-factor model: all variables combined. CFI is the comparative fit index. RMSEA is the root-mean-square error of approximation. SRMR is the standardized root-mean-square residual. TLI is the Tucker–Lewis index.

TABLE 2 | Means, standard deviations, correlations, and internal consistency coefficient.

	M	*SD*	1	2	3	4	5	6	7	8
1. Age	33.47	5.21								
2. Gender	1.20	0.40	−0.38**							
3. Education	3.86	0.67	0.08	0.13						
4. Job tenure	19.44	17.72	0.16*	−0.10	0.01					
5. POQ	2.85	0.61	−0.02	0.05	−0.04	−0.02	(0.84)			
6. Voice toward peers	3.51	0.78	−0.17*	0.06	−0.03	0.00	−0.12	(0.92)		
7. Peer group poq	2.84	0.40	−0.07	0.24**	−0.06	−0.05	0.17*	−0.11		
8. Creative performance	3.18	0.82	−0.11	−0.05	−0.04	0.05	−0.05	0.52**	−0.04	(0.90)

N = 206. gender: 1 = male, 2 = female; education: 1 = junior middle school, 2 = high school, 3 = junior college, 4 = bachelor, 5 = master, 6 = doctor. POQ = perceived over qualification.
*p < 0.05; **p < 0.01.

Creative Performance

Creative performance was evaluated by supervisors with five items adapted from the scale of George and Zhou (2002) scale. A sample items is: "This person comes up with new and practical ideas to improve performance." Cronbach's alpha was 0.90.

Control Variables

Following previous research on creative performance (Mohammed and Kamalanabhan, 2019; Wadei et al., 2021), we controlled for employee gender, age, education, and job tenure to avoid possible confounding effects. We also repeated the analyses while controlling these demographic characteristics. The results showed that there was no significant difference between the results with and without these controls. Therefore, for the sake of parsimony, we report the results without any of the controls.

RESULTS

Confirmatory Factor Analysis

Before testing hypotheses, we used Mplus7.4 for confirmatory factor analysis (CFA) to evaluate the distinctiveness between variables: perceived overqualification, voice toward peers, and creative performance. The ratio of sample size to parameters should be exceed 10:1, otherwise, incorporating all scale items into the model will lead to some parameter estimation bias (Bandalos, 2002). Therefore, we packaged the scale items to form latent factors according to the high-estimate package strategy following Rogers and Schmitt (2004). According to the results (As shown in **Table 1**), the three-factor model was better than several alternative models in CFA ($\chi^2 = 81.01$; df = 41;

RMSEA = 0.07; TLI = 0.96; CFI = 0.97), showed sufficient overall fit and high discriminative validity.

Tests of Hypotheses

The means, standard deviations, correlations between the variables and internal consistency coefficient of the scale are showed in **Table 2**. As shown in **Table 2**, voice toward peers was positively related to creative performance ($r = 0.52$, $p < 0.01$), which provides preliminary statistical support for the following hypothesis 2.

We used SPSS 22.0 for regression analysis to test H1 and H2. Hypothesis 1 predicted that peer group perceived overqualification would moderate the relationship between perceived overqualification and voice toward peers. The results presented in **Table 3** showed that the interaction between perceived overqualification and peer group perceived overqualification was a significant predictor of voice toward peers (Model 3, $\beta = 0.70$, $p < 0.01$). In order to demonstrate the nature of the moderating effect more clearly and intuitively, we plot the interaction by calculating the slope of one standard deviation above and below the mean of peer group perceived overqualification. As indicated in **Figure 2**, perceived overqualification was positively related to voice toward peers when peer group perceived overqualification at high level, and negatively related to voice toward peers when peer group perceived overqualification at low level.

Therefore, hypothesis 1 was supported.

Hypothesis 2 predicted that voice toward peers is positively related to creative performance. As shown in **Table 3**, voice toward peers was found to have a positive correlation with creative performance (Model 5, $\beta = 0.55$, $p < 0.001$). Hence, hypothesis 2 was supported.

We used the analysis method recommended by Preacher et al. (2007) to estimate the indirect effects of non-normal

TABLE 3 | Results of regression analysis.

Outcome	Voice toward peers			Creative performance	
	Model1	Model2	Model3	Model4	Model5
Perceived overqualification	−0.15	−0.13	−0.15		0.01
Peer group Perceived overqualification		−0.17	−0.38*		0.023
Interaction			0.70**		
Voice toward peers				0.55***	0.55***
R^2	0.01	0.02	0.07	0.27	0.27
$\triangle R^2$		0.01	0.05**		0.00
$\triangle F$	2.81	1.55	9.57**	76.44***	74.68***

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.*
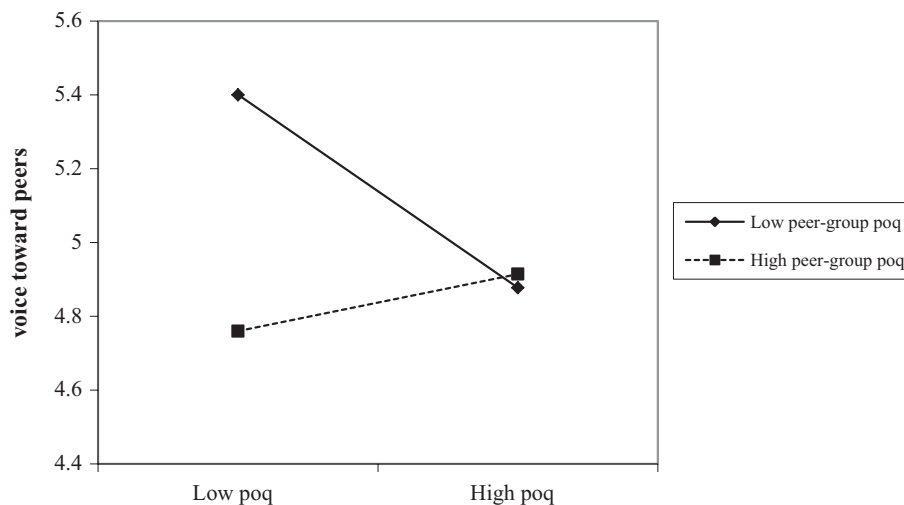
FIGURE 2 | The interaction between perceived overqualification and peer group perceived overqualification on voice toward peers.

TABLE 4 | Results of moderated mediation effect.

	β	SE	95% confidence interval	
			Lower limit	Upper limit
Conditional indirect effect				
High peer group poq (+1 SD)	0.07	0.06	−0.03	0.20
Low peer group poq (−1 SD)	−0.24	0.08	−0.41	−0.10
Diff	0.31	0.10	0.13	0.53

High and low refer to one standard deviation above and below the mean value of peer group perceived overqualification. β and SE refer to the unstandardized parameter estimates and their corresponding standard errors, respectively.

distribution. 95% confidence intervals were calculated to test the moderated indirect effects by using 5,000 repeated parameter sampling. **Table 4** revealed that when peer group perceived overqualification at high level, the relationship between perceived overqualification and creative performance through voice toward peers was not significantly positive

[$\beta = 0.07$, 95% confidence interval (−0.03, 0.20)]; however, when peer group perceived overqualification at low level, the relationship between perceived overqualification and creative performance through voice toward peers was significantly negative [$\beta = -0.24$, 95% confidence interval (−0.41, −0.10), excluding 0]. The difference between the two groups was significant, and the 95% confidence interval [0.13, 0.53], excluding 0, showed that the indirect effects are certainly different when peer group perceived overqualification at different level. Consequently, Hypothesis 3 was supported.

DISCUSSION

Based on the conservation of resource theory, we constructed a theoretical model of perceived overqualification and creative performance. We further explore the mediating role of voice toward peers on the relationship between perceived overqualification and creative performance, as well as the moderating role of perceived overqualification in influencing the mediation.

Using data from employees in China gathered across three time periods from three enterprises, we found support for our model. The results revealed that peer group perceived overqualification moderated the relationship between perceived overqualification and voice toward peers. Interestingly, perceived overqualification negatively affected voice toward peers when peer group perceived overqualification at low level and positively affected voice toward peers when peer group perceived overqualification at high level. Furthermore, we find that peer group perceived overqualification moderated the indirect effects of perceived overqualification on creative performance *via* voice toward peers. Notably, the indirect effect was negative only when peer group perceived overqualification at low level and became insignificant when peer group perceived overqualification at high level.

Theoretical Implications

First, we promote the research of overqualification theoretically and empirically by identifying creative performance as the potential positive outcome of overqualification. The existing literature on overqualification gives a large number of negative descriptions of overqualified employees, because the field has mainly relied on equity theory and relative deprivation theory (Cheng et al., 2020; Schreurs et al., 2021). In fact, overqualified employees have more knowledge and skills, which may be beneficial to the organization (Sikora et al., 2016). However, the research on perceived overqualification and positive outcomes has been largely ignored. Moreover, the relationship between overqualification and employees' task performance is inconsistent (Li et al., 2019; Lee et al., 2021). This study can theoretically explain the inconsistent results to a certain extent by exploring the influence mechanism of perceived overqualification on creative performance from the perspective of resources.

In addition, this study deepens the understanding of the positive results of overqualification and provides a new perspective and new ideas for future research. Although a few studies have explored the possible positive effects of overqualification based on person–environment (P–E) fit theory and self-representation theory (Li et al., 2019; Erdogan et al., 2020), to some extent, they ignore the process of obtaining resources in the interaction between individuals and peers. However, we find that resources are an indispensable key factor involved in creative processes (Shalley and Gilson, 2004). Therefore, based on the conservation of resource theory, the present study introduces voice toward peers as an interpretation mechanism between perceived overqualification and creative performance, which provides a valuable supplement to the literature. At the same time, we respond to the call to explore the theoretical mechanism behind the relationship between overqualification and creativity (Luksyte and Spitzmueller, 2016).

Another noteworthy implication is that our study further identifies the peer group perceived overqualification as an important boundary condition of overqualification–creative performance. Previous research has revealed overqualification to be both dysfunctional (Simon et al., 2019) and functional (Zhang et al., 2016). However, these studies did not consider

the membership of the staff in the team, nor did they incorporate the team background into the research model. We extend the existing literature by exploring how peer group perceived overqualification affects the voice behavior of overqualified employees to their peers. As our empirical results show that peer group perceived overqualification changed the negative effect of perceived overqualification on voice toward peers, indicating that contextual factors can be implemented to mitigate the negative consequences of overqualification. Furthermore, the findings of the research contribute to theory building of perceived overqualification through distinguishing perceived overqualification as an individual characteristic from the perception of overqualification that occurs in teams.

Practical Implications

In addition to the theoretical and empirical contributions discussed above, we offer several practical implications for both organizational management and human resource practices. The higher productivity and possible knowledge spillover effects of overqualified employee offset the cost of employment (Jones et al., 2009; Pouliakas, 2013), and such hiring decision may bring benefits in the form of voice behavior toward peers and creative performance if managed appropriately, although it may be associated with some risks. Our results reveal that perceived overqualification positively affects creative performance through voice toward peers when peer group perceived overqualification at high level. Therefore, managers should keep in mind that need not deliberately screen out such applicants when recruiting employees, but to pay more attention to overqualified employees, because they tend to have more favorable reactions toward peers and make more contributions to organization when they working with similarly overqualified peers. Managers should be aware that they can promote overqualified employees' voice behavior toward peers and creative performance if they strive to strategically position overqualified employees in the organization and group these similar employees several overqualified employees into a team. Further, managers also should encourage overqualified individuals to cooperate actively with their peers and benefit others to build team spirit. Finally, managers should carry out some activities outside the workplace to strengthen the communication between overqualified employees and their peers, so as to enable them to establish a good interactive relationship. By doing so, overqualified employees can apply their underutilized qualifications to support the group and improve their creative performance by demonstrating voice behavior toward peers.

Limitations and Future Research

Like any other study, the present study has some limitations should be noted. First, although the examined variables were measured at three periods, the design of time-lagged still cannot set up causality explicitly for all paths in our model. We recommend that future studies to extend our study using longitudinal designs or experiments to rule out the reverse causality in a more rigorous manner.

Second, although we controlled for employee age, gender, education, and job tenure, the results have no significant

difference with and without control variables. Future research can take other factors that may affect voice behavior and creative performance as control variables, such as the exchange quality of leader–members and organizational identification (Olsson et al., 2012; Wang et al., 2018).

Third, although our study examined a mechanism links perceived overqualification with creative performance in which voice toward peers as a mediator and peer group perceived overqualification as a boundary condition, other factors may affect the relationship we examined. More research is needed to examine other potential moderators to reduce the negative effects of hiring overqualified employees, for example, empowering leadership may help the overqualified employees to establish a more positive psychological state, give them full opportunities for growth, and provide needed help and guidance to promote the overqualified employees to exert their redundant qualifications (Hon and Chan, 2013).

Finally, the data of 53 groups from different industries are used in this study and the level of excess qualification and creative forms may be different. Therefore, the conclusion of this study can be further verified for a certain industry or a certain type of employees in the future. In addition, the study was conducted in China with collective cultural characteristics (Hofstede, 2001), further cross-cultural research is needed to explore whether the results of this study are applicable in other cultural backgrounds. To extend our finding, future studies should consider variables at the national level, explore the generalizability of our results in different countries which have different economic conditions, different educational level, and different universality of overqualification.

CONCLUSION

In this study, we based on conservation of resources theory to examine the moderating effect of peer group perceived overqualification and mediating effect of voice toward peers on

the relationship between perceived overqualification and creative performance by using a Chinese sample and also clarify important implications for future research and practice. A reasonable extension of our research results is that managers can stimulate employees' voice behavior toward peers and improve their creative performance by pairing overqualified employees. Such effort is worthwhile, both for the individuals and for the organization.

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 Institutional Review Board of Shanghai University, China. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

YiL, YanL, PY, and MZ designed the study and revised the draft. YiL and PY collected the data. YanL drafted the theory and results. MZ drafted the methods. All authors contributed to the article and approved the submitted version.

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Transformational and Transactional Leadership in the Polish Organizational Context: Validation of the Full and Short Forms of the Multifactor Leadership Questionnaire

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The Multifactor Leadership Questionnaire (MLQ 5X Short) is the most frequently used leadership measure in scholarship and organizational practice. However, so far it has not been validated in the Polish context. Therefore, the present study aimed to validate and shorten the MLQ (5X Short) in the Polish organizational setting. A total sample of 1,065 employees (572 women and 493 men) from different organizations took part in two sessions of an online study. Respondents were between 18 and 70 years old ($M = 40.1$; $SD = 12.9$) with an average job tenure of 17.00 years ($SD = 12.1$). In subsample 1 ($n = 539$), using exploratory factor analysis, a three-factor structure of the MLQ full form (MLQ-FF) was established, comprising transformational-supportive, inspirational goal-oriented, and passive-avoidant leadership. Based on qualitative (i.e., content analysis) and quantitative criteria (psychometric parameters), we constructed an 18-item MLQ short form (MLQ-SF). Both forms were supported by the confirmatory factor analysis in subsample 2 ($n = 526$). The MLQ-FF and MLQ-SF factors displayed acceptable to high levels of item-related parameters (e.g., intra-class, inter-item, and item-total correlations), as well as scale-related reliability (e.g., internal consistency, temporal stability). Both forms indicated high convergent and predictive validity examined by correlations with authentic leadership and employee's work outcomes (i.e., work satisfaction, work effectiveness, work engagement, and organizational commitment) (subsample 3; $n = 691$). Our study provided the full and the short form of the MLQ as reliable and valid instruments, potentially suitable to measure leadership styles in academic research and organizational practice.

Keywords: transformational-transactional leadership, MLQ, short form, employee's work outcomes, validation

INTRODUCTION

Transformational leadership theory, also referred to as full range leadership (FRL), has dominated the leadership field for over three decades (Avolio and Bass, 2004). The theory has shifted the long-standing scholarly focus from studying the mere economic goals of organizations to leadership behavior and human relations that play a central role in achieving long-term organizational

outcomes (Bass, 1990). Within the scope of the FRL model, the Multifactor Leadership Questionnaire (MLQ) was developed to gauge leaders' behavior, ranging from transformational through transactional to laissez-faire, all of which are fundamental to leadership effectiveness (Bass and Bass, 2008). Transformational leadership pertains to the role modeling behaviors of a leader who seeks to transform her followers' attitudes and behaviors to perform beyond expectations. Transactional leadership is focused on reciprocal relationships of providing benefits for delivering performance. While transformational leadership is morale-uplifting, motivating, and inspiring, the transactional attitude exemplifies rather goal-oriented focus utilizing contingent rewarding. Laissez-faire leadership is usually considered as absence of leadership, and for the most part, is thought to negatively influence followers (Bass and Riggio, 2006).

The MLQ (5X Short), the most frequently used instrument in leadership research, includes nine dimensions of idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, individualized consideration, contingent reward, active management-by-exception, passive management-by-exception, and laissez-faire (Avolio and Bass, 2004). It measures five components of transformational leadership, three components of transactional leadership, and a laissez-faire style. The MLQ (5X Short), albeit not free from criticism (van Knippenberg and Sitkin, 2013; Batista-Foguet et al., 2021), has been primarily acknowledged as reflecting a full spectrum of transformational and transactional leadership styles (Antonakis et al., 2003). However, the structure of the MLQ (5X Short) and its previous versions, subjected to extensive factorial evaluations, has demonstrated inconsistent results across numerous studies that we comprehensively reviewed and presented in **Table 1**.

The findings summarized in **Table 1** demonstrate a significant scholarly effort to determine the high level of ecological validity of the MLQ (5X Short) and its previous forms. Some studies, conducted mainly in the North American context, attested the nine dimensions of the MLQ (5X Short) as best describing the theoretical FRL model. Other studies have uncovered different factorial solutions. Overall, they present a multidimensional nature of the transformational-transactional leadership and indicate that one universal model had not been conclusively agreed upon. The inconsistencies among studies' outcomes partly resulted from modifications to the MLQ (5X Short) and previous versions of the instrument. Some researchers merged scales and reassigned items between scales to achieve satisfactory fit indices and find the most suitable solution for their dataset. Attempts were also made to shorten the MLQ (5X Short) scale, and despite satisfactory psychometric properties, the abbreviated solutions were not further tested (Den Hartog et al., 1997; Heinitz et al., 2005; Kanste et al., 2007; Edwards et al., 2012).

Consequently, various factors were lost between studies, making it difficult to compare the results. Other sources of low consistency across studies were associated with the contextual characteristics of the research (Bycio et al., 1995; Den Hartog et al., 1997; Edwards et al., 2012). For instance, Antonakis et al. (2003) indicated industry, businesses, groups'

heterogeneity vs. homogeneity, and the interactions between the leader and follower gender as potential contexts that influence the variations in the MLQ (5X Short) modeling. In sum, the MLQ (5X Short) received both support and criticism together with claims to refine the factors reflecting transformational and transactional constructs. It thus seems essential to evaluate the relevance and applicability of the MLQ model in a new national and organizational context, specifically to this study – the Polish organizations.

Noteworthy, the FRL model corresponds to other leadership constructs. In particular, the transformational component alludes to servant (Banks et al., 2018; Lee et al., 2020), ethical (Riggio et al., 2010), empowering (Lee et al., 2018), and authentic leadership styles (Avolio and Gardner, 2005; Lee et al., 2020). These concepts emphasize strong values, morals, ethics, and leaders' authentic attitudes toward their followers, organizations, and constituents (Banks et al., 2018). However, servant, ethical, and authentic leadership emphasize leader character rather than managerial competencies, whereas transformational-transactional leadership holds both qualities (Bass and Bass, 2008). Furthermore, in some instances, transformational leadership may be less authentic, but may never be inauthentic (Bass and Steidlmeier, 1999). Just as transformational-transactional leadership serves as the facilitator of positive work-related attitudes (Judge and Piccolo, 2004) so has authentic leadership been found to strongly relate to employees' job satisfaction, happiness, greater productivity, trust, and more positive working environment (Avolio and Gardner, 2005). Since authentic leadership contributes to open, truthful, and productive work atmosphere (Duarte et al., 2021), we assumed it holds great value for testing the convergent validity of the MLQ (5X Short) in the Polish context.

Thereto, empirical evidence has consistently demonstrated the significant role of the FRL model in predicting employee's outcomes, such as work performance across different types and criteria (Wang et al., 2011; Hetland et al., 2018; Steinmann et al., 2018; Lai et al., 2020; Ge et al., 2022), work satisfaction (Bass et al., 2003; Nohe and Hertel, 2017; Kammerhoff et al., 2019), trust in the leader (Breevaart and Zacher, 2019), work engagement (Tims et al., 2011; Miao et al., 2012), work motivation (Kanat-Maymon et al., 2020), and organizational commitment (Keegan and Hartog, 2004; Cho et al., 2019). The mechanisms explaining these relationships rely on assumptions that transformational-transactional leadership elicits general positive job attitudes of employees (Judge and Piccolo, 2004). In the same vein the exchange processes between leaders and employees are based on mutual trust which develops due to joint experiences (Nohe and Hertel, 2017; Breevaart and Zacher, 2019). In sum, transformational-transactional leadership is acknowledged as the wide-ranging leadership approach that facilitates conditions to create inclusive workplaces and positive outcomes for organizations (Bass and Riggio, 2006). These relationships serve as evidence for predictive validity of the MLQ (5X Short). It is thus our intention to uncover the predictive effectiveness of the FRL model in Polish organizations.

Although the MLQ (5X Short) is the most frequently used leadership measure in contemporary scholarship and practice,

TABLE 1 | Factor structure of the MLQ – review of studies.

References	MLQ form	Participants	MLQ models tested	Results	Comments
Bass (1985)	Form 1 73 items Rater form	USA; Senior executives $N = 70$ U.S. Army colonels $N = 196$	Exploratory factor analysis (EFA)	*6 factors*: 1.CH; 2.IS; 3.IC; 4.CR; 5.MBE; 6.Passive.	• Out of 143 items, 73 were extracted. • CH, IS, IC represented transformational CR, MBE - transactional leadership.
Hater and Bass (1988) Correlational study	Form 5 73 items Rater form	USA Delivery company $N = 362$	EFA	*6 factors:* 1.CH; 2.IC; 3.IS; 4.CR; 5.MBEA; 6.MBEP.	• MBE was split into active and passive dimensions.
Howell and Avolio (1993) Correlational study	Form 10 67 items Rater form	Canada Financial institution $N = 322$	EFA	*5 factors:* 1.Transformational (CH; IS; IC); 2.CR; 3.MBEA; 4.MBEP; 5.LF.	• EFA reduced the number of items to 31.
Yammarino et al. (1993) Longitudinal study	Form 1 44 of 73 items Rater form	USA US Navy Officers, $N = 186$ Subordinates of focal officers, $N = 793$	CFA: first-order factor model: 9-factors: CH; IC; IS; INSP; CP; CR; MBEA; MBEP; LF. EFA CFA: first-order factor model: 5-factors	*EFA: 5 factors*: 1.Transformational (CH, INSP, IS); 2.Transactional (CP, CR, IC); 3.MBEA; 4.MBEP; 5.LF. *CFA: 5 first-order factors*: 1.Transformational (CH, INSP); 2.Transactional (CP, CR, IC); 3.MBEA; 4.MBEP; 5.LF.	• To fit the military context the number of items was reduced to 44. • The 5-factor model included 27 items.
Druskat (1994) Correlational study	Form 8Y 40 items Rater form	USA Roman Catholic Church $N = 6,359$	EFA	*5 factors:* 1.CH, IC; 2.IS, INSP; 3.LF, MBEP; 4.CR; 5.MBEA.	• CH, IC, IS, INSP collapsed into 2 transformational factors. • MBEA and CR formed 2 transactional factors. • LF and MBEP formed one factor.
Tepper and Percy (1994) Validation study	Form X 24 of 73 items Rater form	USA S1[a]: Undergraduates/part-time and full-time employees $N = 290$ S2: Financial institutions managers $N = 90$	CFA S1: First-order factor model: (24 items): null, 1-, 2-, 8-factors; - (16 items): null, 1-, 2-, 4-, 5-factors. S2: Higher-order factor model (16 items): null, 1-, 2-, 3-factors	S1: *4 first-order factors:* 1.(CH, INSP); 2.CR; 3.IC; 4.IS. *5 first-order factors:* 1.CR; 2.CH; 3.INSP; 4.IC; 5.IS. S2: *2 higher-order factors:* 1.CH_I, CH_II, INSP_I, INSP_II; 2.CR.	• S1: the 24-item solutions were not acceptably fitted to the data. • The 4- and 5-factor models (16-items) were well fitted to the data. • More parsimonious 4-factor model was accepted. • S2: the 2- and 3-factor models were well fitted to the data. • More parsimonious 2-factor model was accepted.
Koh et al. (1995) Correlational study	Form 5S 73 items Rater form	Singapore Educational institution $N = 844$	EFA	*5 factors:* 1.CH, IC, IS; 2.CR; 3.MBEA; 4.MBEP; 5.LF.	• Seven factors emerged with eigenvalues above 1. • Due to interpretability a 5-factor model was accepted.
Bycio et al. (1995) Validation study	Form 1 40 of 73 items Rater form	Canada Registered nurses, health services, $N = 1,376$	CFA First-order factor models: null, 1-, 2-, 2- 5-factor	*5 first-order factors:* 1.CH; 2.IC; 3.IS; 4.CR; 5.MBE. *2 first-order factors:* 1.Active (CH, IC, IS, CR); 2.Passive (MBE).	• The 5-factor model was acceptably fitted to the data. • A simpler 2-factor of *active* vs. *passive leadership* solution was recommended.

(Continued)

TABLE 1 | Continued

References	MLQ form	Participants	MLQ models tested	Results	Comments
Avolio et al. (1995)[b] Validation study	Form 5X 36 items Rater form	USA Various companies $N = 1,394$	CFA First-order factor models: null, 1-, 2-, 3-, 6-, 7-, 8-, 8-, 9- factor.	*8 first-order factors:* 1.CH (IIA, IIB); 2.IM; 3.IS; 4.IC; 5.CR; 6.MBEA; 7.MBEP;8.LF. *9 first-order factors*: 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.MBEP; 9.LF.	• From among nine different models tested, the 8- and a 9-factor model were most adequately fitted to the data.
Den Hartog et al. (1997) Validation study	Form 8Y 40 items Rater form	Netherlands Various companies $N = 1,200$	EFA	*4 factors:* 1.Transformational (CH, INSP, IS, IC); 2.CR; 3.MBEA; 4.Passive (MBEP, LF). *3 factors:* 1.Inspirational (CH, INSP, IS, IC); 2.Rational-objective (CR, MBEA); 3.Passive (MBEP, LF).	• The 2-, 3-, 4- factor solutions were all well-interpretable.
Lievens et al. (1997) Correlational study	Form 8Y 40 items Rater form	Netherlands Various companies $N = 319$	EFA	*7 factors:* 1.(CH; INSP); 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP; 7.LF. *4 factors:* 1.Transformational (IS, IC, INSP); 2.CR; 3.MBEA; 4.Passive (MBEP, LF).	• Due to eigenvalue criteria, factor loadings, interpretability, and meaning, the 4-factor model was accepted. • The 4-factor solution included 30 items.
Geyer and Steyrer (1998) Correlational study	Form 5R 67 items Rater form	Austria Banks $N = 376$	CFA First-order factor model: 7-factor. EFA	*4 first-order factors*: 1.Core transformational (CH, IS, IM, IC[5]); 2.Individualized consideration (IC, CH); 3.Contingent reward (CR, IC); 4.Management -by-exception (MBE).	• The 4-factor model was revealed in EFA (67 items) and confirmed in CFA (35 items).
Avolio et al. (1999) Validation study	Form 5X 80 items Rater form	USA US and foreign companies, $N = 3,786$	CFA First-order factor models: null, 1-, 2-, 2-, 3-, 4-, 5-, 6-, 7- factor. Higher-order factor models: 2-, 3-, 3-factor.	*6 first-order factors:* 1.CH (IIA, IIB); IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP, LF. *3 higher-order factors:* 1.Transformational (CH, IS), 2.Developmental /transactional (IC, CR), 3.Corrective-avoidant (MBEA, MBEP, LF).	• Fourteen independent samples were analyzed. • The number of items was reduced to 36.
Tejeda et al. (2001) Validation study	Form 5X 27 of 36 items Rater form	USA Various companies S1: $N = 384$, S2: $N = 398$, S3: $N = 486$, S4: $N = 199$	CFA First-order factor models: 9 factors (36 and 27 items) Higher-order factor model: 3-factor.	*9 first-order factors (27 items):* 1.AC; 2.II; 3.INSP; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.MBEP; 9.LF. *3 higher-order factors (27 items):* 1.Transformational (AC, II, INSP, IS, IC); 2.Transactional (CR, MBEA, MBEP); 3.LF.	• Higher-order structure of the 27-item MLQ was supported in one sample only.
Vandenberghe et al. (2002) Validation study	Form 5X 50 items Rater form	Belgium Hospital nurses, $N = 1059$	CFA First-order factor models: null, 1-, 2-, 2-, 2-, 3-, 6-factor.	*6 first-order factors:* 1.MBEP; 2.MBEA; 3.CR; 4.Attributed CH; 5.IS; 6.IC. *1 higher-order factor* (Attributed CH, IS, IC, CR).	• Test for higher-order factor was restricted to transformational and CR, due to negative correlation between MBEA and MBEP (-0.41).

(Continued)

TABLE 1 | Continued

References	MLQ form	Participants	MLQ models tested	Results	Comments
Bass et al. (2003) Correlational study	Form 5X 36 items Rater form	USA US Army $N = 1,340$ $N = 1,335$	CFA First-order factor models: 6-factor.	*6 first-order factors:* 1.CH (IIA, IIB); IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP, LF.	• The 6-factor model was tested on 18 platoons and retested on a target sample of 72 platoons.
Antonakis et al. (2003) Validation study	Form 5X 36 items Rater form	USA Various companies S1: $N = 3,368$ S2: $N = 6,525$	CFA First-order factor models: 1-, 2-, 3-, 3-, 6-, 7-, 8-, 8-, 9-factor.	*3 first-order factors:* 1.Transformational; 2.Transactional; 3.Laissez-faire. *3 first-order factors:* 1.Transformational (IIA, IIB, IM, IS, IC); 2.Transactional (CR, MBEA); 3.Passive (MBEP, LF) *6 first-order factors:* 1.IIA, IIB, IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.Passive (MBEP, LF). *7 first-order factors:* 1.IIA, IIB, IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP; 7.LF. *8 first-order factors:* 1.IIA, IIB; 2.IM; 3.IS; 4.IC; 5.CR; 6.MBEA; 7.MBEP; 8.LF. *8 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.Passive (MBEP, LF). *9 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.MBEP; 9.LF.	• The 9-factor model was confirmed in S1 and S2, homogenous gender samples, in different contexts and samples: high-risk conditions, stable business conditions, majority males, majority females, lower-level leaders. • The 9-factor model has shown the best fit indices.
Rowold (2005) Validation study	Form 5X 36 items Rater form	Germany Government, managers, manufacturing, public transportation, students $N = 1,267$	CFA First-order factor models: null, 1-, 2-, 3-, 3-, 5-, 6-, 7-, 8-, 9-factor.	*9 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.MBEP; 9.LF. *3 first-order factors:* 1.Transformational (IIA, IIB, IM, IS); 2.Transactional (IC, CR, MBEA); 3.Passive (MBEP, LF). *5 first-order factors:* 1.Transformational (CH; IS; IC); 2.CR; 3.MBEA, 4.MBEP; 5.LF *6 first-order factors:* 1.CH (IIA, IIB); IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP, LF. *7 first-order factors:* 1.CH; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP; 7.LF. *8 first-order factors:* 1.IM; 2.II; 3.IS; 4.IC; 5.CR; 6.MBEA; 7.MBEP; 8.LF.	• All confirmed models displayed excellent fit indices.

(Continued)

TABLE 1 | Continued

References	MLQ form	Participants	MLQ models tested	Results	Comments
Heinitz et al. (2005) Validation study	Form 5X 36 items Rater form	Germany Public administration S1: N = 1,311 S2: N = 879 S3: N = 650	CFA First-order factor models: 3-, 4-, 9-factor.	*3 first-order factors* (13 items): 1.Charismatic goal-orientation (IIB, IM, CR); 2.Passive-avoidant (MBEP, LF); 3.MBEA.	• In S1 and S2 the 9-factor model was not confirmed. In S2, 3-factor model was extracted. • In S3, due to eigenvalue and interpretability 4 factors (21 items) were not accepted, but • The 3-factor model (13 items) was confirmed.
Kanste et al. (2007) Validation study	Form 5X 36 items Rater form	Canada Nurses N = 601	EFA/ CFA First-order factor models: 1-, 2-, 2-, 3-, 6-, 7-, 8-factor.	*EFA: 3 factors (31 items):* 1.Rewarding transformational; 2.Passive laissez-faire; 3.Active management by exception *CFA: 6 first-order factors (25 items):* 1.IIA, IIB, IM; 2.IS; 3.IC; 4.CR; 5.MBEA; 6.MBEP, LF.	• EFA resulted in 3 factors including 31 items. • A modified, 25-item six-factor model was accepted.
Muenjohn and Armstrong (2008) Validation study	Form 5X 36 items Rater form	Australia Community sample, N = 138	CFA First-order factor models: 1-, 3-, 9-factor.	*9 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC; 6.CR; 7.MBEA; 8.MBEP; 9.LF.	• Due to small sample size CFA resulted in low fit indices of the tested models. • The 9-factor model was accepted.
Alonso et al. (2010) Validation study	Form 5X 36 items Rater form	Spain Various companies N = 954	CFA First-order factor models: 1-, 2-, 3-, 3-, 3-, 4-, 6-, 9-factor.	*4 first-order factors:* 1.Transformational (IIA, IIB, IM, IS); 2.Developmental/transactional (IC, CR), 3.Corrective (MBEA); 4.Passive/avoidant (MBEP, LF).	• Authors highlighted parsimony of the 4-factor model.
Edwards et al. (2012) Validation study	Form 5X 36 items Self/rater forms)	UK manufacturing companies N = 1,244	EFA/CFA First-order factor models: null, 1-, 2-, 2-, 3-, 3-, 3-, 4-, 5-, 6-, 7-, 9-factor.	*3 first-order factors:* 1.Active-constructive (IIA, IIB, IM, IS, IC, CR); 2.MBEA; 3.Passive-avoidant (MBEP, LF).	• None of the tested models fitted the data very well. • The 3-factor model was finally pursued in the analysis.
Boamah and Tremblay (2019) Validation study	MLQ 5X 32 items Rater form	Canada Registered nurses N = 378	EFA/CFA First-order factor model: 8-factor	*8 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5 IC; 6.CR; 7.MBEA; 8.MBEP. *1 higher-order factor* (IIA, IIB, IM, IS, IC, CR, MBEP).	• LF scale was omitted. • The 8-factor model was verified in EFA and CFA. • Five factors described transformational, • Three factors represented transactional leadership.
Factor analysis of MLQ's transformational leadership component					
Densten and Sarros (1997) Validation study	Form 5R 67 items Rater form	Australia Law Enforcement Organization Senior police officers, N = 480	CFA Higher-order factor model: 6 factors EFA	*EFA: 11 first-order factors* *4 higher-order factors:* 1.II; 2.IM; 3.IC; 4.IS.	• In CFA, the 6-factor model (CH, IS, IC, CR, MBE, Passive) was not confirmed.

(Continued)

TABLE 1 | Continued

References	MLQ form	Participants	MLQ models tested	Results	Comments
Hinkin et al. (1997) Correlational study	Form 5X 39-item Self/rater forms	USA Hotels General/middle managers, $N =$ 123 Full-time employees, $N =$ 158	EFA First-order factor models: - 4-factor (23 items) CFA- 3-factor (11 items).	*4 first-order factors:* 1.II; 2.IM; 3.IC; 4.IS. *3 first-order factors:* 1.IM; 2.IC; 3.IS.	• Four factors were yielded in EFA, but not confirmed in CFA • Finally, the 3-factor model was confirmed.
Tracey and Hinkin (1998) Correlational study	Form 5X 39 items Rater form	USA Hotels lower or middle-level managers $N = 291$	EFA/CFA First-order factor model: 4 factors	*CFA: 1 composite factor* (II, IM, IS, IC). *EFA: 5 factors:* 1.II, IC, IM; 2.IS; 3.II, IM; 4.IS; 5.IC, IS, IM.	• Four-factor model was not confirmed, but one-factor model (including 4 subscales) was confirmed. • In EFA, 5-factor model emerged for 39 items). • Finally, 5-factor solution (28 items) was accepted.
Carless (1998) Validation study	Form 5X 27 items Rater form	Bank Australia $N = 1,389$	CFA First-order factor models: 1-, 3-factor. Higher-order factor model: 1-factor	*3 first-order factors:* 1.Attributed CH; 2.IS; 3.IC. *1 higher-order factor* (Attributed CH, IS, IC)	• Transformational leadership was expressed as a single, higher-order construct.
Hemsworth et al. (2013) Correlational study	Form 5X 20 items Self form	Public sector chief executives, USA $N = 372$	CFA First-order factor model: 5-factor	*5 first-order factors:* 1.IIA; 2.IIB; 3.IM; 4.IS; 5.IC.	• Transformational leadership was represented by 20 items.

IIA, Idealized influence attributed; IIB, Idealized influence behavior; IM, Inspirational motivation; IS, Intellectual stimulation; IC, Individualized consideration. CR, Contingent reward; MBEA, Active management-by-exception; MBEP, Passive management-by-exception; LF, Laissez-faire.

it has not been yet validated in the Polish organizational context. Hence, to use the measure in a new non-English-speaking environment we shall not rely on a mere translation but a soundly validated instrument. Furthermore, there is a scant number of studies that have undertaken to shorten the MLQ (5X Short) (e.g., Heinitz et al., 2005; Kanste et al., 2007). Parsimonious research instruments are currently highly valued due to often-imposed time constraints, like in large-scale research projects or hastening managerial practice. Therefore, considering this gap in the literature we aimed at validating and refining the MLQ (5X Short) in a population of Polish employees. Firstly, we assembled a Polish full version of the transformational-transactional leadership measure as the full form, called thereafter the MLQ-FF. We then examined its factorial structure and psychometric properties. Secondly, based on the qualitative (i.e., content analysis) and quantitative criteria (psychometric parameters) of the MLQ-FF we have developed a short version – the MLQ-SF. Next, we investigated the convergent and predictive validity of both forms.

In the light of the findings described above, we predicted significant relationships between the MLQ-FF and MLQ-SF and authentic leadership, as evidence of convergent validity. We hypothesized that transformational and transactional subscales would be positively associated with authentic leadership. The laissez-faire leadership would negatively relate to authentic leadership. In addition, predictive validity was established via the associations of the MLQ-FF and MLQ-SF with various employee work outcomes, like work engagement, organizational commitment, work effectiveness, and work satisfaction. We hypothesized positive associations between transformational and transactional leadership and work engagement, organizational commitment, work effectiveness, and work satisfaction. Lastly, we assumed that the laissez-faire leadership would negatively relate to work engagement, organizational commitment, work effectiveness, and work satisfaction.

MATERIALS AND METHODS

Participants and Procedure

A total of 1087 employees from Polish organizations participated in the study. They represented various industries such as office and public administration (22%), services (17%), retail (19%), IT (14%), manufacturing (15%), and other (13%). To avoid the common method bias (Podsakoff et al., 2003), the study was conducted online in two sessions with a 4-week interval. Complete data were obtained from 1,065 participants (98% return rate; 572 women and 493 men) and included in the analyses. Respondents were between 18 and 70 years old ($M = 40.1$; $SD = 12.9$) with an average job tenure of 17.0 years ($SD = 12.1$). To ensure the external validity of the results and the generalization of conclusions for the study sample, the maximum number of participants in the target population was reached (Westland, 2012). In the first session, respondents completed MLQ (5X Short). The total sample was randomly split into two subsamples following the cross-validation framework to increase the measure's viability (de Rooij and Weeda, 2020). Subsample 1

included 539 individuals (294 women and 245 men), aged 19–70 years ($M = 44.2$; $SD = 9.8$), and an average tenure of 20.3 years ($SD = 10.6$). Subsample 2 consisted of 526 employees (278 women and 248 men) aged 18–70 years ($M = 35.87$; $SD = 14.22$), with an average tenure of 13.5 years ($SD = 12.6$). In the second session, 691 employees (subsample 3, 65% of a total sample) completed the remaining measures. Respondents (371 women; 320 men) were aged 19–70 years ($M = 42.5$, $SD = 11.3$) and a mean tenure was 19.1 years ($SD = 11.2$). Data from subsample 3 were used to examine the convergent and predictive validity of the MLQ.

All participants were informed about the anonymity of the survey and their participation was voluntary. All participants provided informed consent before inclusion in the study. Our study was carried out according to the ethical standards of the American Psychological Association and was approved by the university research ethics committee.

Measures

Transformational-Transactional Leadership

The MLQ (5X Short; Rater Form) - a 36-item questionnaire, was used to measure transformational, transactional, and laissez-faire leadership styles (Avolio and Bass, 2004). It consists of nine dimensions: (1) idealized influence attributed (IIA), representing the attribution of charisma; (2) idealized influence behavior (IIB), reflecting the behavioral part of charisma; (3) inspirational motivation (IM), pertaining to the thought-provoking and motivating behavior of the leader; (4) intellectual stimulation (IS), expressing stimulating followers to unconventional and creative thinking; (5) individualized consideration (IC), demonstrating genuine interest in each follower's well-being and tending to their individual needs; (6) contingent reward (CR), representing fair and constructive management processes of rewarding good performance, both financially and psychologically; (7) active management-by-exception (MBEA), reflecting active monitoring of the follower work and taking corrective actions whenever necessary; (8) passive management-by-exception (MBEP), describing leader intervening behaviors upon occurrence of problems; and 9) laissez-faire (LF), expressing the absence of leadership or lack of involvement in leading (Avolio and Bass, 2004).

In this study, we used the Polish translation of the MLQ (5X Short) Rater Form provided by Mind Garden. To ensure conceptual equivalence to the English original version, the English and Polish versions of the questionnaire were verified by three independent expert judges from the psychology field. Then, all three versions were discussed, and differences were resolved. To gain higher confidence regarding item comprehension, five tenured employees appraised the level of difficulty in understanding of all items. Finally, 8 statements were slightly reformulated. After the results were verified, the final version of the Polish translation was agreed upon. The MLQ (5X Short) asked respondents to rate the leadership style of their respective leader using a 5-point Likert-type scale ranging from 0 (not at all) to 4 (frequently, if not always).

Authentic Leadership

A Polish validation of the Authentic Leadership Questionnaire (ALQ) was used to measure authentic leadership[1] (Walumbwa et al., 2005; Wałachowska and Łaguna, 2018). The ALQ consists of four subscales: self-awareness (e.g., "My leader seeks feedback to improve interactions with others"), relational transparency (e.g., "My leader says exactly what he or she means"), internalized moral perspective (e.g., "My leader makes decisions based on his/her core beliefs."), and balanced processing of information (e.g., "My leader listens carefully to different points of view before coming to conclusions."). All items were rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). In this study, Cronbach's α for the subscales ranged between 0.75 and 0.91, and the total score of the authentic leadership scale was 0.86.

Work Engagement

Work engagement was measured using nine items drawn from the Polish version of the Utrecht Work Engagement Scale (UWES-SF; Schaufeli et al., 2006; Szabowska-Walaszczyk et al., 2011). The scale consists of three subscales with three items each: vigor (e.g., "When I get up in the morning, I feel like going to work."), dedication (e.g., "I am enthusiastic about my job."), and absorption (e.g., "When I am working, I forget everything else around me."). A higher total score indicates a higher level of work engagement. Cronbach's α for the subscales ranged between 0.81 and 0.88, and the total score of work engagement was 0.93.

Organizational Commitment

To measure organizational commitment, the Organizational Commitment Scale (Meyer and Allen, 1991), validated in Poland (Bańka et al., 2002), was used. It included three subscales: affective commitment (e.g., "The organization has a great deal of personal meaning for me."), normative commitment (e.g., "This company deserves my loyalty."), and continuance of commitment (e.g., "It would be very hard for me to leave my company, even if I wanted to do so."). Responses were rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's α for the subscales ranged between 0.73 and 0.86, and for the total score it was 0.91.

Work Effectiveness

Employee's work effectiveness was assessed with one item, "How would you rate your work effectiveness?" on a 5-point Likert-type scale ranging from 1 (very low) to 5 (very high).

Work Satisfaction

We assessed employee's work satisfaction with one item, "How satisfied are you with your work?" on a 5-point Likert-type scale ranging from 1 (completely unsatisfied) to 5 (completely satisfied).

Analyses

A confirmatory factor analysis (CFA) was conducted to test the various factor solutions of the MLQ (5X Short) established in

[1]The presented Polish version of the ALQ was used with the permission of the Publisher of the measure (Mind Garden Inc.) and is available from the Publisher.

earlier studies. Next, using an exploratory factor analysis (EFA), we identified the MLQ factor structure specific to the Polish organizational context (in subsample 1), which was then verified by CFA (in subsample 2). As suggested by Byrne (2016), root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) values below 0.08 indicate an acceptable fit, and values below 0.05 indicate a very good fit. The adjusted goodness of fit index (AGFI), comparative fit index (CFI), and Tucker-Lewis fit index (TLI) values higher than 0.90 show a good model fit. Based on the full form of the MLQ (MLQ-FF) factor solution, the short form (MLQ-SF) was developed by conducting an EFA (in subsample 1) and a CFA (in subsample 2). Next, psychometric characteristics of both forms of the MLQ were identified. To examine the measure's scale-level (internal consistency, temporal stability) and item-level reliability indices (item-total, inter-class, and intra-class correlations) were assessed separately in subsamples 1 and 2. In addition, the tests of the differences between women and men in relation to the MLQ dimensions were conducted. Due to not normally distributed data, we used a nonparametric Mann-Whitney U-test. The convergent and predictive validity were verified by correlating both forms of the MLQ, authentic leadership and various work outcomes (in subsample 3). As a follow-up study, the temporal stability of the MLQ-FF and MLQ-SF was examined. Analyses were performed using the statistical package IBM SPSS 25.0, and the CFA was performed using AMOS 25.0 software.

RESULTS

Confirmation of the Previous Factor Structures of the MLQ (5X Short) in a Total Sample

First, we tested various factor solutions of the MLQ (5X Short) established in earlier studies (see **Table 2**).

The series of conducted CFA indicated that the 9-factor original model and all other tested models resulted in unsatisfactory fit indices (**Supplementary Table 1** in the Supplementary Material).

Factor Structure and Reliability of the MLQ-FF and the MLQ-SF – Subsample 1

Given that the previous factor structures of the MLQ (5X Short) were not confirmed in the Polish sample, we were prompted to search for new solutions. We thus performed an EFA in subsample 1 ($n = 539$). Following Kline's (2016) recommendation and to test the suitability of the data for factor analyses we calculated the overall Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity, which were significant (KMO $=0.96$; $\chi 2(630) = 13,920.35$, $p < 0.001$). Based on the principal component method, scree plot criterion, and Promax rotation, a two- and three-factor solution was extracted. Items with factor loadings higher than 0.40 were considered for further analysis.

In the two-factor model, all items that represented transformational and transactional leadership loaded on the first factor and explained 41% of the variance. The second factor included 10 items of the passive and avoidant leadership.

TABLE 2 | The MLQ factor models from previous studies tested in the current study.

Factor model	Authors	Factor								
		1	2	3	4	5	6	7	8	9
2-factor model v1	Avolio et al. (1999)	IIA, IIB, IM, IS, IC, CR	MBEA, MBEP, LF							
2-factor model v2	Antonakis et al. (2003)	IIA, IIB, IM, IS, IC, CR, MBEA	MBEP, LF							
3-factor model v1	Kanste et al. (2007), Edwards et al. (2012)	IIA, IIB, IM, IS, IC, CR	MBEA	MBEP, LF						
3-factor model v2	Den Hartog et al. (1997), Antonakis et al. (2003)	IIA, IIB, IM, IS, IC	CR, MBEA	MBEP, LF						
3-factor model v3	Tejeda et al. (2001)	IIA, IIB, IM, IS, IC	CR, MBEA, MBEP	LF						
3 factor model v4	Rowold (2005)	IIA, IIB, IM, IS	IC, CR, MBEA	MBEP, LF						
4-factor model v1	Alonso et al. (2010)	IIA, IIB, IM, IS	IC, CR	MBEA	MBEP, LF					
4-factor model v2	Den Hartog et al. (1997)	IIA, IIB, IM, IS, IC	CR	MBEA	MBEP, LF					
5-factor model	Koh et al. (1995), Rowold (2005)	IIA, IIB, IM, IS, IC	CR	MBEA	MBEP	LF				
6-factor model	Avolio et al. (1999), Antonakis et al. (2003), Rowold (2005)	IIA, IIB, IM	IS	IC	CR	MBEA	MBEP, LF			
7-factor model	Avolio et al. (1999), Rowold (2005)	IIA, IIB, IM	IS	IC	CR	MBEA	MBEP	LF		
8-factor model v1	Rowold (2005)	IIA, IIB	IM	IS	IC	CR	MBEA	MBEP	LF	
8-factor model v2	Antonakis et al. (2003)	IIA	IIB	IM	IS	IC	CR	MBEA	MBEP, LF	
9-factor model	Antonakis et al. (2003)	IIA	IIB	IM	IS	IC	CR	MBEA	MBEP	LF

IIA, Idealized influence attributed; IIB, Idealized influence behavior; IM, Inspirational motivation; IS, Intellectual stimulation; IC, Individualized consideration; CR, Contingent reward; MBEA, Active management-by-exception; MBEP, Passive management-by-exception; LF, Laissez-faire.

TABLE 3 | Means, standard deviations, factor loadings, and item-total correlations for MLQ-FF and MLQ-SF in subsample 1.

Item	MLQ (5X Short) subscales			MLQ-FF		MLQ-SF	
		M	*SD*	FL	$r_{item-total}$	FL	$r_{item-total}$
Factor 1: Transformational-supportive							
Item 19	IC	2.92	1.11	0.86	0.72	0.97	0.70
Item 18	IIA	2.67	1.17	0.83	0.78	0.90	0.76
Item 31	IC	2.80	1.15	0.82	0.87	0.88	0.86
Item 29	IC	2.69	1.04	0.80	0.50		
Item 30	IS	2.91	1.07	0.71	0.81	0.71	0.81
Item 21	IIA	3.17	1.10	0.71	0.81	0.82	0.81
Item 1	CR	3.13	1.17	0.70	0.82	0.84	0.80
Item 10	IIA	2.77	1.17	0.68	0.82		
Item 32	IS	2.87	1.06	0.63	0.81	0.66	0.81
Item 23	IIB	2.98	1.05	0.60	0.76		
Item 2	IS	3.01	1.06	0.60	0.79		
Item 15	IC	2.81	1.12	0.56	0.75		
Item 35	CR	3.14	1.02	0.52	0.74	0.62	0.75
Factor 2: Inspirational goal-oriented							
Item 13	IM	3.28	0.98	0.80	0.76	0.85	0.73
Item 14	IIB	3.18	1.04	0.74	0.77	0.80	0.73
Item 27	MBEA	2.82	0.91	0.67	0.48	0.82	0.47
Item 4	MBEA	3.03	1.02	0.61	0.14		
Item 26	IM	3.00	1.02	0.61	0.72	0.67	0.71
Item 24	MBEA	3.08	0.98	0.57	0.64	0.59	0.60
Item 34	IIB	3.00	1.04	0.56	0.70	0.62	0.69
Item 36	IM	3.54	0.87	0.56	0.48		
Item 11	CR	3.06	1.06	0.52	0.77		
Item 6	IIB	3.11	1.05	0.51	0.60		
Item 9	IM	3.28	1.00	0.49	0.69		
Item 22	MBEA	2.88	0.98	0.44	0.59		
Item 16[a]	CR	3.01	1.07	0.44	0.74		
Item 8	IS	3.23	0.97	0.41	0.67		
Factor 3: Passive-avoidant							
Item 20	MBEP	2.57	0.64	0.85	0.65	0.88	0.63
Item 12	MBEP	2.67	0.69	0.79	0.65	0.81	0.62
Item 28	LF	2.48	0.68	0.77	0.63	0.75	0.60
Item 5	LF	2.64	0.67	0.76	0.68	0.75	0.63
Item 33	LF	2.70	0.26	0.72	0.65		
Item 7	LF	2.67	0.50	0.70	0.65		
Item 17[b]	MBEP	2.82	1.03	0.52	0.28		
Item 25[c]	IIA	2.89	1.19	0.52*	-		
Item 3	MBEP	3.23	1.08	0.45	0.35		

n = 539. FL – factor loadings. $r_{item-total}$ – item-total correlation. MLQ-FF: full form. MLQ-SF: short form.
[a]*Item 16 loaded onto factor 1 with factor loading of 0.44.*
[b]*Item 17 loaded onto factor 1 with a factor loading of 0.51.*
[c]*Item 25 loaded onto factors 1 and 2 with factor loadings of −0.48 and 0.44, respectively. IIA – Idealized influence attributed.*
IIB, Idealized influence behavior; IM, Inspirational motivation; IS, Intellectual stimulation; IC, Individualized consideration.
CR, Contingent reward; MBEA, Active management-by-exception; MBEP, Passive management-by-exception; LF, Laissez-faire.

These two factors accounted for 54% of the total variance. In the three-factor solution (see **Table 3**), the first factor (13 items) contained all IC items, three items from IA and IS, one item from IB, two items from CR, and it explained 42% of the variance. The core of the first factor was transformational leadership,

which emphasized individual support and recognition, so we called it transformational-supportive leadership. The second factor of 14 items combined IM (all items), MBEA (all items), IB (three items), CR (two items), and IS (one item) and explained 12% of the variance. The content of the items implied a leader's

inspirational attitude with a strong tendency to complete tasks and accomplish goals. Hence, it is referred to as inspirational goal-oriented leadership. The third factor explained 4% of the variance, included 8 items from the MBEP and LF scales and expressed passive-avoidant leadership. Due to the cross-loading of item 25, we decided to exclude it from further analyses.

In total, the three factors explained 58% of the variance. All factor loadings ranged between 0.41 and 0.86. Complete results for the three-factor solution for the MLQ-FF are presented in **Supplementary Table 2** in the Supplementary Material.

In the next step, we attempted to shorten the obtained MLQ-FF. Considering both quantitative (i.e., psychometric parameters) and qualitative criteria (i.e., item-content analysis), we have selected items with the highest factor-loadings and item-total correlations that simultaneously represented the content of the nine original MLQ (5X Short) subscales. Two items per each of the 9 subscales were selected, creating an 18-item form–the MLQ-SF. The shortened version was subjected to an EFA in subsample 1, and a three-factor solution with eigenvalues above 1 was extracted, which explained 67% of the total variance (Factor 1: 47%, Factor 2: 14%, Factor 3: 6%, respectively). All factor loadings for the MLQ-SF items ranged from 0.50 to 0.82 (see **Table 3**).

The subsequent analyses were performed on the MLQ-FF and MLQ-SF simultaneously hence, we present these results together. The transformational-supportive and inspirational goal-oriented factors of the MLQ-FF and MLQ–SF were highly intercorrelated (0.84 and 0.77, respectively), and both correlated negatively and slightly to moderately with the passive-avoidant factor (from -0.11 to -0.26). According to Cohen's (1988) interpretation of the magnitude of correlation, correlations in the order of 0.10 are "small," those of 0.30 are "medium," and those of 0.50 are "large." The internal consistency of the MLQ-FF subscales was between 0.84 and 0.96 and of the MLQ-SF between 0.80 and 94. The intraclass correlation (ICC) values ranged between 0.84 and 0.95 for the MLQ-FF and between 0.80 and 0.94 for the MLQ-SF. The item-total correlations ranged from 0.14 to 0.87 for the MLQ-FF and from 0.47 to 0.86 for the MLQ-SF. The inter-item mean correlation ranged from 0.39 to 0.62 for the MLQ-FF and from 0.51 to 0.66 for the MLQ-SF (all inter-item correlations ranged from 0.01 to 0.82 for the MLQ-FF and from 0.34 to 0.79 for the MLQ-SF). All item- and scale-related parameters are presented in **Supplementary Table 4** in the Supplementary Material.

Next, a Mann-Whitney U test revealed a significant difference between women and men in passive-avoidant leadership for MLQ-FF ($U = 31633.50$, $z = -2.44$, $p = 0.015$) and for MLQ-SF ($U = 32,375.00$, $z = -2.03$, $p = 0.042$). Men perceived their leaders as displaying passive leadership to a higher extent (MLQ-FF: $M = 22.35$, $SD = 5.52$, $Mdn = 22.00$; MLQ-SF: $M = 10.62$, $SD = 3.19$, $Mdn = 11.00$) than women did (MLQ-FF: $M = 21.32$, $SD = 5.97$, $Mdn = 21.00$; MLQ-SF: $M = 10.14$, $SD = 3.41$, $Mdn = 10.00$). However, there were no significant differences in transformational-supportive and inspirational goal-oriented factors for both MLQ forms (see **Supplementary Table 5** in the Supplementary Material). Additionally, the MLQ-FF and MLQ-SF factors did not correlate significantly with age (see **Table 4**).

Factor Structure and Reliability of the MLQ-FF and MLQ-SF – Subsample 2

The three-factor solution of the MLQ-FF extracted in subsample 1 was tested by CFA in subsample 2. Kaiser-Meyer-Olkin measure and the Bartlett's test of sphericity (KMO =0.95, $\chi 2(630) = 10,357.48$, $p < 0.001$) were statistically significant, indicating good suitability of the data for factor analysis. The model fit indices exceeded the recommended cut-off criteria (Byrne, 2016), $\chi^2 = 743.48$, df = 477, $\chi^2/df = 1.56$, $p < 0.001$, RMSEA = 0.033, GFI = 0.93, AGFI = 0.90, CFI = 0.97, TLI =0.97, SRMR =0.052. All standardized factor loadings ranged from 0.14 to 0.83 (see **Supplementary Table 3** in the Supplementary Material). The CFA conducted on the MLQ-SF also indicated good fit of the factor model to the data ($\chi^2 = 188.30$, df = 111, $\chi^2/df = 1.70$, $p < 0.001$, RMSEA = 0.036, GFI = 0.96, AGFI = 0.94, CFI = 0.98, TLI = 0.98, SRMR = 0.041). All standardized factor loadings ranged from 0.54 to 0.82 (see **Supplementary Table 3** in the Supplementary Material).

In subsample 2, the transformational-supportive and inspirational goal-oriented factors of both MLQ forms were highly intercorrelated, and they correlated negatively at a low to moderate level with the passive-avoidant factor. Internal consistency of the MLQ-FF subscales was between 0.83 and 0.93 and between 0.82 and 0.90 for the MLQ-SF. The intraclass correlation (ICC) values ranged between 0.83 and 0.93 for the MLQ-FF and between 0.82 and 0.90 for the MLQ-SF. The item-total correlations were above 0.19 for the MLQ-FF and above 0.48 for the MLQ-SF, the inter-item mean correlation was between 0.38 to 0.49 for the MLQ-FF and between 0.43 and 0.55 for the MLQ-SF (all inter-item correlations ranged from 0.05 to 0.76 for the MLQ-FF and from 0.28 to 0.76 for the MLQ-SF).

In addition, a Mann Whitney test revealed significant differences between women and men in the transformational-supportive leadership in both MLQ forms (MLQ-FF: $U = 30376.50$, $z = -2.35$, $p = 0.019$, MLQ-SF: $U = 30563.00$, $z = -2.25$, $p = 0.025$). Men's rating of their leaders' transformational-supportive behavior was higher (MLQ-FF: $M = 39.65$, $SD = 10.22$, $Mdn = 41.00$; MLQ-SF: $M = 24.91$, $SD = 6.76$, $Mdn = 25.50$) than women's rating (MLQ-FF: $M = 37.50$, $SD = 11.36$, $Mdn = 38.00$; MLQ-SF: $M = 23.57$, $SD = 7.41$, $Mdn = 24.00$). Inspirational goal-oriented and passive-avoidant leadership in both MLQ forms were however not significantly different between women and men (see **Supplementary Table 5** in the Supplementary Material). All leadership factors of both forms significantly but weakly correlated with age (see **Table 4**).

Convergent and Predictive Validity of the MLQ-FF and the MLQ-SF - Subsample 3

In this study we examined convergent and predictive validity in subsample 3 ($n = 691$). Harman's single-factor test using principal component EFA with Kaiser criterion was employed to test for possible common-method bias. The analysis resulted in 12 distinct factors accounting for 65% of the total variance. The first unrotated factor captured 32% of the variance in the data, however no single factor emerged, and the first factor did not

TABLE 4 | Means, standard deviations, Cronbach α, and correlations for all analyzed variables.

Variables				MLQ-FF			MLQ-SF		
	M	*SD*	Cronbach α	1	2	3	4	5	6
MLQ-FF subscales (subsample 1)									
1. Transformational-supportive[a]	37.87	11.52	0.96		.				
2. Inspirational goal-oriented[a]	43.48	9.61	0.91	0.84**					
3. Passive-avoidant[a]	21.79	5.79	0.84	−0.25**	−0.11*				
MLQ-SF subscales (subsample 1)									
4. Transformational-supportive[a]	23.61	7.43	0.94	0.99**	0.82**	−0.27**			
5. Inspirational goal-oriented[a]	18.36	4.60	0.86	0.77**	0.95**	−0.08	0.75**		
6. Passive-avoidant[a]	10.36	3.32	0.80	−0.26**	−0.14**	0.95**	−0.28**	−0.12**	
7. Age	44.23	9.81	-	0.01	0.01	−0.03	0.01	−0.01	−0.05
MLQ-FF subscales (subsample 2)									
1. Transformational-supportive[b]	38.52	10.88	0.93		.				
2. Inspirational goal-oriented[b]	44.02	9.90	0.90	0.83**					
3. Passive-avoidant[b]	19.96	5.98	0.83	−0.30**	−0.16**				
MLQ-SF subscales (subsample 2)									
4. Transformational-supportive[b]	24.20	7.13	0.90	0.98**	0.82**	−0.33**			
5. Inspirational goal-oriented[b]	18.74	4.67	0.82	0.79**	0.95**	−0.13**	0.77**		
6. Passive-avoidant[b]	9.34	3.61	0.83	−0.31**	−0.20**	0.94**	−0.34**	−0.17**	
7. Age	35.87	14.22	-	−0.11*	−0.11*	0.14**	−0.13**	−0.10*	0.16**
ALQ subscales									
8. Self-awareness[c]	12.18	3.90	0.91	0.78**	0.70**	−0.29**	0.77**	0.64**	−0.30**
9. Relational transparency[c]	15.42	4.24	0.81	0.70**	0.66**	−0.28**	0.70**	0.61**	−0.29**
10. Internalized moral[c]	12.64	4.01	0.75	0.67**	0.62**	−0.30**	0.66**	0.58**	−0.33**
11. Balanced processing of information[c]	9.26	2.93	0.86	0.74**	0.66**	−0.31**	0.74**	0.60**	−0.33**
12. Authentic leadership (total)[c]	49.04	13.85	0.86	0.80**	0.73**	−0.32**	0.79**	0.67**	−0.34**
Employee outcomes									
13. Vigor[c]	11.14	2.76	0.88	0.41**	0.33**	−0.09*	0.41**	0.33**	−0.07
14. Dedication[c]	11.90	2.96	0.87	0.41**	0.35**	−0.09*	0.40**	0.34**	−0.10*
15. Absorption[c]	11.47	2.81	0.81	0.37**	0.33**	−0.06	0.36**	0.32**	−0.07
16. Work engagement (total)[c]	34.50	7,85	0.93	0.43**	0.37**	−0.09*	0.42**	0.36**	−0.08*
17. Affective commitment[c]	18.90	5.23	0.86	0.60**	0.48**	−0.14**	0.59**	0.43**	−0.14**
18. Normative commitment[c]	17.59	5.28	0.86	0.46**	0.36**	0.01	0.44**	0.35**	0.02
19. Continuance commitment[c]	18.36	4.49	0.73	0.09*	0.08*	0.15**	0.08*	0.08*	0.16**
20. Organizational commitment (total)[c]	54.86	12.87	0.91	0.46**	0.37**	0.01	0.45**	0.35**	0.01
21. Work effectiveness[c]	3.92	0.77	-	0.30**	0.25**	−0.17**	0.30**	0.23**	−0.16**
22. Work satisfaction[c]	3.97	0.99	-	0.33**	0.28**	−0.13**	0.34**	0.26**	−0.13**

[a]$n = 539$. [b]$n = 526$. [c]$n = 691$. *$p < 0.05$, **$p < 0.01$. MLQ-FF, full form; MLQ-SF, short form.

explain most of the variance. Thus, we assumed that CMV was not an issue in this study (Podsakoff et al., 2003).

Convergent validity was examined in the context of authentic leadership. As shown in **Table 4**, transformational-supportive and inspirational goal-oriented scales were positively correlated with all authentic leadership dimensions at moderate to high level. The passive-avoidant scale showed moderate to low negative correlation with authentic leadership dimensions. We thus consider the convergent validity of the tested MLQ-FF and MLQ-SF as initially supported.

The MLQ-FF and MLQ-SF factors correlated with employee's outcomes, such as work engagement, organizational commitment, work effectiveness, and satisfaction with work

(**Table 4**). Work engagement dimensions and the total score were positively and moderately related to transformational-supportive and inspirational goal-oriented factors but very weakly to passive-avoidant factor. In addition, transformational-supportive and inspirational goal-oriented were significantly correlated with employee's organizational commitment. In general, the aggregated organizational commitment score was moderately related to transformational-supportive and inspirational goal-oriented factors but non-significantly to passive-avoidant factor. Specifically, transformational-supportive leadership and inspirational goal-oriented were moderately to highly associated with affective commitment, moderately with normative commitment, but very weakly with

continuance commitment. Passive avoidant leadership correlated slightly with low employee's affective commitment and with high continuance commitment, whereas it did not significantly correlate with normative commitment. Moreover, self-perceived work effectiveness correlated weakly with high transformational-supportive and inspirational goal-oriented factors and low passive avoidant leadership. Employee's work satisfaction correlated moderately with high transformational-supportive factor, but weakly with high inspirational goal-oriented, and high passive avoidant leadership.

Follow-Up Study and Test-Retest Reliability

A follow-up study was conducted to assess the temporal stability of the Polish version of the MLQ. One hundred sixty-five employees (85 women, 80 men) were recruited from the total sample to complete the MLQ once again after an 8-week time interval. Participants were between 19 and 70 years old ($M = 33.2$ years; $SD = 13.8$), with mean job tenure of 10.9 years ($SD = 12.2$). The correlations between measures in two-time points were from 0.81 to 0.74 for the MLQ-FF and from 0.80 to 0.73 for the MLQ-SF (see **Supplementary Table 4** in the Supplementary Material).

DISCUSSION

The first aim of this study was to validate the MLQ (5X Short) in the Polish organizational context. We assembled a Polish version of the transformational-transactional leadership measure called the MLQ full form or the MLQ-FF. Based on the qualitative (i.e., content analysis) and quantitative criteria (psychometric parameters) of the MLQ-FF, we then aimed at constructing a short version of the measure - the MLQ-SF. As a result, we uncovered a two- and three-factor solution of the MLQ. The two-factor solution aligns with earlier findings of active and passive leadership models (Den Hartog et al., 1997). However, we decided not to pursue this solution for the two factors did not adequately reflect the complex nature of the FRL model.

Therefore, we considered a three-factor structure of the MLQ-FF and MLQ-SF as more adequately representing specific leadership view among Polish employees. The first factor, transformational-supportive leadership, consisted of individualized consideration, attributed idealized influence, and contingent reward components, all of which reflected transformational and supportive attitudes toward employees and their work. Leaders' behaviors included approaching individuals with genuine interest, recognizing each employee's uniqueness, strength, and need for growth, creating a climate of support, encouraging innovative solutions, and facilitating employee development. The second factor, inspirational goal-oriented, was more heterogeneous and connected inspirational motivation with concern for task accomplishment and reward-for-performance exchange behaviors. Flagship behaviors of inspirational goal-oriented leadership express expectations of commitment to goals, monitoring deviances from standards, inspiring communication style, enthusiasm, and optimism. The transformational leadership items present in this factor attenuated the transactional nature of the remaining items, all of

which together created a honed leadership factor of inspirational and optimistic support for the effortful achievement of organizational goals. Overall, this factor reflected behaviors such as setting direction and stimulating intrinsic employee motivation. The third factor, passive-avoidant leadership, was characterized by passive elements of the transactional component, which pertained to delaying reactions unless problems occurred, and laissez-faire behaviors.

The current three-factor structure is distinct from previously proposed three-factor models (Den Hartog et al., 1997; Avolio et al., 1999; Heinitz et al., 2005; Kanste et al., 2007; Edwards et al., 2012) in terms of factor content, explained variance, and interpretability. In previous studies, the first factor was most often represented by transformational and CR subscales (e.g., Den Hartog et al., 1997) due to their high intercorrelation (Hoogeboom and Wilderom, 2019). The second factor usually included either MBEA or MBEP items, or the mixture of both (e.g., Kanste et al., 2007; Edwards et al., 2012). In our solution, the transformational, CR, MBEA and MBEP subscales are distributed between the first two factors. In effect these factors share the meaning (Batista-Foguet et al., 2021) and are highly intercorrelated (cf. Bycio et al., 1995; Den Hartog et al., 1997; Kanste et al., 2007). Undoubtedly, this result requires further investigation, including refinement of items and scales. Alternatively, the passive-avoidant factor reflected reactive and avoiding leadership behaviors (Kanste et al., 2007; Edwards et al., 2012).

The uncovered three-factor structure of the MLQ-FF was the starting point for shortening the scale. Based on qualitative (i.e., item content analysis) and quantitative criteria (psychometric parameters), we have successfully assembled a shorter, 18-item form of the measure. The MLQ-SF included items representing all nine dimensions of the original FRL model. In fact, the novelty of the MLQ-SF lies in that it contains items from each of the nine original subscales of the MLQ-5X, thus the loss of information is minimal when compared to the full-length scale.

Both, the MLQ-FF and MLQ-SF, demonstrated good psychometric properties overall. The scale-level reliability (i.e., internal consistency and temporal stability) displayed acceptable to excellent values and were comparable with those found in previous studies that employed the MLQ (5X Short). Additionally, item-level reliability indices (i.e., item-total, inter-item, and intraclass correlations) indicated an acceptable level of discriminating power for the MLQ-FF and MLQ-SF. In sum, only a few earlier studies (cf. Tejeda et al., 2001; Heinitz et al., 2005; Kanste et al., 2007) proposed shorter versions of the MLQ (5X Short). They varied among each other across the number of factors and items considered in the measures. To our knowledge, none of these propositions have been subjected to further verification and validation.

The proposed three-factor solution shall be interpreted bearing in mind Polish contextual dynamics. Polish employees might not be cognizant of highly differentiated leadership. They may discern primarily between broad categories of leadership (Bajcar et al., 2015; Babiak et al., 2017). This mode of perception might facilitate better comprehension of the relevant leader

behaviors. Also, it may help them fulfill required tasks and goals when influenced by an inspirational goal-oriented leadership or individually encouraging behaviors reflected in transformational-supportive style. Discriminating between nuanced dimensions of the MLQ (5X Short) scale may be a differentiating factor between individual employees.

Additionally, our results are inconclusive concerning differences in leadership perception in the dependence of age and gender. Undoubtfully, more research is required to test the differences in leadership perception between age groups.

The convergent and predictive validity for both, the MLQ-FF and MLQ-SF were supported. As predicted, three factors were significantly associated with authentic leadership, thus initially confirming convergent validity. According to Bass and Bass (2008), transformational and transactional leadership components indicate authenticity and ethics in behavior, consistency, transparency of values, and moral character. These virtues fall into the domain of authentic leadership, which reflects truthfulness, trustworthiness, morality, and employee-focused behavior. The passive-avoidant factor was negatively related to authentic leadership dimensions at the moderate level. Our results align with earlier findings related to associations between transformational-transactional leadership and authentic leadership (Bass and Steidlmeier, 1999; Avolio and Gardner, 2005; Lee et al., 2020).

In support of the predictive validity, MLQ-FF and the MLQ-SF factors correlated with employee's work outcomes, such as work engagement, organizational commitment, work effectiveness, and work satisfaction. Essentially, we have found positive associations of transformational-supportive and inspirational goal-oriented leadership and negative associations of passive avoidant leadership with work outcomes. The pattern of relationships between the three-factor MLQ and employee's work outcomes corresponds to the results of previous validation studies that included various measures of performance (Wang et al., 2011; Hetland et al., 2018; Steinmann et al., 2018; Lai et al., 2020), work engagement (Tims et al., 2011; Miao et al., 2012), work satisfaction (Bass et al., 2003; Sayadi, 2016; Nohe and Hertel, 2017; Kammerhoff et al., 2019), work motivation (Kanat-Maymon et al., 2020), and organizational commitment (Keegan and Hartog, 2004; Cho et al., 2019). Positively related outcomes may be thought of as psychological benefits that influence employees' overall well-being and work attitudes (Djourova et al., 2020). A rather unusual relationship was revealed between MLQ-FF and MLQ-SF factors and organizational commitment dimensions. Mainly, there are unexpected results that pertain to a very weak positive relationship between the continuance commitment dimension and passive-avoidant leadership. However, these associations are low and require further research. Thus, our findings can be considered as an initial support for the predictive validity of the three-factor MLQ-FF and MLQ-SF in Poland.

There were several limitations associated with this study. Common method variance (CMV; Podsakoff et al., 2003) may have obscured the results due to the cross-sectional design of the study. To reduce the possibility of the CMV, we have measured the variables in two-time points. Harman's single-factor test

results (Podsakoff et al., 2003) indicated that CMV had not contaminated the study results. We collected data from a heterogeneous sample that was too small to scrutinize contextual aspects, such as industry, business operations, hierarchical level, age, gender, and tenure. Therefore, future research should be conducted using a larger sample of employees to explore unique leadership contexts. Moreover, the convergent validity of the MLQ-FF and the MLQ-SF need to be verified with other leadership concepts (e.g., servant, ethical, or shared leadership) and respective measures. Similarly, future studies should test the discriminant validity of the Polish version of the MLQ.

The Polish validation of the MLQ (5X Short) has theoretical and practical implications. First, the MLQ-FF and MLQ-SF enable an assessment of transformational-transactional leadership in the Polish research and organizational contexts. Scholars can potentially use both the MLQ-FF and MLQ-SF to measure employee's perception of leadership, individual and organizational antecedents, and consequences of transformational and transactional behaviors, which have not yet been investigated in the Polish-speaking population. Furthermore, the MLQ-SF, due to the ease of application and use, may serve the organizational context in the initial selection and evaluation of leaders. Preliminary screening provides a general view of a candidate's leadership potential. The mindset leaders adopt at the start of their careers can have a transformative effect on co-workers and employees. The organizational environment is highly diverse, complex, and subject to constant change. A reliable, valid, and adapted leadership style instrument is needed for practitioners and organizations concerned with effective leadership, a collaborative environment, and committed employees as fundamental elements of sustainable organizational success. Besides, the MLQ-FF may be useful when a more accurate measurement of leadership is needed. In contrast, the MLQ-SF is adequate in time-restricted leader evaluation both in the research area (like large-scale studies) and in the organizational practice (e.g., in the initial preselection of employees).

CONCLUSIONS

This study provides academics and practitioners with a reliable, valid, and refined instrument, potentially suitable to measure Polish leaders' transformational-transactional behaviors. To our knowledge, this is the first validation study conducted among Polish employees. Along with the MLQ-FF, a shortened, 18-item form - the MLQ-SF - was proposed. We consider our research an essential part of the continuous effort to unravel the complexity of leadership and emphasize its relevance in enhancing leader-member relations - a vital force in achieving organizational performance.

DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

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

AUTHOR CONTRIBUTIONS

Both authors contributed to the study conception, design, material preparation, and data collection. Analyses were performed by BB. In the first draft of the manuscript, introduction, and discussion was written by JB, and methods and results by BB. Both authors were involved in the discussion and revision of the final manuscript and approved the submitted version.

SUPPLEMENTARY MATERIAL

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Managing Organizational Inertia: Indonesian Family Business Perspective

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The ability to transform on a regular basis is critical in the effort to adapt to external challenges; however, changes to an organization's fundamental characteristics may increase the likelihood of failure. Because of this, organizational restructuring efforts appear to engender cynicism, which appears to be one of the most significant obstacles facing contemporary businesses, particularly in this area. Organizational inertia is the term used to describe this aversion to change, as well as the desire to maintain the current status quo. A new organizational culture capable of combating the incidence of organizational stagnation is required by massive social, economic, and technological difficulties, and firms that employ the concept of empowering leadership will be able to meet these challenges. For the purposes of this study, a framework for discussing the phenomena of organizational cynicism was developed and implemented.

Keywords: cynicism about organizational change, organizational inertia, empowering leadership, attribution theory, family business

INTRODUCTION

In a constantly changing business environment, long-term success necessitates not just the ownership of difficult-to-replicate assets, but also the possession of one-of-a-kind and outstanding dynamic talents. Several scholars claim that this competitive advantage will be realized in the area of human capital management if the organization is able to design the connectivity of human resources inside it under the auspices of a high-performing work system (Quratulain and Al-Hawari, 2021; Nguyen et al., 2022). Organizations strive to adjust their strategy in order to face the challenges posed by changes in the company life cycle (Santiago, 2015). Organizations that are able to adapt to new markets, processes, and technology are known as entrepreneurial enterprises (Sharma et al., 2012; Santiago, 2015). For firms confronting changes in the organizational life cycle, innovation appears to be a sensible course of action. Organizations, on the other hand, do not always innovate, and some can fall into a condition of immobility. In family enterprises, inertia is also common (Chirico and Nordqvist, 2010; Chirico and Salvato, 2016). Inertia increases in families that stay closed and paternalistic. The business family becomes rigid and resistant to change as a result of the paternalistic mindset, whereas the entrepreneurial drive encourages innovation (Chirico and Nordqvist, 2010). The refusal to modify the core of the organization is referred to by Mallette and Hopkins (2013) as structural inertia, biased

management cognition (Gilbert, 2005). Cynicism about change and even hostility to change stems from the organization's closed, paternalistic culture and refusal to change its essential values. In addition, some research have found a link between cynicism and organizational inertia. Huang et al. (2013) claimed that inertial organizational conditions will impede the implementation of organizational strategy, making organizational sustainability uncertain (DeCelles et al., 2013; Fernhaber and Li, 2013).

According to research on organizational inertia, there is a significant internal propensity towards similarity, which can inhibit employees' ability to produce novel ideas (AlKayid et al., 2022). Visionary leadership (AlKayid et al., 2022), flexible budgeting (Oyadomari et al., 2018), skewed management cognition, a lack of incentive to change, or challenges in redeploying business resources (Gilbert, 2005; Hoppmann et al., 2019) are some of the antecedent variables. The character of cynicism as a serious barrier to change (Reichers et al., 1997), cynicism as something that develops, is destructive, and is possible to sabotage (DeCelles et al., 2013), and the reluctance of cynical employees to participate in change are all factors considered in this study (Islam et al., 2020). Cynical personnel have a passive attitude toward change, which leads to organizational stagnation in the form of incapacity to implement internal adjustments in the face of large external changes (Gilbert, 2005).

In recent years, the topic of organizational cynicism has become an intriguing subject for further exploration. Given the strong correlation between cynicism and an employee's professionalism (Bang and Reio, 2017), cynicism, particularly in Indonesia, is worth investigating further. Indonesia is a collectivist country with a high power distance (Aslam et al., 2016), and its response to cynicism is quite unique, promoting tolerance and respect for others and concealing cynicism within an organization. Milliken et al. (2003) characterized cynicism as "silent cynicism" in a study they conducted.

When an organization changes, the comfort and stability of the workplace are frequently disrupted. This is because when an organization changes, it creates uncertainty and discomfort in the work environment, which contributes to employee cynicism (Oreg, 2006; Aslam et al., 2016). Numerous studies on employee behavior in response to organizational change have been conducted over the last few decades (Reichers et al., 1997; Wanous et al., 2000; Brown and Cregan, 2008; Grama and Todericiu, 2016). The study agrees that employee cynicism will have an effect on the organization's performance (Bouckenooghe et al., 2014, 2021; Cinite and Duxbury, 2018).

According to several studies, it is believed that by involving employees, an organization's cynicism can be reduced. Numerous studies indicate that an organization's cynicism can be reduced by involving employees in the planning process, conducting performance evaluations, and being willing to admit mistakes (Ahearne et al., 2005; Stanley et al., 2005). Employees who feel empowered are more likely to take proactive measures and support the change process; additionally, superiors must demonstrate their recognition of employees' competence, as this fosters employees' confidence and security in the organization by allowing them to work independently and providing support. Increasing the capacity

of an organization in order to ensure its long-term viability (Jung et al., 2020).

There is a wealth of research demonstrating the link between HPWS and organizational performance. This study will look at HPWS from a variety of angles. The study's link between strategic human resource management and psychology is in the establishment of empowering leadership mechanisms to manage cynicism and organizational inertia. Confidence in the organization and senior management is increased by preparing followers to accept potential negative experiences during any transformation effort (Zhang and Bartol, 2010; Van Bockhaven et al., 2015; Hao et al., 2017; Lee et al., 2018). As a result, empowered leadership can assist followers in discovering purpose in their job and establishing a sense of security within the organization, while simultaneously fostering creativity and lowering hazardous defensive behavior. As a result, empowering leaders has a beneficial effect on their followers' risk-taking behavior (Jung et al., 2020). Empowering leaders through development support for the technical and managerial skills required of followers enables followers to initiate change-related activities (Lorinkova and Perry, 2017; Kundu et al., 2019).

This research employs a social cognitive theory approach, which Bandura (1997) asserts consistently demonstrates successful self-leadership abilities and other desirable work-related behaviors. The learning model is a component of social cognition theory and the idea of triadic reciprocity, which asserts that an individual's cognitive processes, behavior, and environmental impacts are all interconnected (Amundsen and Martinsen, 2014; Newman et al., 2018). Empowerment improves the work environment and increases individual motivation to work indirectly by providing autonomy and development support to lower levels in an organization where decisions can be made, particularly in terms of implementing creative and innovative changes that address business needs. Will eventually result in the creation of a sustainable business (Turi et al., 2019; Lin and Ling, 2021). The interaction of the three triadic reciprocal components is predicted to expand the usage of social cognition theory in the setting of family business. Three components: personal (cynicism about change as a negative attitude among organizational members), environmental (empowering leadership as a positive environment the leader attempts to create), and behavioral (cynicism about change as a negative attitude among organizational members; organizational inertia as a form of behavior after going through the learning process). In this context, empowering leadership is a variable that reduces cynicism and reduces the impact of cynicism on organizational inertia changes in family businesses (Li and Yuan, 2017; Meng-Hsien et al., 2018).

THEORETICAL BACKGROUND

Social Cognitive Theory

"Social Cognitive Theory" is a foundational theoretical framework that has been shown to be effective in comprehending and explaining behavior (Bandura, 1997). The individual (person), the environment (environment), and individual behavior (behavior) all have a reciprocal link, which is referred to as (triadic) reciprocal

determinism (or triadic reciprocal model of causality; Bandura, 1997; Eslami and Melander, 2019). The essence of this theory is that humans acquire the ability to model through observation and imitation, which they subsequently use when behaving or acting. Humans react by utilizing their capacity for thought, symbolism, and anticipation (outcome reaction). It is critical to emphasize the relationship between individual characteristics, group values, attitudes, and behavior throughout organizational change (Bandura, 1997). This theory is predicated on the following assumptions: humans view humans intrinsically, not as good or bad, but as a result of experience with the potential for all kinds of behavior; humans are capable of conceptualizing and controlling their behavior; humans are capable of acquiring new behavior; and humans can influence the behavior of others just as their behavior is influenced by others (Ilgen et al., 2005; van Zundert et al., 2010) proposed four critical parts to this theory in order to explain it: observational learning (modeling), self-regulation, self-efficacy, and reciprocal determinism. Cynicism toward university changes develops when new obligations are not accompanied by equitable justice. The justice approach is supposed to be capable of fostering an environment conducive to learning, self-evaluation, and constructive behavior (Yim et al., 2017).

Cynicism About Organizational Change

Cynicism is essentially the end result of a preceding process (Wanous et al., 2004; Grama and Todericiu, 2016; Schraeder et al., 2016; Bakari et al., 2019). According to Dean et al. (1998), there are five fundamental conceptualizations of cynicism: personality cynicism, societal or institutional cynicism, occupational cynicism, employee cynicism, and skepticism about organizational transformation. Cynicism is defined as a person's lack of trust in others or their perception of others as dishonest, unsocial, immoral, ugly, or even vicious (Abugre, 2017; Rayan et al., 2018; Schmitz et al., 2018; Zeidan and Prentice, 2022). To be more precise, this research will refer to "cynicism about organizational change" as a moderate attitude toward future organizational changes that includes pessimism about their success, based on the perception that changes are prone to failure and the belief that change agents are incompetent (Wanous et al., 2004).

Wanous et al. (2004) coined the term "cynicism about organizational change," which refers to a genuine loss of trust in change agents as a result of a history of change initiatives that were not fully or obviously effective. Additionally, because those who are cynical about organizational change may rationalize away knowledge gaps with the rationale that things must not have gone well, ineffectiveness and failure foster pessimistic attitudes, which further inhibit motivation to try again and become a significant impediment to change (James, 2005; Stanley et al., 2005; Abugre, 2017). It occurs despite the best intentions of those responsible for the change; even for rational decision makers who care about both employee well-being and their own reputations (Stanley et al., 2005; Walter and Cole, 2011; Neves, 2012). Cynicism about organizational change has previously been defined as a composite of three components: (a) pessimism about the success of future organizational change, (b) a dispositional attribution that those responsible for change are less motivated, incompetent, or both, and (c) a situational

attribution (Wanous et al., 2000, 2004; Stanley et al., 2005). Pessimism is defined as an individual's assessment of the likelihood that future organizational reforms will be effective. Meanwhile, dispositional attribution is concerned with the motivation and ability of organizational leaders, whereas situational attribution is concerned with circumstances beyond their control (Wanous et al., 2004). In the context of a family business, the term "successor" is not widely used. Leadership transformation is not a position that can be filled by random individuals, but rather by owner placement and direct appointment. Cynicism is critical to manage in this case because it is prone to occur in family businesses.

Additionally, the level of enthusiasm for new projects varies by individual and hierarchy. Changes may be viewed as fascinating challenges or as appropriate and timely responses to a changing environment; however, lower-level employees may regard them as incomprehensible and inexplicable actions because top-level management (parents in the business family) is typically conservative and lacks the capability to adapt to a changing environment (Brown and Cregan, 2008; Qian and Daniels, 2008; Scott and Zweig, 2016). Hourly workers expressed more cynicism about organizational change than executives did. Perhaps executives and managers believe they have a better understanding of upcoming plans and decision-making processes (Reichers et al., 1997). According to a previous empirical study conducted by (Stanley et al., 2005; Qian and Daniels, 2008; Grama and Todericiu, 2016; Bakari et al., 2019; Scott and Zweig, 2020), cynicism about organizational change is likely caused by a lack of general knowledge about what was happening in the workplace, a lack of communication and respect from the supervisor or union representative, a negative disposition, and a lack of opportunity for meaningful participation in decision-making.

According to Wanous et al. (2000), Cynicism about organizational change has two possible antecedents: negative affectivity as a personality trait and organizational factors. For example, prior exposure to change may predispose some employees to cynicism, which includes pessimism about the success of change initiatives. The supervisor's role efficacy includes conveying information, listening effectively, being available, and showing concern. Participation in decision-making is the third organizational factor that has been linked to cynicism about organizational change. Employee cynicism can be influenced by top management. Unless they are used as selection criteria, top management cannot influence personality traits (Wanous et al., 2000).

Organizational Inertia

As previously stated by Hannan and Freeman (1984), Rumelt (1995), and Gilbert (2005), when an organization has structural inertia or a strong strategy, the organization is prone to resist adaptive adjustments to changes in the external environment and is more comfortable with the status quo. This is because an organization's adaptation to a change will have an effect on the organization's existing characteristics, such as its routine operating procedures, organizational structure, resource allocation methods, and decision-making procedures (Yi et al., 2016; Hoppmann et al., 2018; Zhen et al., 2021). Inertia in an

organization results in a condensing of the organization's operating mode and direction, reducing its flexibility (Hannan and Freeman, 1984; Godkin and Allcorn, 2008; Allcorn and Godkin, 2011; Sillic, 2019). Organizational inertia has two components: resource rigidity and routine rigidity (Gilbert, 2005). It is the inability of a company to change its resource investment pattern, while routine inflexibility is the lack of change in organizational processes and procedures for using invested resources. (Gilbert, 2005; Moradi et al., 2021).

In organizational literature, the terms organizational inertia and organizational flexibility are mutually exclusive. Flexibility has a number of advantages, and organizations that are more adaptable are more efficient. Inertia manifests itself in a variety of ways in organizations, including the suppression of valuable information within the organization, rigid rules, and an excessive commitment to the organization (Boyer and Robert, 2006; Dew et al., 2006). The organization is an open system that interacts with its surroundings and is self-sufficient. Closed communication and information channels cause an organization to be unaware of changes occurring around it, leading to its demise. Inflexible organizations and individuals are unable to adapt to changing environments. Individual stagnation leads to organizational inertia (Boyer and Robert, 2006; Hirschmann, 2021; Moradi et al., 2021).

Empowering Leadership

By combining social cognitive theory and organizational inertia, this study sought to understand the relationship between cynicism about change and leader empowerment. Humans, according to SCT, are both environmental consumers and producers (Bandura, 2001). Humans' ability to choose and control their own behavior through deliberate action is called organization (Bandura, 1989, 2001). SCT proposes five mechanisms for learning and shaping behavior. Observation, reflection, self-regulation, and symbolization are the mechanisms. To test the Empowering Leadership development intervention's effectiveness in reducing cynicism, and thus unsafe behavior, we used SCT and the underlying mechanisms.

Employees' work is valued, decision-making authority is increased, and unwanted factors such as harassment are eliminated (Zhang and Bartol, 2010). Enabling does not sum up "sharing power." Empowered employees can self-manage to improve work psychological cognition. Furthermore, subordinate motivation should be considered holistically (Dong et al., 2015; Li et al., 2016; Kim et al., 2018b). Basically, empowerment is a matter of degree rather than absolute state, so the issue is managers' ability to classify both decisions about who to empower and how much (Cheong et al., 2016; Lorinkova and Perry, 2017; Kim et al., 2018b). However, empowerment can also be seen as a mutually beneficial relationship between a leader and his subordinates (Qian et al., 2018; Muafi et al., 2019; Lin et al., 2022). Thus, it is critical to always improve team performance by encouraging problem-solving initiative, quick communication, and improved work-life balance. So Amundsen and Martinsen (2014) focus on power sharing, motivation support, and development support.

Power sharing is a basic application of employee empowerment. Its indirect link between self-leadership and

freedom within bounds (e.g., encourage independent actions). According to (Cheong et al., 2016; Li et al., 2016; Qian et al., 2018), decision-making procedures distinguish consultation and delegation. Leaders engage subordinates in consultation before delegating authority and decision-making responsibility (Cheong et al., 2016, 2019). Kim et al. (2018a) noted that delegation provides real autonomy in decision making. To feel empowered, everyone must agree on their overall goal and what actions they can take to achieve it. Leaders must motivate subordinates to take initiative, make decisions, and lead themselves (Amundsen and Martinsen, 2014). Encourage subordinates to work toward self-determination and inspire them with goals (Jung et al., 2020; Lin et al., 2022). Employees believe that for them to feel positive and confident in their abilities, it is critical for'superleaders' to approach subordinates with an open ear and listen to their ideas. As a result, it may foster autonomy and have a significant effect on motivation and efficacy. Additionally, we advise leaders to create a welcoming environment in which subordinates can discover their capabilities, inspire employees, and apply their abilities (Li et al., 2016; Jung et al., 2020). Empowering and inspiring leaders can inspire and create positive emotional states by demonstrating enthusiasm and belief in their future goals and prospects.

The last essential construct for empowering leadership according to Amundsen and Martinsen (2014) is development support, which explains the main characteristic of leaders is to serve as observable models for their subordinates (Cheong et al., 2016; Li et al., 2016). Model learning is a concept in social cognitive theory that implies a behavior can be learned or modified by observing others (learning by example). This is more likely because the models have status, power, success, and/or competence (Hao et al., 2017; Jung et al., 2020). So this study uses two empowering leadership dimensions. It describes how a leader empowers members to take initiative through delegation, coordination, and information sharing. This dimension describes how a leader can model and guide members to keep learning. To motivate and develop subordinates to work autonomously within the organization's goals and strategies is a genuine concern of leaders (Amundsen and Martinsen, 2014).

Sustainable Family Business

Family businesses must be built on a solid foundation of family meetings, respect, and communication. The first step toward family business sustainability is to understand the basics. Competitive advantages are typically fleeting in high-tech environments, whereas advantages may be more sustainable in low-tech environments (Weemaes et al., 2020). Thus, a family firm is defined as one that is "governed and/or managed with the intention of shaping and pursuing the business vision held by a dominant coalition of members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families." Family-owned enterprise Sustainability is defined as the capacity to recover, rebound, or revert to pre-existing conditions following the occurrence of problems or stresses (Gupta and Bhattacharya, 2016). Lee et al. (2013) were able to quantify an organization's potential for sustainability (resilience) by examining adaptability

measures such as managers' perceptions of environmental risk, their willingness to seek information about environmental risks, the organization's structure, their level of involvement in community planning activities, their level of compliance with continuity of operations planning, and whether the department has professional accreditation (Gupta and Bhattacharya, 2016).

According to the Sustainable Family Business (SFB) model, a sustainable family business is an integrated function of the family's functionality and the business entity's success (Kuruppuge and Gregar, 2018; Pitchayadol et al., 2018) and that each of these two components has a two-way influence on the other (Heck and Trent, 1999). Aldrich et al. (2021) established that social networks, including families, foster the establishment, growth, and transition of family businesses. Additionally, (Herrero and Hughes, 2019; Vecchio et al., 2019) discovered that the manner in which family members interact has a significant but inconsistent relationship with the family business's continuity. This mode of interaction encompasses the negotiation process, everyone's accessibility, each team member's individuality, and routines.

HYPOTHESES

Cynicism for change refers to the degree to which people are pessimistic about the future of change initiatives, as well as about their own management skills and abilities to bring about change success (Choi, 2011). Wanous et al. (2000) distinguish between two types of cynicism toward change: pessimism about the change itself and dispositional attributes that are associated with those who are responsible for implementing the change. Pessimism, on the other hand, is of particular interest because it is closely associated with generalizable individual attitudes. Comparatively, because they can relate to stakeholders other than management, such as trade union representatives, dispositional attributes lack the 'focus specificity' necessary to be practically useful in change management studies, and therefore are not practical in change management studies (Albrecht, 2002). Consequently, the current research will concentrate primarily on the cynical side's cynicism regarding change.

Interestingly, cynicism about change appears to be a significant in the ability to successfully implement change, making this concept very intriguing. Change is invoked in individuals more frequently (and unsuccessfully) the more likely it is that they will express cynicism about the change (Brown et al., 2017). Employee engagement, on the other hand, in accordance with the aforementioned constructs, plays an important role in preventing cynicism from changing. It is possible to reduce the likelihood of change cynicism by sharing and communicating information while also involving individuals in the decision-making process. Nonetheless, when individuals are cynical about change, resistance to change is more likely to occur, increasing inertia at the individual level as a result (Stanley et al., 2005). Inertia can result from ignoring this individual's opposition to the desired change, because individual support is required for the significant implementation of the intended change (Fernandez and Rainey, 2017). In order to successfully

avoid inertia, it may be necessary to overcome this individual changing attitude.

Based on the findings and discussion above, the following hypotheses can be proposed:

> H1: Cynicism about organizational change has a positive and significant effect on organizational inertia.

Even for highly successful businesses, inertia can lead to difficulties in adapting to new business methods. Moradi et al. (2021) demonstrate that the business management model is accompanied by risk and uncertainty, and that the inertia that exists in organizations that have had successful business models in the past leads to business model problems when accepting new business models. Reconfiguring a business model interacts with issues that must be addressed, such as: (1) overcoming inertia, (2) identifying multiple changes, and (3) adopting a new structure and selecting an appropriate approach to improvement. Because of organizational inertia and the resulting uncertainty, firms are unlikely to define their business model unless they are faced with a significant change in their industry or market. Even in cases where adaptation is obvious, the firm's strategic direction and path dependencies are likely to make the process of adapting existing business models to new market demands or competitive threats more difficult and time-consuming (Vorbach et al., 2017). Therefore, it can be hypothesized that:

> H2: Organizational inertia has a negative and significant effect on sustainable family business.

Cynicism about organizational change has a destructive effect on the organization, and it can even lead to acts of sabotage (DeCelles et al., 2013). Organizational inertia will be created as a result of cynicism about change as a result of a negative attitude (Huang et al., 2013). The development of organizational inertia (resources rigidity, processes rigidity, and path dependency) in a family business will result in the company's inability to actualize the agility that is required in a rapidly changing business environment if allowed to continue (Huang et al., 2013). According to social cognitive theory, cynicism about organizational change is a personal trait that must be developed (Bandura, 1989). Furthermore, empowering leadership can be defined as a leader's action in creating a favorable environment for initiated changes to take place (Lorinkova and Perry, 2017). Then, as a form of suppression, empowering leadership will be able to suppress cynicism about change as a result of its empowerment (Frazier et al., 2004; Li and Yuan, 2017). It is expected that the interaction of the two variables will act as a buffer, reducing the negative impact of cynicism on changes in organizational inertia (Huang et al., 2013). Therefore, this study formulated the following hypothesis:

> H3: Empowering Leadership will be able to reduce the negative effect of CAOC on organizational inertia in family business in Indonesia.

MATERIALS AND METHODS

Research Setting and Sampling Procedure

To address the study's research question, the first step was to select a research sample representative of an organizational inertia phenomenon, specifically family businesses. Questionnaires were distributed to family business founders and members regarding research variables and changes in family business succession. After effectively tabulating the data, data aggregation, processing, and hypothesis testing are performed; additional discussion, as well as theoretical and practical implications, are produced after the findings are acquired. This is a quantitative study conducted using a cross sectional design, in which all measurements on each person are taken at the same time. The population of this study is Indonesian family-owned businesses. The sampling technique used in this study is non-probability sampling, which means that not all samples have an equal chance of being chosen as a sample. Meanwhile, this study's sample selection technique is purposive sampling. To qualify as a family business, the owner/manager must have been in the business for at least 1 year or be actively engaged in the business for at least 6 h per week or at least 312 h per year while living with other family members. As a result, this study's sample is limited to businesses that meet those criteria. The research sample is distributed throughout Indonesia and includes 31 family businesses operating in a variety of sectors or fields, including food and beverage, medicine, electronics, garment manufacturing, and the automotive industry. In total, 124 people were sampled for this study, including 31 leaders from various family businesses located throughout Indonesia and 93 members, three from each organization.

Measurement

This study's sample units are divided into two categories: leaders (top to middle management) and members (lower management). This study examines four variables, two of which are distributed to the family business leader and the rest to family business members. This study examines members' cynicism about organizational change and empowering leadership, while measuring organizational inertia and family business sustainability. This study used a questionnaire to collect primary data, i.e., a prepared list of questions. The cynicism about organizational change variable has 16 operational items adapted from Wanous et al. (2004). The reasons for using dispositional cynicism in this study are (a) distrust of integrity, competence, and leadership motivation (common in family businesses); and (b) the data quality test results for pessimism and situational cynicism show that they do not pass the reliability test. For example, resource dependency, position reinvestment incentives, threat perception, contraction of authority, reduced experimentation, focus on existing resources and learning effects are all operational items of organizational inertia adapted from Gilbert (2005). This variable includes autonomous support (power sharing and motivation support) and development support, which are both adapted from Amundsen and Martinsen (2014).

Each leader is represented by 3 (three) members in each family business, implying that each business family must have a minimum of four members. The sample for this study included 31 family business leaders and 93 family business members or employees. Additionally, data aggregation was used to combine data collected from two distinct subjects in the family business. Aggregation of data is a two-step process. To begin, one or more data groups are identified based on the values in selected features (data grouping); second, the values in one or more selected values are aggregated for each group.

Data Collection

The questionnaire generation process was carried out in two stages, referred to as double-back translation, in which operational items adapted from previous research were translated to Bahasa Indonesia and then back to English to avoid misinterpretation during the translation process. Additionally, the questionnaire was rechecked for informal fallacies such as double-barreled questions, which are questions that address multiple issues but allow for only one response. Meanwhile, the questionnaire used the Likert scale as a measurement tool in this study. The Likert scale is a useful indicator of a study with five (five) scales, as it simplifies the process of calculating results and makes responding easier for respondents (Sekaran and Bougie, 2016). After completion, the questionnaire was distributed to family businesses throughout Indonesia, with a leader and members representing each sample unit.

Method of Analysis

This study's data are processed using Multiple Moderated Regression (MMR). MMR is a statistical method for assessing the impact of moderation in a research model. The general procedure of this method is to examine the effect of the independent variable (X) on the dependent variable (Z) and the effect of the product (XZ) on the independent variable (Z). The independent variable's effect on the dependent variable varies at intervals determined by the moderator variable (Hayes, 2018). This study's goal was to examine how empowered leadership affected cynicism about organizational change, organizational inertia, and family business sustainability. The measurement model for this research was validated and reliability tested in advance. Validity was assessed using EFA, CFA, and PCA (PCA). The reliability test used Cronbach Alpha, Corrected Item Total Correlation, and Split-half testing. In addition, the F-test, coefficient of determination, and t-test results were examined in this study. The F-test was used to assess the significance of the regression model and the effect of all independent variables on the dependent variable. It was determined by the coefficient of determination (or t-test) whether or not each independent variable had a significant effect on the dependent variable.

RESULTS

Measurement Validation

Validity is determined by the value of the outer loading, which according to Hair et al. (2017) has a cutoff of 0.500, whereas reliability is determined by the reference value of composite reliability and the AVE value, with a recommended CR value in the range of 0.700 and an AVE value greater than 0.500 (Fornell and Larcker, 1981). As shown in **Tables 1** and **2**, the overall

Code	Item	Outer loading	Reliability	AVE
SCA1	Child has a commitment to continue the family business	0.702		
SCA2	Business does not just stop at the first generation	0.637		
SCA3	Family business always earns profit in the long term	0.674	0.970	0.635
SCA4	Prospective successors are able to foster a sense of harmonization between siblings in running a family business	0.894		
SCA5	Prospective successors are able to foster a sense of harmonization with employees	1.011		
CAOC17	The people who are responsible for making improvements around here do not know enough about what they are doing	0.901		
CAOC16	I've suspected that the leaders' public statements reflect more spin than reality	0.917		
CAOC14	I marvel at the disparity between reality and the leaders' claims	0.607		
CAOC9	I suspect the leaders is deliberately evasive in the things they say	0.865		
CAOC8	I have misgivings whether the leader is forthright regarding their actions	0.535	0.977	0.678
CAOC18	Most of the people who are responsible for solving problems around here do not try hard enough to solve them	0.930		
CAOC19	The people responsible for making things better around here do not care enough about their jobs	0.939		
CAOC20	The people who are responsible for solving problems around here do not have the skills needed to do their jobs	0.789		
Empower20	My leader's planning of his/her work is visible to me	0.723		
Empower19	My leader lets me see how he/she organizes his/her work	0.850		
Empower16	My leader is enthusiastic about what we can achieve	0.384		
Empower15	My leader invites me to use my strong sides when needed	0.422		
Empower14	My leader recognizes my strong and weak sides	0.717		
Empower13	My leader listens to me	0.840		
Empower12	My leader is concerned that I work in a goal-directed manner	0.823		
Empower11	My leader makes me work towards goal attainment	0.766		
Empower10	My leader is concerned that I reach my goals	0.643		
Empower9	My leader encourages me to take initiative	0.751		
Empower8	My leader expresses positive attitudes related to me starting with my own defined tasks	0.674	0.994	0.586
Empower7	My leader encourages me to start tasks on my own initiative	0.690		
Empower6	My leader discusses shared affairs with me	0.799		
Empower5	My leader talks with me about his/her own and my goals	0.763		
Empower4	My leader coordinates his/her goals with my goals	0.737		
Empower3	My leader gives me authority over issues within my department	0.827		
Empower2	My leader gives me power	0.708		
Empower1	My leader conveys that I shall take responsibility	0.713		
Empower21	I gain insights into how my leader arranges his/her work days	0.707		
Empower22	My leader shows me how I can improve my way of working	0.620		
Empower23	My leader guides me on how I can best do my work	0.894		
Empower24	My leader tells me about his/her own way of organizing his/her work	0.876		
Inertia1	The company did not succeed in implementing new products/services development	0.701		
Inertia 3	New additional employees were not hired to work in the area of developing new products/services	0.590		
Inertia 8	Budget control was made tighter	0.606		
Inertia 15	The company is not seeking for higher efficiency in order to find synergies among several activities	0.861	0.890	0.521
Inertia 16	The company did not learn and obtain new skills and experiences while implementing new products/services	0.755		
Inertia 17	The new product/service did not require new knowledge and skills from the company	0.752		
Inertia 18	It is difficult to "forget" the former success stories	0.751		

value of the outer loading does not fall below the standard of 0.500, and the AVE value is also greater than 0.5. Thus, the data used in this study satisfy the validity assumption. Additionally, the composite reliability value is greater than 0.700, indicating that the data used is reliable. Additionally, as shown in **Table 2**, pro-change behavior is negatively correlated with pro-change cynicism.

Data Analysis

We assessed the study's construction and analysis level using a group-level analysis approach, with the family business as the unit of analysis. As a result, data collection from each unit to represent their respective groups is necessary. The RWG approach is used to merge individual group data into team-level group data (James et al., 1984; Walumbwa et al., 2017), with a minimum value of 0.700.

Hypothesis Testing

The PROCESS macro is used to run SPSS to test the moderated mediation hypothesis (Hayes, 2018). In a more detailed model, we examined the impact of cynicism on changes in Cynicism

(Cyndisp) on changes in Sustainability Competitive Advantage (SCA) *via* Behavioral Inertia (INT) moderated by Empowering Leadership (EL). Using a 5,000-bootstrap sample, we obtained a 95 percent bootstrap confidence interval with an indirect effect bias.

The *t*-count value of cynicism toward changes to inertia (INT) was −0.964 and the *p*-value was 0.224. Hypothesis 1 thus fails. The second hypothesis states that inertia reduces SCA. The t-count is 0.449 with a *p*-value of 0.657, indicating that hypothesis 2 is unsupported. The third hypothesis predicts that EL will reduce cynicism's impact on family business inertia. The moderating variable (CynDisp*EL) has a t-value of 2.426 and a *p*-value of 0.17, supporting the hypothesis.

Cynicism has an indirect effect on SCA changes *via* inertia, according to Hypothesis 4. For H3, **Figure 1** and **Table 3** show the moderated mediation of Hayes' 7 model outputs.
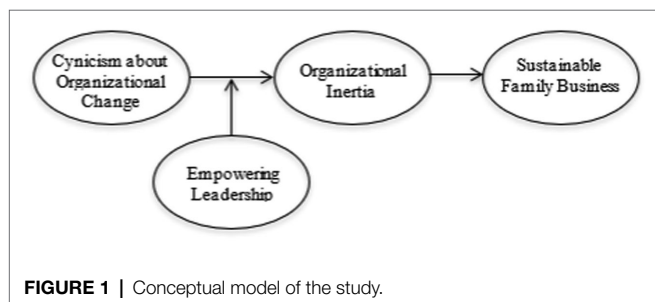
Model 1's outcome variable has a 38.50 percent variation (Inertia). The model fits with a *F* value of 5.630. EL has a significant positive effect on inertia, with a *p*-value of 0.039 0.05. The LLCI and ULCI are not zero because of the significant interaction (int 1 = Cyndisp*EL). This suggests that EL does act as a moderator in the relationship between cynicism about organizational change and organizational inertia (Hayes, 2013).

The result of the mediation model is as follows: SCA is the criterion and Cyndisp is the independent variable. The proposed model's R2 is 38.600%, F is 8.807, and *p*-value (0.001) is significant. Since Inertia directly affects SCA, it appears to be a mediator in the relationship between Cyndisp and SCA. Also, the LLCI and ULCI Boot values are both negative, with no zeros between them. So EL is a moderator at low, average, and high levels.

An interaction plot is made to see if the interaction is in the predicted direction. As shown in **Figure 2**, when leaders are empowered and cynical about change, the inertia value is moderate. Moderate inertia indicates that the family business can maintain a competitive advantage while maintaining the status quo. When cynicism toward change is high and the value of empowered leadership is low, inertia tends to be valuable. Due to the low inertia, the family business is more likely to be dynamic in the long run, thereby establishing a sustainable competitive advantage. Additionally, when cynicism toward change is low and empowerment of leadership is low, it has been demonstrated that the value of inertia is low. Inertia

TABLE 2 | Descriptive statistic.

Variable	SD	Mean	1	2	3	4
SCA	0.481	4.503	**0.678**			
CAOC	0.527	2.416	−0.107	**0.521**		
Empower	0.485	3.884	0.364*	−0.587**	**0.586**	
Inertia	0.524	2.248	−0.618**	0.276	−0.578**	**0.635**

Values on the diagonal are AVE. Values below the diagonal are inter-factor correlations.
*Correlation values are significant at p < 0.05.
**Correlation values are significant at p < 0.01.

FIGURE 1 | Conceptual model of the study.

FIGURE 2 | Hayes v3.5 Model-7 output statistical diagram. **Correlation values are significant at *p* < 0.01.

TABLE 3 | Model summary and coefficient (Hayes v3.5) Model 7.

	Model	R	R²	MSE	F	p	Outcome
Model summary	Model 1	0.620	0.385	0.187	5.630	0.039	Inertia
	Model 2	0.621	0.386	0.152	8.807	0.001	SCA
	Model	**Coeff**	**t**	**p**	**LLCI**	**ULCI**	**Outcome**
	Constant	2.410	26.948	0.000	2.226	2.594	INT
	CynDisp	−0.198	−0.964	0.344	−0.620	0.224	INT
Coefficient	EL	−0.308	−2.465	0.020	−0.565	−0.052	INT
	DispCyn*EL	−0.884	−2.426	0.017	0.389	1.380	INT
	Constant	5.819	17.861	0.000	5.152	6.486	SCA
	Inertia	0,063	0.449	0.657	−0.225	0.352	SCA
	CynDisp	−0.585	−4.135	0.000	−0.875	−0.295	SCA

Effect		SE	T	p	LLCI	ULCI	Md	EL	Effect	B_SE	LLCI	ULCI	Index
Direct		0.063	0.141	0.448	0.657	−0.225	0.352						
In-direct								INT	−0.868	0.565	0.301	−0.020	1.19
								INT	0.000	0.116	0.157	−0.211	0.428
								INT	0.868	−0.324	0.143	−0.605	−0.041
Moderation-mediation index										0.203	−0.937	−0.167	−0.517

FIGURE 3 | The effect of cynicism towards change on inertia at various levels of empowering leadership.
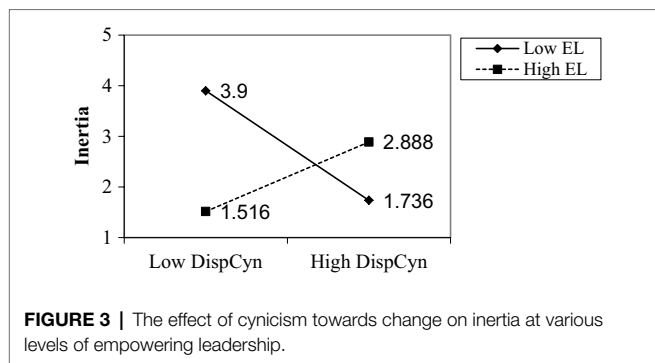
results from low cynicism toward change and high empowerment. Inertia indicates a family business is keeping things the same (**Figure 3**).

Because of the interaction between cynicism about organizational change and empowering leadership, the result demonstrates the ability of the interaction to produce suppression and buffering as a reciprocal triadic mechanism in Social Cognitive Theory (Bandura and Wood, 1989; Frazier et al., 2004; Li and Yuan, 2017; Lorinkova and Perry, 2017). Cynicism about organizational change, as indicated by a reduction in the regression coefficient value of cynicism about organizational change, from −0.884 to −0.198 in the interaction regression coefficient, is said to be able to suppress by the interaction when it can suppress by the interaction (Frazier et al., 2004; Li and Yuan, 2017). Organizational inertia is reduced by the positive influence of empowering leadership, which acts as a buffer against the negative impact of cynicism about organizational change. In other words, when empowering leadership by the leader is perceived as creating a positive environment for employees, the relationship between cynicism about organizational change and organizational inertia is reduced (Lorinkova and Perry, 2017).

DISCUSSION AND IMPLICATION

The findings have many theoretical implications: To begin, research shows that leaders who empower employees are less effective. The results show that EL is only effective at high concentrations to reduce DispCyn's negative effect on inertia. Perhaps the most important theoretical contribution of this study is expand the use of Social Cognitive Theory in the context of family business, besides the results of this study indicate that empowering leadership is a form of environmental in triadic reciprocal (Bandura, 1989; Amundsen and Martinsen, 2014; Lim et al., 2020). It has been proven that a positive environment of change can be a suppressor in suppressing cynicism for change, besides that a positive environment can also be a buffer in suppressing the negative influence of cynicism on changes to organizational inertia (Buffer). EL and cynicism change only when subordinates have positive empowering exchange relationships with superiors. Thus, the moderated-mediated model assumes a fully moderated negative relationship between EL and cynicism. These findings add to the growing body of research on the impact of leadership

empowerment by highlighting the critical role of empowerment in generating exchange (Lorinkova and Perry, 2017).

The following are the implications: The first use of empowering leadership is to increase employee psychological empowerment and reduce cynicism about change. However, it is important for family business owners to remember that employees must psychologically feel empowered by the owner or leader. The effects of dyadic relationships can be felt by frontline employees, so direct supervisors and their supervisors are encouraged to cultivate high-quality dyadic relationships. This study suggests that family businesses actively train members to manage with the EL style through training and coaching. Development assistance can help reduce cynicism and inertia (Kim et al., 2018a,b).

Second, in the context of family business changes that place employees under pressure, discomfort, and/or uncertainty (Dhaenens et al., 2018; Lorenzo Gomez, 2020), leaders must position themselves as role models for employees, particularly cynical employees. Employees will learn from their leaders how to adapt to change, modify their behavior, and combat cynicism. By reducing employee cynicism through empowering leadership behaviors demonstrated by a leader who also enjoys a positive relationship with top management, managers can ensure a happier workplace and possibly even a more seamless transition to a new organizational reality without experiencing inertia (Santiago, 2015; Hirschmann, 2021).

LIMITATION AND FUTURE RESEARCH

This study has various limitations, including the following: (1) the use of cross-sectional data, (2) the lack of a research gap between variables, (3) data processing at the same place, and (4) the inability to conduct simultaneous testing due to the dimensions of the test equipment utilized. Because of this, it is recommended that longitudinal data be used in the next study. This is done in order to ensure that there is a gap between CAOC and SCA in terms of influencing inertia. Researchers can use a time lag of 3–6 months with the same respondents in order to get more accurate results. Furthermore, researchers can use covariance-based SEM to determine whether or not a test is unidimensional.

CONCLUSION

The findings of this study indicate that cynicism toward organizational change has a beneficial and statistically significant effect on organizational inertia. Additionally, empowering leadership has a negative moderating effect on the relationship between cynicism about organizational change and organizational inertia. Overall, this study sheds new light on the importance of empowering leadership in family businesses in suppressing members' cynicism toward change, thereby reducing the likelihood of organizational inertia. A leader's action in creating a favorable environment for initiated changes can also be defined as "a leader's action in facilitating the implementation of changes" (Lorinkova and Perry, 2017). When empowered leadership

suppresses cynicism about change, it is doing so in the form of suppression (Frazier et al., 2004; Li and Yuan, 2017). It is anticipated that the interaction of the two variables will act as a buffer, mitigating the negative impact of cynicism on changes in organizational inertia by at least a factor of two (Huang et al., 2013). The results of the moderated mediation test revealed that EL was responsible for determining the indirect effect of CAOC on SCA through organizational inertia in the study. EL not only reduces CAOC (Suppress), but it also supports the relationship between CAOC and inertia (Buffer), and it determines the indirect effect of CAOC on SCA through inertia (Frazier et al., 2004; Amundsen and Martinsen, 2014; Hayes, 2018).

DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

TT and VS presented the idea about how cynicism might affect the sustainability of an organization. SS and EA focused on how to conduct the data analysis with the multi-source and data aggregation, while TS and EA helped to gain access to family business networks in Indonesia. TT supervised the progress of this paper and added some references about organizational change and cynicism. VS helped to add some contribution and discussion to this paper. Finally, TT and EA edited the manuscript. All authors contributed to the article and approved the submitted version.

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Analysis of the Turnover Tendency of College Teachers From the Perspective of Psychology

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University teachers are the core of university teaching and scientific research construction and an important link of double first-class construction. With the increasingly fierce academic competition among colleges and universities, the resignation behavior of college teachers is increasing, which has brought great impact on the construction of talents and discipline development in colleges and universities. The survey found that the departure of college teachers is not an isolated phenomenon, but a time-consuming process. Although the turnover tendency of college teachers has not evolved into resignation behavior in most cases, the resignation tendency of college teachers is always accompanied by negative psychology, complaints, and perfunctory work. These bad phenomena have brought double negative effects to colleges and universities and teachers themselves. According to this, psychological analysis of the turnover tendency of college teachers is conducive to building a benign flow mechanism for college teachers, thus supporting the long-term development of colleges and universities.

Keywords: psychological analysis, university teachers, turnover tendency, regression model, support system

INTRODUCTION

According to the 2016 National Teacher Development Survey (the investigation project organized and implemented by The School of Education of Peking University from 2016 to 2017) data, 66% of teachers have different degrees of turnover tendency (Du and Liu, 2019). At present, some domestic universities try to rapidly improve their own teachers' level and strengthen and consolidate the dominant learning through large-scale talent introduction measures with high incentives as the core division status so as to strengthen and consolidate their position as superior disciplines. However, this kind of talent introduction measure, which is basically oriented by economic interests, has brought problems such as excessive talent cost, and emphasis on quantity over quality. Even cases of talents imported with heavy funds are difficult to carry out their work due to insufficient hardware facilities. The resignation tendency of college teachers has been paid attention to by the academic community earlier and has now formed certain results. Taken together, these results are mainly focused on two levels. First, the psychological mechanism of college teachers' tendency to leave; Du and Liu (2019) analyzed the internal relationship between the perception of academic power and the tendency of college teachers to leave through investigation and research. Yin Muzi paid attention to the new college teachers and interpreted in detail the huge pressure of college teachers under the pressure of scientific research and the mechanism and development path of their resignation tendency. Zhao Chonglian and Zheng Yong analyzed the emergence and evolution of college teachers' turnover tendency from the perspective of job

burnout. Second, the coping strategies of college teachers' tendency to leave. Zhu Naiping and Jiang Dan paid attention to the over construction of college teachers' influencing factor model of college teachers' resignation tendency and discussed the relationship between career pressure, performance appraisal, job satisfaction, and organizational commitment on resignation tendency. Cao Yuping paid attention to the separation process and cost analysis of college teachers and recorded the design of the response plan in the process of analyzing the turnover tendency of college teachers. The above results have had a certain impact on this study. At the same time, an important innovation point of this study is to adopt data quantification, analyze qualitative research plans, and then produce more objective results.

PSYCHOLOGY AND EXPLAINING THE TENDENCY OF COLLEGE TEACHERS TO LEAVE

Mechanism of the Resignation Tendency of College Teachers

The tendency to leave means that the organization has lost its attraction to employees, causing employees to have attitudes and ideas to leave the organization. The turnover tendency of college teachers is a process phenomenon (Pei, 2004). In the beginning, the identity of the organizational culture decreased or disappeared, accompanied by gradual negative work attitude, which eventually evolved into a conflict with the organization at the conceptual level, and finally became more negative or divorced from the organization. The turnover tendency of college teachers is an interaction between individual decision-making and the external environment provided by colleges and universities. The external environment provided by colleges and universities is an important trade-off factor for college teachers to make resignation decisions. College teachers are faced with the influence of the external environment, which is the core of school treatment and assessment index. Generally speaking, the turnover tendency of university teachers is an interaction between individual decision-making and the external environment provided by the university. When individuals think that the external environment provided by the school cannot meet their psychological needs, they often have the tendency to leave their jobs.

The resignation of college teachers is an objective practical problem, but the resignation of colleges and universities and teachers is not an isolated phenomenon. College teachers generally have a "critical period" of 6 months from the tendency to resignation behavior. Starting from the "critical period," we can establish an effective mechanism to protect the right of teachers' turnover by recognizing and understanding the internal mechanism of teachers' turnover from the perspective of psychology. On the one hand, the right of teachers' turnover can be guaranteed, and on the other hand, the development of colleges and universities can be guaranteed with sufficient intellectual support. Therefore, psychological

analysis of the turnover tendency of college teachers can put forward corresponding countermeasures to alleviate the turnover tendency of college teachers in a critical period of time, and then stabilize the ranks of college teachers.

Psychological Overview of College Teachers' Tendency to Leave

This study, when discussing the turnover tendency of college teachers, comprehensively draws on the basic demand theory, psychological contract theory, and the relevant theory of "cognitive psychology" in psychology, and then integrates and analyzes the basic perspective of college teachers' turnover tendency.

The basic psychological needs theory was put forward by Deci and Ryan (2000). It elaborates the mechanism theory of the role of environmental factors on individual self-integration behavior. According to the basic needs theory (Deci and Ryan, 2000), the satisfaction of basic needs can stimulate the strengthening of an individual's internal motivation or make the external environment more acceptable to individuals. The survey results show that 66.5% of college teachers' basic psychological needs are not met. Lack of basic needs-level satisfaction is one of the reasons why college teachers leave. For the group of college teachers, when their basic needs are not met, they tend to take two different behaviors: the first is to make their own basic demands to colleges and universities and seek relevant suggestions to solve them; the second is to suppress this basic psychological need, and when the suppression fails, they tend to leave. Even take exit actions. Psychologist Shi En introduced the concept of "contract" into the field of psychology, defining "psychological contract" as that in any organization, there is always a set of unwritten expectations between each member and the manager of the organization and others. This expectation itself is a kind of psychological expectation, which is related to the generation of dimission tendency of college teachers (Wang, 2006).

Although the basic demand theory and psychological contract theory point out that there is a close relationship between colleges and university teachers, the process of resignation tendency cannot be grasped from the mechanism of the two. Therefore, it is necessary to introduce cognitive response theory as a supplement to this theory. Cognitive psychology is a psychological trend that emerged in the West in the mid-1950s. It is a psychological mechanism based on human behavior. Its core is the internal psychological process between input and output. Cognitive response theory has three basic assumptions (http://baike.haosou.com/doc/1845539-1951567). First of all, external information appears in the form of stimulus. Secondly, belief not only controls the reception and processing of environmental information by the cognitive system, but also profoundly affects the interaction between the whole cognitive system and external environmental information (Eysenck and Keane, 2005). Finally, cognitive reactions in turn affect existing beliefs and cognitive structures (Axelrod, 1973). It pushes applied cognitive research to a broader real-life space. Cognitive psychology provides a middle perspective for understanding social problems. There is a "critical period" of 6 months for college teachers' turnover

intention to change into behavior. Cognitive psychology provides a medium perspective for understanding the dimission tendency of university teachers, which can be cut into the dimission problem of university teachers from the process dimension (Wang et al., 2007).

DATA AND INTERVIEW ANALYSIS OF TEACHER RESIGNATION IN COLLEGES AND UNIVERSITIES

Research Objectives of Data and Interview Research

This study focuses on the problem of college teachers' turnover tendency. Through the exploration of college teachers' turnover tendency and psychological mechanism, it establishes a questionnaire on the working status of college teachers to collect data on college teachers' treatment of work and turnover propensity, and builds a regression model equation to affect the emotional and psychological tendency of college teachers.

Quantitative Analysis

This survey focuses on the psychological mechanism of college teachers' resignation tendency and grasps the internal and external causes, occurrence process and willingness direction of the resignation tendency of interviewees through the prevention of questionnaires and interviews, so as to provide data support for the study of countermeasures.

Data Collection and Analysis Program

To have an overall understanding of the resignation tendency of college teachers, in the process of this survey, we used questionnaires and interviews to evaluate them separately. We randomly selected 6 colleges and universities, randomly selected 4 colleges in each school, distributed 30 questionnaires, each school randomly selected 3 functional departments, and each functional department issued 20 questionnaires, a total of 1,080 questionnaires were distributed, 985 valid questionnaires were recovered, and the effective recovery rate was 91.2%.

This study chose the Rickett Scale compiled by American psychologist Rickett as a research tool to measure the psychological feelings of college teachers in five dimensions, namely, subjective feelings of work pressure, psychological pressure at work, physical pressure at work, positive emotions at work, and negative emotions at work. The scale is mainly composed of a set of statements, including five evaluation indicators, namely, "very little of," "little of," "general," "a little of," and "much of," and adopts a five-level scoring system, from 1 point for "very little of," 5 for "much of" to score five evaluation indicators, and get the psychological feeling of college teachers.

A Multiple Regression Model for Investigating the Resignation Psychology of the Interviewed Teachers

The SPSS23 software was used to establish a multiple linear regression model of the resignation psychology of the interviewed

college teachers through the data collected in the questionnaire from the five dimensions of college work pressure, psychological pressure at work, physical pressure at work, positive emotion, and negative emotion at work, as well as the resignation thought data of teachers, so as to explore the influencing variables of college teachers' turnover psychology and establish the multiple linear regression model of the resignation psychology of the interviewed college teachers. The specific measurement indicators and various coefficients of the model are shown in **Tables 1**, **2**.

According to the results of the multiple linear regression model calculated by the SPSS23 software, the adjusted R-value in **Table 1** is 0.789, which is 0.3 higher than the standard data. Therefore, it is explained that the probability of leaving the university teachers is 78.9%. It is caused by work pressure in college, psychological stress at work, physical stress at work, the positive and negative emotions of doing things, and the Debin Watson parameter in **Table 1** is close to 2, so it shows that there is no sequential correlation between various variables.

In **Table 2**, the significance of work pressure, psychological pressure at work, physical pressure at work, positive emotion, and negative emotion in colleges and universities is 0.002, 0.401, 0.025, 0.000, and 0.948, respectively. Among them, the significance of work pressure, physical pressure, and positive emotion in colleges and universities is less than 0.05, so it shows that the physical pressure at work and positive emotions can significantly affect the turnover thoughts of college teachers. The VIF values of collinearity statistics in **Table 2** are less than 5, so it shows that there is no multicollinearity in all independent variables. Finally, the normal P-P diagram of the multiple regression model obeys the requirements of normal distribution, and the data are distributed on the diagonal (refer to **Figure 1** for details).

According to **Table 2**, the non-standardized coefficient of college work pressure and physical pressure at work is positive, while the positive emotion of doing things is negative. Therefore, it shows that the greater the work pressure of college teachers, the greater the physical pressure at work, and the lower the positive emotion at work, the stronger the resignation idea of college teachers.

Therefore, according to the above analysis, the multiple linear regression model equation of the resignation psychology of the interviewed college teachers is constructed. The specific form of the equation is shown in formula (1):

$$A = 4.242 + 0.165 * B + 0.133 * C - 0.654 * D \quad (1)$$

Among them, A represents the resignation emotion score of college teachers, B represents the stress score of college work, C represents the physical pressure at work, and D represents the positive emotion of doing things.

Conclusion of the Study on the Resignation Psychology of the Teachers Who Were Interviewed

Among the 985 college teachers who were interviewed, 720 have corresponding turnover ideas, accounting for 73%. When

Model	R	R square	Adjusted R-square	Error of standard estimation	Debin Watson parameter
Multiple regression model of resignation psychology of interviewed College Teachers	0.891	0.794	0.789	0.3866	2.003

Multiple regression model		Non-standardized coefficient		Standardization coefficient	t	Significance	Collinearity statistics	
		B	Standard error	Beta			Tolerance	VIF
Dependent variable: Resignation emotion	Argument (constant)	4.242	0.298		14.221	0.000		
	Independent variable: work pressure in Colleges and Universities	0.165	0.052	0.167	3.183	0.002	0.390	2.563
	Independent variable: psychological stress at work	−0.063	0.075	−0.059	−0.841	0.401	0.215	4.641
	Independent variable: physical stress at work	0.133	0.059	0.110	2.263	0.025	0.459	2.180
	Independent variable: positive emotion of doing things	−0.654	0.044	−0.761	−14.882	0.000	0.412	2.426
	Independent variable: negative emotion of doing things	0.003	0.052	0.002	0.065	0.948	0.861	1.161

external factors such as university performance appraisal and organizational culture as external stimuli exert pressure on the psychology of university teachers, university teachers have more turnover intention (refer to **Figure 2** for details).

This feedback produces two results. First, they force themselves to identify with the external environment and adjust their cognitive structure. The specific performance is that although they have turnover intention, they fail to take turnover behavior. Second, use their own cognition to deny the rationality of the external environment. The specific performance is the implementation of resignation action. No matter whether college teachers take resignation behavior or not, the "psychological contract" of college teachers will also disintegrate. The disintegration of psychological contract will enable college teachers to adopt negative strategies to deal with the external pressure such as performance appraisal and organizational culture put forward by colleges and universities, which is the root of the weak cohesion of college talent team.

This study collates the interviews of 35 college teachers among the 985 college teachers interviewed. It is found that the pressure of college teachers mainly comes from three parts. The first part is the teaching pressure. Although college teachers do not need to punch in and go to class on time every day like primary and secondary school teachers, they need to prepare more information about the content of lessons, and also take into account the content that students can accept, and make corresponding adjustments accordingly. During the interview, 23 teachers said that the teachers' general preparation time is

more than three times the class time. With the application of new teaching technologies and methods (such as rain classroom and the teaching integration system represented by wisdom tree), the pressure of lesson preparation is increasingly intensified, which brings great pressure to the daily work of college teachers.

The second part is the pressure of scientific research. Scientific research is the main basis for the evaluation of college teachers' professional titles. Therefore, college teachers are generally faced with greater pressure of scientific research. Among the 35 college teachers interviewed, 31 are "teaching scientific research" posts. In addition to teaching tasks, they also need to carry out scientific research, and scientific research is the main reference basis for evaluating professional titles. In recent years, the vast majority of colleges and universities have used the performance appraisal mechanism to assess teachers, i.e., if they cannot complete the corresponding workload in a certain period of time (usually 2–3 years) and be rated as deputy senior titles, they will leave. Most of these assessment mechanisms are linked to the establishment, and some colleges and universities no longer provide the newly introduced doctoral establishment. In this environment, scientific research activities greatly increase the psychological pressure of college teachers and reduce their psychological expectations for college work. Then promote them to have turnover intention.

The third part is the pressure on the level of identity. During the interview, 12 teachers mentioned the pressure brought by the school's organizational culture. In particular, for the newly introduced middle-aged and young teachers, it is difficult to
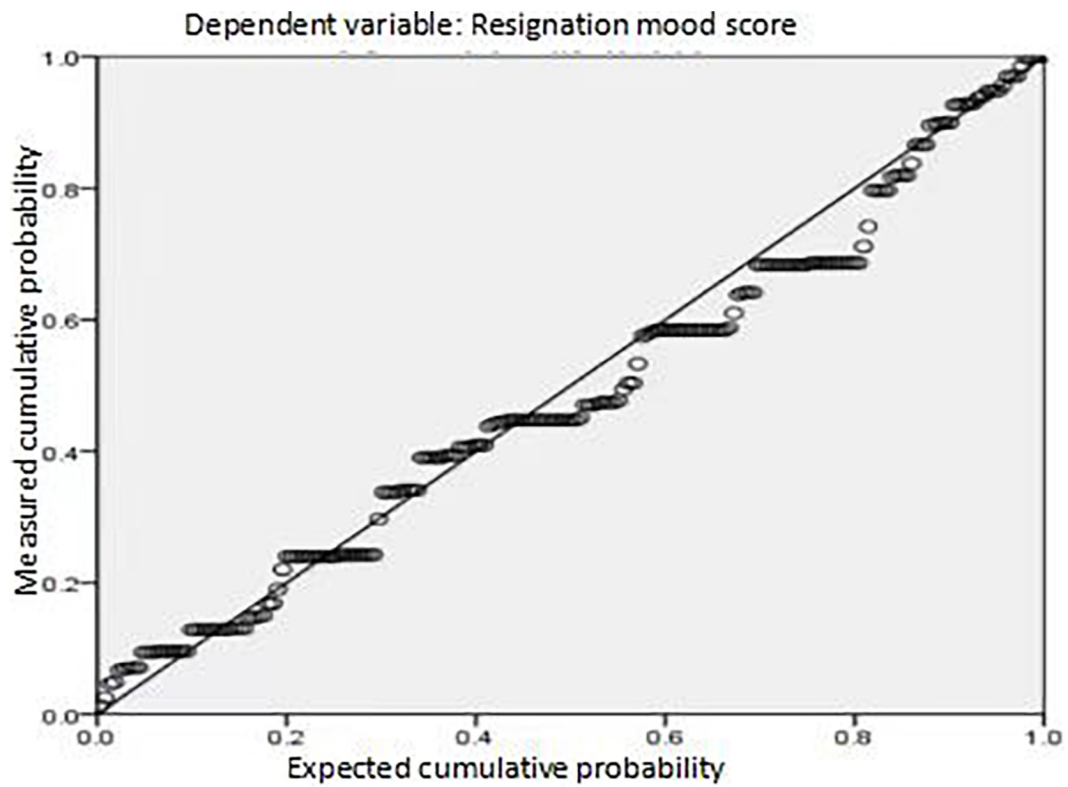
FIGURE 1 | Normal P-P diagram of standardized residuals of resignation psychological regression of interviewed college teachers.
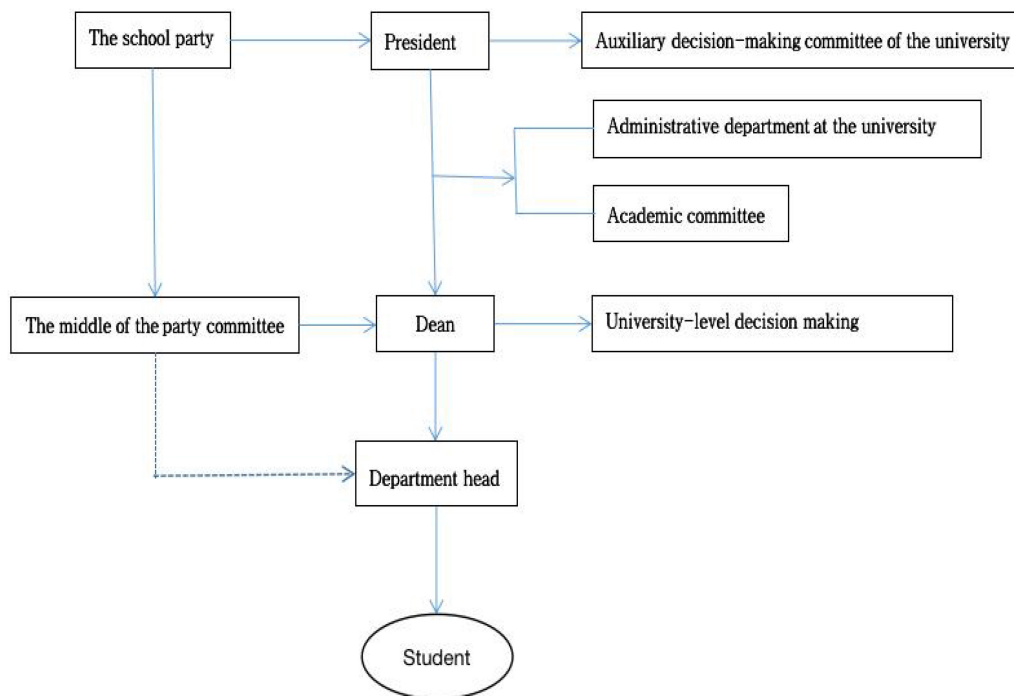

FIGURE 2 | Schematic diagram of university governance structure.

integrate into the organizational culture of the school. The new members are faced with the sense of exclusion brought by the existing social relations at the college level. The existing social relations at the college level often bring psychological pressure to college teachers, which reduces their willingness to integrate into the organizational cultural environment of the university.

Through the follow-up interviews with college teachers, the following basic conclusions are drawn. First, the turnover intention of college teachers is high, but the probability of eventually implementing the turnover behavior is low; second, there is a positive correlation between psychological stress and turnover intention; third, when the gap between the incentives outside colleges and universities and the actual income of college teachers increases significantly, college teachers' turnover intention is easy to evolve into turnover behavior; and fourth, the work pressure of colleges and universities, the psychological and physical pressure at work, and the emotion of doing things are important reference factors for college teachers' turnover intention.

PSYCHOLOGICAL ANALYSIS OF COLLEGE TEACHERS' TURNOVER INTENTION

The Problems of College Teachers' Resignation

In the process of coping with the external environment created by colleges and universities, the gradually formed psychological contract is an important link to maintain the loyalty of college teachers to colleges and universities. The maintenance of psychological contract itself requires college teachers' recognition of their working environment and organizational culture. New teachers have more energy to carry out teaching and scientific research. If their efforts cannot be evaluated in a positive way by the school, they will often produce psychological pressure, resulting in physical pressure at work and eventually turnover intention.

Lazarus and Folkman (1984) believed that stress refers to the dynamic process of individual cognitive assessment of the environment. Kyriacou (1987) believed that stress is the bad emotions experienced by teachers in teaching activities, such as tension, frustration, anxiety, and depression. Starting from the concept of pressure, the pressure of college teachers mainly comes from the institutional system formulated by colleges and universities, which leads to the dislocation of college teachers at the role level, e.g., the conflict between the role of teachers in cultural concepts and reality, especially the conflict between the role of teachers in traditional Chinese culture and reality (Liu et al., 2021). In traditional culture, teachers are a role with perfect personality in concept. From Confucius's "model teacher" to the present "volunteering teacher" image is deeply rooted in the hearts of the people. The virtue of this behavior is the essence of our culture. However, college teachers facing the dual pressure of work and life are usually tired of professional work and lack the sense of gain as teachers. The social relationship of

college teachers is relatively simple, the working environment is relatively single, and the work content is relatively boring (Lucy and Helen, 2020). This makes it difficult to coordinate the image expectation of teaching and educating people in the concept with their own work. This dislocation makes many teachers have a sense of disillusionment with lofty ideals. During the discussion, 19 teachers have this sense of disillusionment, and 5 of them think it is difficult for them to dispel this sense of disillusionment. This mismatch between the system and the role of teachers strengthens the psychological pressure of teachers, and when it cannot be adjusted, the dimission behavior is inevitable (Peng, 2021).

A Scheme for the Rational Flow of College Teachers

First, systematic psychological counseling institutions for college teachers should be established. For college teachers, their turnover intention makes them depressed for a long time. According to the statistics, 84.7% of teachers think that they have a gap between their intention to leave and their real life. In particular, when the personal goals of college teachers are difficult to integrate into the goals of colleges and universities, this depression is more prominent. In the interview, we found that if the respondents highly recognize the values and goals of their unit, even if they have a very strong willingness to leave, they often alleviate their anxiety and pressure through positive ways. Generally speaking, college teachers whose basic psychological needs are met have a strong sense of identity with colleges and universities, and the psychological contract is more stable. Therefore, it is very necessary to take targeted intervention measures to alleviate the psychological pressure of college teachers. Colleges and universities should regularly evaluate the psychological status of teachers. In particular, we should effectively understand the pressure of college teachers through the interview program. In addition to teaching and scientific research, family life, economic pressure, interpersonal relationships, and other problems may be the causes of college teachers' turnover intention. In particular, there is a lack of systematic mental health counseling institutions for teachers in colleges and universities. Among the six universities selected in our questionnaire survey, only one university will regularly organize psychological lectures for college teachers. In the interview, we found that the turnover intention of teachers in this university is low, and the teachers with turnover intention are also more active. Therefore, colleges and universities should actively establish systematic psychological counseling institutions in colleges and universities. This psychological counseling institution can be led by trade unions, hold regular lectures, and carry out psychological counseling and treatment for individual college teachers.

Second, we should adjust the governance structure of colleges and universities to provide a better external environment for the mitigation of college teachers' turnover intention. The governance structure of colleges and universities in China is generally shown in the figure above. This hierarchical management structure has the advantages of perfect organization and convenient management, but at the same time, it also brings the problems of complex institutions and large tail.

The complexity of university governance structure makes many teachers often tired and at a loss when dealing with schools. To reduce the turnover intention of college teachers, we should adjust the governance structure of colleges and universities and further improve the functions of colleges and universities in serving college teachers, so as to enhance teachers' identity with the organizational culture of colleges and universities. To alleviate teachers' turnover intention, the governance structure of colleges and universities can be adjusted for specific functions. The basic idea is to further enhance the service function and reduce (weaken) the examination and approval function. The service-oriented institutions for teachers can establish joint office institutions to facilitate teachers' work, shorten the work process, and then improve efficiency. For example, we can draw up the staff of the security department, the financial department and the personnel department, and form a comprehensive service department. Teachers need to solve the registered residence problems and financial problems brought about by personnel mobilization, and we can get one-stop solution.

Third, the standards of teacher performance appraisal should be optimized from the school level. Through investigation, we found that a core consideration of current teachers' dimission is the excessive pressure of performance appraisal. On the one hand, the pressure beyond the norm is not conducive to the maintenance of psychological contract between teachers and schools, and on the other hand, it greatly restrains the efforts of colleges and universities to establish stable teachers. If appropriate adjustment can be made to reduce the quantity standard and improve the quality index, it will be beneficial to restrain the dimission tendency of teachers.

CONCLUSION

The turnover intention of college teachers is an objective (increased generally) phenomenon. On the one hand, turnover emotional tendency brings psychological pressure and even physical discomfort to college teachers, which makes it difficult for them to devote themselves to the work process, and then hinders the improvement of work efficiency. On the other hand, the reduction of college teachers' psychological expectations of colleges and universities is very easy to cause the disintegration of the "psychological contract" between them and colleges and universities, thus affecting the construction of talent team in colleges and universities. Therefore, for the whole academic ecology, we should strengthen efforts to meet the basic psychological and material needs of college teachers and actively promote the rational flow of college teachers,

including professional titles, staffing, appropriate teaching, and scientific research tasks. The university institutions should actively take measures to pay attention to the pressure and positive emotion of teachers at work, and build professional psychological counseling institutions for college teachers to help college teachers relieve personal work pressure and physical pressure, so as to make college teachers have positive emotions to face challenges in their work.

FUTURE RESEARCH DIRECTIONS

To ensure the effectiveness of the data, this study adopts the combination of questionnaire survey and in-depth interview, but the sample is less than the survey object itself, although it is objectively enough to reflect the internal mechanism affecting the resignation of college teachers and provide targeted solutions. However, in the regression analysis to explore the specific weight of each element, the result is not very ideal.

In the future, this research will conduct more in-depth and extensive investigation, and build a more reliable model to demonstrate the internal mechanism of college teachers' turnover intention on the basis of the current research.

DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

YZ: propose the research topic, design the research proposal, implement the research process, and draft the thesis. KZ: collect and organize data, research and organize literature, design thesis framework, and revise thesis. Both authors contributed to the article and approved the submitted version.

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The Mediator Role of Organizational Justice in the Relationship Between School Principals' Agile Leadership Characteristics and Teachers' Job Satisfaction

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Teachers with high job satisfaction become more effective and productive by showing high performance and positively affecting student and school outcomes. This study investigates the relationship between school principals' agile leadership characteristics, organizational justice, and job satisfaction, and sheds light on the role of organizational justice in the relationship between agile leadership and job satisfaction. To achieve this aim, a theoretical model has been put forward and this model has been tested with the data collected from 409 teachers working in public schools in Istanbul. The results show that school principals with high agile leadership characteristics and organizational justice are associated with teachers' job satisfaction. The analyses also indicate that organizational justice strongly contributes to the relationship between agile leadership and job satisfaction and plays an important role in the relationship between the two determinants.

Keywords: leadership, agile leadership, job satisfaction, justice, organizational justice

INTRODUCTION

Today, leaders try to deal with elements such as Volatility, Uncertainty, Complexity and Ambiguity (VUCA) (Joiner and Josephs, 2007; De Meuse et al., 2008; Horney et al., 2010). This situation forced organizations to manage complex and dynamic environments and differentiated their understanding of Leadership (Litz, 2011; Alsaeedi and Male, 2013). In order for leaders to be successful in VUCA environments, it is necessary to demonstrate a range of effective behaviors such as competitiveness, readiness for change and effective use of resources. There is a common view that agile leaders, who can use these behaviors effectively and easily manage uncertain environments, will also transform the organization into a more agile structure (Lediju, 2016; Hollis, 2017; Fielitz and Hug, 2019; Gren and Lindman, 2020). Many researchers study agile leadership and school effectiveness (Çalışkan Yılmaz, 2021; Yalçın and Özgenel, 2021), organizational commitment (Lediju, 2016; Kostrad, 2019; Özdemir, 2020)

and employee engagement (Fitaloka et al., 2020), organizational learning and innovation (Muafi and Uyun, 2019), gender (Saro, 2017; Akkaya and Üstgörül, 2020; Cestou, 2020), performance (Lediju, 2016; Yalçın and Özgenel, 2021). Focusing on the relationship between organizational agility (Young, 2013; Joiner, 2019), flexibility and adaptability (Hollis, 2017), they tried to reveal the effects of agile leadership on the organization and employees. Since the research on agile leadership is new and limited, more research is needed on this subject with different variables.

Today, educational organizations, like other organizations, are to effectively manage environments that are difficult to control. While educational organizations discuss how to handle VUCA (Akinoso, 2015; Reeves and Reeves, 2015; Stewart et al., 2016), they also focus on the effects of the agile school leader, who can lead these environments, inside and outside the organization (Taylor, 2017; Özdemir, 2020; Özgenel and Yazici, 2020; Çalışkan Yılmaz, 2021). Although these studies try to determine the effects of the agile leader on the employee and the organization, it is seen that there are important gaps in the subject. One of them is the job satisfaction of the employees, which can shape the success of the organization. In many studies conducted on teachers, it has been revealed that different leadership practices and behaviors have positive reflections on job satisfaction (Pool, 1997; Nguni et al., 2006; Hariri et al., 2016; Sun and Xia, 2018; Torlak and Kuzey, 2019; Torres, 2019; Maheshwari, 2021). However, job satisfaction, which is an important factor in ensuring the teacher effectiveness of the agile school leader, has been left as a subject that needs research. In addition, the agile leader's integrating all stakeholders with the goals of the organization, encouraging cooperation, providing opportunities for new ideas, motivating flexible management approach (Joiner and Josephs, 2007; Joiner, 2009), exhibiting an impartial, fair management style can also strengthen teachers' perceptions of organizational justice. However, organizational justice is considered important as a factor affecting teachers' job satisfaction, since it includes evaluating teachers' feelings about the school environment and the work they do at school, and meta-analysis research results in the literature prove the effect of organizational justice on job satisfaction (Cohen-Charash and Spector, 2001; Korkmaz, 2021). Since the current research findings and theoretical knowledge are insufficient to explain the relationship between agile leadership, organizational justice and job satisfaction, which is the subject of this study, it is aimed to determine whether organizational justice perceptions will mediate the relationship between school principals' agile leadership characteristics and teachers' job satisfaction. Determining which factors are effective at school level in terms of improving teachers' job satisfaction and revealing the relationships between agile leadership, organizational justice and job satisfaction may enable managerial inferences to be made. Discussing the organizational effects of the agile leader by including them in the research, as well as the individual effects of the agile leader, determining how organizational justice mediates, will provide a better understanding of the subject and will improve our understanding of the relationship between these variables.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

The Effect of Agile Leadership on Organizational Justice and Job Satisfaction

The concept of agile leadership is defined as the ability to offer fast and effective solutions in the face of ambiguous and complex situations, adapting their skills to different situations, and displaying flexible behaviors (Joiner and Josephs, 2007; Joiner, 2009). Continuous learning, gaining experience, and willingness to develop, which is suggested as a leadership skill, are among the features frequently used by the agile leader (Lombardo and Eichinger, 2000; Mumford et al., 2000). The ability to develop different solution strategies with experiential learning and to apply them quickly to new situations to improve their changing business skills gives the agile leader the power to manage teams (Joiner and Josephs, 2007; De Meuse et al., 2010). Agile leaders' effective communication skills, transparent management approach, involving employees in decision-making processes without considering their personal interests, gaining the respect and support of their followers ensure that they are perceived as a fair leader by their followers (Joiner and Josephs, 2007). In addition, agile leaders keeping communication channels open with employees and providing fair rewards and promotion opportunities with the feedback they obtain will create a sense of trust in employees. In this way, it will enable the employees to perceive the organization more justly and the leaders to exhibit a more agile management approach. The sense of organizational justice is considered important as it affects the attitudes and behaviors of employees (Hubbell and Chory-Assad, 2005; Cheng, 2014). Organizational justice is expressed as employees' perception of whether their behavior toward them is fair or not (Moorman, 1991). Leaders' management styles affect organizational justice, and this situation is also reflected in educational environments (Uğurlu and Üstüner, 2011). For this reason, it is thought that the management style of agile school leaders will positively affect the perception of organizational justice.

Another important factor for the organization to achieve sustainable success is job satisfaction. Because job satisfaction is the positive emotional response to the extent to which an individual meets the things, he considers important for his job (Locke, 1969; Luthans, 2011) and these reactions direct their performance (Petty et al., 1984). Existing research reveals that the leadership styles of school principals are an important factor in teachers' positive perception of their work environment and their job satisfaction (Bogler, 2001; Dreer, 2021). While agile school principals increase the organizational commitment of teachers (Özdemir, 2020), they support their professional development and have a positive effect on their performance (Yalçın and Özgenel, 2021). Self-efficacy beliefs of school principals that they can overcome difficult situations enable them to be more persistent and make an effort (Wood and Bandura, 1989). Accordingly, teachers' job satisfaction increases (Federici and Skaalvik, 2012) and they feel safe (Nielsen et al., 2011). Since

agile leaders have high self-efficacy, they can increase teachers' job satisfaction by taking decisive steps in the face of uncertainty (London and Smither, 1999) and managing uncertainty (Joiner and Josephs, 2007; Horney et al., 2010; Setili, 2015). Given the theoretical and empirical evidence between the variables, we hypothesize the following:

H₁: *Agile leadership has a significant and positive direct effect on job satisfaction and organizational justice.*

The Effect of Organizational Justice on Job Satisfaction

Job satisfaction lies under the attitudes of the employees toward the organizational environment (Burke, 2004) and their feelings (Spector, 1997). Locke (1976) defines job satisfaction as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences' (p. 1304). Organizational researchers have long been working to identify the antecedents and consequences of greatest job satisfaction (Hoppock, 1937; Vroom, 1962; Lawler and Porter, 1967; Wanous and Lawler, 1972; Weaver, 1980; Scarpello and Campbell, 1983; Conway et al., 1987; Arvey et al., 1989; Furnham and Drakeley, 1993; Clark, 1996; Wright and Cropanzano, 2000; Judge et al., 2002, 2012; Crossman and Harris, 2006; Lee et al., 2012; Mondal and Saha, 2017). The main purpose of these studies is to try to eliminate, prevent or improve the factors that negatively affect job satisfaction by determining its antecedents and results. Accordingly, it is aimed to increase the performance of the employees in a specific sense, and to increase the efficiency and effectiveness of the organization in general. Indeed, studies support this idea. For example, it has been revealed that employees with high job satisfaction are productive, have a higher probability of staying in the organization (McNeese-Smith, 1997), has higher performance (Greene, 1972; Iaffaldano and Muchinsky, 1985; Judge et al., 2001, 2002; Harter et al., 2002; Hunter, 2006) and life satisfaction (Tait et al., 1989; Judge and Watanabe, 1993), positively affects organizational outcomes (Faragher et al., 2013), reduce turnover (Steel and Rentsch, 1995), and leave of employment (Griffeth et al., 2000; Judge et al., 2002). However, it has been reported that employees with low job satisfaction are not productive/effective, experience burnout (Faragher et al., 2013), and prevent them from being innovative (Raziq and Maulabakhsh, 2015).

Job satisfaction can be traced back to Hawthorne studies, which sought to understand how employees behave in organizational settings. Determining which organizational characteristics are important in the context of increasing/developing employees' job satisfaction provides managerial implications (Churchill et al., 1974). Ultimately, it improves organizational effectiveness. It is tried to answer how wage increases, promotions, job status, and similar distributions within the organization, in other words, organizational justice practices affect the attitudes and behaviors of employees (Greenberg, 1987a,b, 1990, 1993). In this context, research on job satisfaction and organizational justice includes evaluating/determining employees' feelings of satisfaction or dissatisfaction with their work environment and job, and

this due diligence affects employee behaviors and organizational outputs (Cohen-Charash and Spector, 2001). Greenberg (1987b) explained organizational justice as the individual's perception of justice regarding wage increases, promotions, job status, and similar practices in the organization (p. 55). In general, employees' perceptions of organizational justice are examined in three dimensions: distributive justice, procedural justice, and interactional justice (Greenberg, 1987a,b; Colquitt et al., 2001). Distributive justice refers to the distribution of the gains that employees get such as wages, compensation, and rewards (Daileyl and Kirk, 1992; Clay-Warner et al., 2005; Bahri-Ammari and Bilgihan, 2017), procedural justice is the method used to distribute these gains (Daileyl and Kirk, 1992; Işıkay, 2020) and interactional justice is related to whether interpersonal behavior is fair or not while the procedures are applied (Greenberg, 1993; Fischer, 2012). In other words, organizational justice focuses on how employees perceive and react to justice practices in the organization. In the literature, capital research findings are showing that organizational justice perceptions of employees affect their job satisfaction positively and significantly in non-profit service sectors such as education, health, and security (Fatimah et al., 2011; Crow et al., 2012; Nojani et al., 2012; Iqbal, 2013; Lotfi and Pour, 2013; Altahayneh et al., 2014; Chegini et al., 2019; Jameel et al., 2020; Korkmaz, 2021) and for-profit commercial sectors such as energy, insurance, technology, furniture, finance, automotive, and tourism (Daileyl and Kirk, 1992; Martin and Bennett, 1996; Blau and Andersson, 2005; Al-Zu'bi, 2010; Ahmadzadeh Mashinchi et al., 2012; Yelboğa, 2012; López-Cabarcos et al., 2015; Hao et al., 2016; Negahban et al., 2017; Ulutas, 2018; Sung, 2021). To this extent, the job satisfaction of employees decreases or increases depending on whether the organizational justice perception is positive or negative. Given the theoretical and empirical evidence between the variables, we hypothesize the following:

H₂: *Organizational justice has a significant and positive direct effect on job satisfaction.*

Indirect Effect of Agile Leadership on Job Satisfaction Through Organizational Justice

Agile leaders can regulate emotions that prevent them from solving problems in times of crisis (Joiner and Josephs, 2007; Yukl and Mahsud, 2010; McCauley et al., 2013). The emotional agility of the leaders, their orientation to feedback to understand the needs and emotional reactions of the employees correctly, enable them to make the right decisions and eliminate the uncertainty (Pescosolido, 2002) and to easily respond to this uncertainty (Joiner and Josephs, 2007). This open flow of information between the leader and the employees also corrects the injustices within the organization, leading to the further development of the perception of justice (Sherf et al., 2021). Organizational justice is an important element in the functioning of schools, as in every organization. While school administrators' supportive leadership behaviors toward teachers and their fair perception of the organization cause them to trust their administrators (Yilmaz and Altinkurt, 2012), they enable them to be more committed

FIGURE 1 | The conceptual framework for the study.
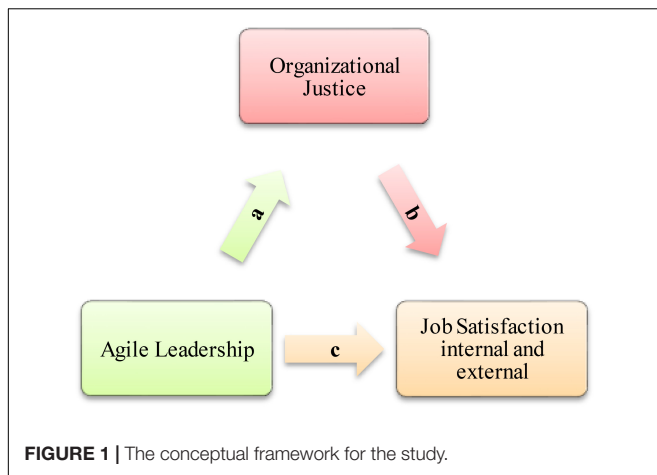
to their profession (Alazmi and Alenezi, 2020). Teachers who perceive the organization as fairer are likely to experience high job satisfaction (Zainalipour et al., 2010; Nojani et al., 2012; Elma, 2013; Ghran et al., 2020). In addition, the mediation effect of organizational justice on the relationship between emotional intelligence and job satisfaction was determined by the research result (Ouyang et al., 2015). As a result, this study argues that school principals' agile leadership characteristics will be effective in gaining job satisfaction and organizational justice perceptions, which are of great importance for teachers to provide sustainable quality education at school. Given the theoretical and empirical evidence between the variables, we hypothesize the following:

H₃: *Agile leadership has a significant and positive indirect effect on job satisfaction through increased organizational justice.*

MATERIALS AND METHODS

Research Model

In this research, which aims to determine the mediating role of organizational justice in the relationship between school principals' agile leadership characteristics and teachers' job satisfaction, a mediation model was established theoretically (**Figure 1**) and the mediation model was tested with the collected data. The purpose of the mediation model is to determine the function of a third variable that affects the direction or strength of the independent variable's effect on the dependent variable (Baron and Kenny, 1986).

According to **Figure 1**, school principals' agile leadership characteristics affect teachers' perceptions of both internal and external job satisfaction and organizational justice. Accordingly, while teachers' organizational justice perceptions directly affect their job satisfaction, teachers' organizational perceptions mediate the relationship between school principals' agile leadership characteristics and teachers' job satisfaction. According to Hayes (2015), determining the causal effect of a variable (X) on another variable (Y) gives us limited information about the relationship between variables. However, confirming/testing that the relationship between these two

variables may affect other variables indicates a deeper understanding than just determining that X affects Y, and such studies contribute a lot to science. According to Baron and Kenny (1986), for a variable to be accepted as a mediating variable, the effect of the independent variable (agile leadership) on the dependent variable (job satisfaction) is added to the model by adding the mediating variable (organizational justice) to the dependent variable (job satisfaction) should decrease to zero. The decrease in the path coefficient between the independent variable (agile leadership) and the dependent variable (job satisfaction) to zero is evidence of a "dominant mediating variable." However, if the path coefficient between the independent variable (agile leadership) and the dependent variable (job satisfaction) is not zero, this finding indicates that there may be "multiple mediating variables" between the independent variable and the dependent variable.

Participants

Participants consist of 409 teachers working in public and private schools in the Sancaktepe district of Istanbul in the 2020–2021 academic year. 409 teachers who were involved in the research participated voluntarily, 72.1% of the teachers were female and 27.9% were male. 87.5% of the teachers have bachelor's degrees and 12.5% have postgraduate degrees. 21% of the teachers work at primary school, 45.5% at secondary school, and 20.3% at high school. Of these 409 teachers, 29.6% have 5 or less seniority, 34.2% have 6–10 years of seniority, 16.1% have 11–15 years of seniority, 9.5% have seniority of 16–20 years, and 10.5% of them have 21 years or more seniority.

Data Collection Tools
Marmara Agile Leadership Scale
The scale, consisting of 34 Likert-type items, is developed by Özgenel and Yazici (2020). The scale consists of three sub-dimensions: situational awareness, human relations, and self-awareness. The 5-point Likert scale was arranged as "Never-0, Rarely-1, Sometimes-2, Often-3, Always-4." The possible scores for the scale are between 0 and 136. While high scores indicate high agile leadership characteristics; low scores indicate a low level of agile leadership characteristics. The reliability coefficient of the scale was calculated as 0.959 (Özgenel and Yazici, 2020).

Minnesota Job Satisfaction Scale
The scale, which consists of 20 Likert-type items and two sub-dimensions, internal satisfaction, and extrinsic satisfaction, is developed by Weiss et al. (1967). The scale was graded as a 5-point Likert type (1-Not at all satisfied, 2-Not satisfied, 3-Not sure, 4-Satisfied, 5-Very Satisfied). Although internal and external satisfaction scores are obtained for the scale, the highest score to be obtained from the scale is 100 and the lowest score is 20. The scale was adapted to Turkish by Baycan (1985), and in this study, the internal consistency coefficient of the Minnesota Job Satisfaction Scale was found to be 0.77.

Organizational Justice Scale
The scale consisting of one dimension and 10 items is developed by Hoy and Tarter (2004). The scale is rated as

a five-point Likert type (1-Never satisfied, 2-Rarely satisfied, 3-Sometimes/sometimes satisfied, 4-Mostly satisfied, 5-Always satisfied). The adaptation of the scale to Turkish was carried out by Tastan and Yilmaz (2008) and the internal consistency coefficient of the scale was calculated as 0.92.

Analysis of the Data

The data obtained within the scope of the research were analyzed with SPSS and AMOS package program. First, Skewness and Kurtosis values were examined to determine whether the data showed normality distribution, and reliability coefficients were calculated (**Table 1**).

In **Table 1**, it is seen that the Skewness and Kurtosis values of the scales are in the range of $-1 +1$. These values revealed that the scores obtained from the scales had a normal distribution. In addition, it is seen that the reliability values of the scales were 0.787 and above, and it is decided that the scales were reliable. Correlation analysis is used to determine the relationship between variables in the analysis of the data, and mediation model analysis is used to test the conceptual model. The mediation analysis proposed by Baron and Kenny (1986) was conducted in three stages.

FINDINGS

Correlation analysis is performed to determine the relationship between the variables and the result is presented in **Table 2**.

When **Table 2** is examined, it is revealed that there is a positive and high level ($r = -0.777$; $p < 0.01$) relationship between school principals' agile leadership characteristics perceived by teachers and teachers' organizational justice perceptions. Meanwhile, a positive and moderate relationship ($r = 0.397$; $p < 0.01$) between agile leadership characteristics and internal job satisfaction is detected. However, it is seen that there is a positive and moderate ($r = 0.523$; $p < 0.01$) significant relationship between agile leadership characteristics and external job satisfaction. After determining the relationships between the variables,

the mediator of the independent variable and the dependent variable; The effect of the mediating variable on the dependent variable is calculated.

According to **Figure 2**, the path coefficients between school principals' agile leadership characteristics and teachers' internal job satisfaction ($\beta = 0.40$; $p < 0.05$) and external job satisfaction [$\beta = 0.52$ ($p < 0.05$)] are significant. School principals' agile leadership characteristics significantly predict teachers' internal ($R^2 = 0.16$; $p < 0.05$) and external job satisfactions ($R^2 = 0.52$; $p < 0.05$). In other words, school principals' agile leadership characteristics explain 16% of the total variance in teachers' internal job satisfaction and 27% of the total variance in external job satisfaction.

According to **Figure 3**, it is seen that the path coefficients between school principals' agile leadership characteristics and teachers' organizational justice perceptions ($\beta = 0.78$; $p < 0.05$) are significant. School principals' agile leadership characteristics significantly predict teachers' perceptions of organizational justice ($R^2 = 0.60$; $p < 0.05$). In other words, school principals' agile leadership characteristics explain 60% of the total variance in teachers' perceptions of organizational justice.

According to **Figure 4**, the path coefficients between teachers' perceptions of organizational justice and internal ($\beta = 0.45$; $p < 0.05$) and external job satisfaction ($\beta = 0.57$; $p < 0.05$) are significant. Teachers' perceptions of organizational justice significantly predicted their internal ($R^2 = 0.21$; $p < 0.05$) and external job satisfaction ($R^2 = 0.33$; $p < 0.05$). Teachers' perceptions of organizational justice explain 21% of the total variance in their internal job satisfaction and 33% of the total variance in their external job satisfaction. After determining that there is a significant relationship between the independent, dependent, and mediator variables, the proposed theoretical model, together with the three variables, was tested by mediation analysis with the collected data (**Figure 5**).

The proposed theoretical model was analyzed and the path coefficients between the variables were examined. It is seen that the path coefficients between agile leadership and internal and external job satisfaction have decreased significantly. However, to evaluate the model, it is first examined whether the path coefficients between the variables were significant (**Table 3**).

When **Table 3** is examined, agile leadership and organizational justice ($\beta = 0.78$; $p < 0.05$) and external job satisfaction ($\beta = 0.19$; $p < 0.05$); while a significant relationship was found between organizational justice and internal ($\beta = 0.37$; $p < 0.05$) and external ($\beta = 0.43$; $p < 0.05$) job satisfaction ($p < 0.05$); it was seen that the path coefficient between agile leadership and internal job satisfaction ($\beta = 0.11$; $p > 0.05$) was not significant and the path between agile leadership and internal job satisfaction was excluded from the model and the analysis was re-executed (**Figure 6**).

When **Figure 6** is examined, it is seen that the path coefficient between agile leadership and external job satisfaction ($\beta = 0.14$; $p < 0.05$) decreased significantly after the path coefficient between agile leadership and internal job satisfaction was removed. In addition, agile leadership and organizational justice ($\beta = 0.78$; $p < 0.05$); it was determined that there is a significant relationship between organizational justice and

TABLE 1 | The skewness, kurtosis, and reliability values of the scales.

	N	**M**	**SD**	**Skewness**	**Kurtosis**	**Cronbach's alpha**
Agile leadership	409	2.93	0.67	−0.958	0.434	0.980
Organizational justice	409	4.05	0.62	−0.835	0.418	0.905
Internal satisfaction	409	4.10	0.53	−0.321	0.637	0.876
External satisfaction	409	3.62	0.59	0.249	0.131	0.787

TABLE 2 | The relationship between agile leadership, job satisfaction, and organizational justice.

Variables		**1**	**2**	**3**	**4**	**M**	**SD**
1. Agile leadership	r	–				2.931	0.674
2. Organizational justice	r	0.777**	–			4.058	0.631
3. Internal job satisfaction	r	0.397**	0.455**	–		4.107	0.535
4. External job satisfaction	r	523**	0.575**	0.678**	–	3.622	0.596

N: 409; **$p < 0.01$.
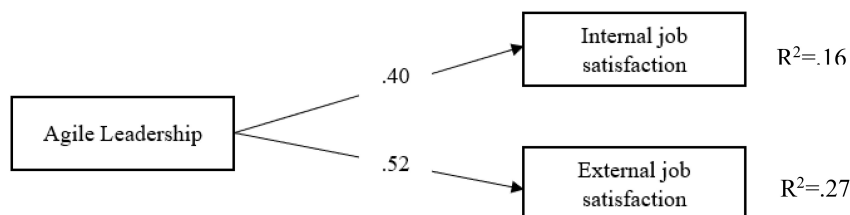
FIGURE 2 | The relationship between agile leadership and job satisfaction.

FIGURE 3 | The relationship between agile leadership and organizational justice.
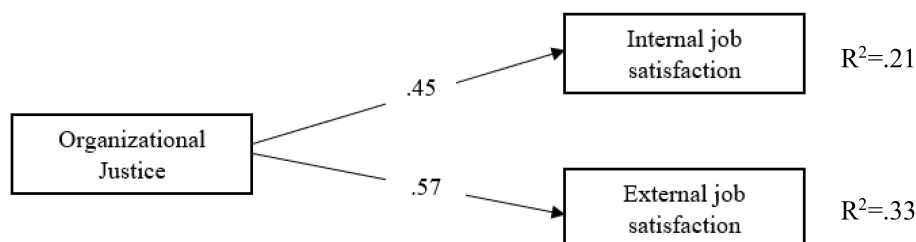
FIGURE 4 | The relationship between organizational justice and job satisfaction.

TABLE 3 | Regression values between variables.

			Estimate	S.E.	C.R.	p
Organizational justice	<−	Agile leadership	0.715	0.029	24,910	***
External job satisfaction	<−	Agile leadership	0.170	0.056	3,021	0.003
Internal job satisfaction	<−	Organizational justice	0.318	0.060	5,297	***
External job satisfaction	<−	Organizational justice	0.408	0.061	6,688	***
Internal job satisfaction	<−	Agile leadership	**0.087**	**0.055**	**1,568**	**0.117**

*Bold indicates p-values that are not significant. *p < 0.05, **p < 0.01, ***p < 0.001.*

internal job satisfaction ($\beta = 0.45$; $p < 0.05$) and external job satisfaction ($\beta = 0.47$; $p < 0.05$) ($p < 0.05$). In other words, while the agile leadership characteristics of school principals

FIGURE 5 | Theoretical model.

alone explain 16% of the total variance in teachers' internal job satisfaction; Agile leadership and organizational justice together explain 21% of the total variance in teachers' internal job satisfaction. Again, while the agile leadership characteristics of school principals alone explain 27% of the total variance in teachers' external job satisfaction; Agile leadership and organizational justice together explain 33% of the total variance in teachers' external job satisfaction. From these findings, the agile leadership characteristics of school principals, together with organizational justice, increase the positive effect on teachers' internal and external job satisfaction. To compare the proposed theoretical model with the measurement model, it is checked whether the path (regression) coefficients between the repeat variables are significant (**Table 4**).

When **Table 4** is examined, a significant relationship is discovered between agile leadership and organizational justice, external job satisfaction, organizational justice, and internal and external job satisfaction ($p < 0.05$). To evaluate the model,

FIGURE 6 | Measurement model.

TABLE 4 | Regression values between variables.

			Estimate	S.E.	C.R.	p
Organizational justice	<–	Agile leadership	0.715	0.029	24,910	***
External job satisfaction	<–	Agile leadership	0.120	0.046	2,588	0.010
Internal job satisfaction	<–	Organizational justice	0.392	0.038	10,314	***
External job satisfaction	<–	Organizational justice	0.451	0.055	8,224	***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

standardized total, direct, and indirect effect values (**Table 5**) and fit indices (**Table 6**) between the variables are examined.

When **Table 5** is scrutinized, standardized total effect values are determined to be significant between school principals' agile leadership characteristics and organizational justice ($\beta = 0.77$; $p < 0.05$), external ($\beta = 0.50$; $p < 0.05$), internal ($\beta = 0.35$; $p < 0.05$) job satisfaction with organizational justice and external ($\beta = 0.47$; $p < 0.05$) and internal ($\beta = 0.45$; $p < 0.05$) job satisfaction. Similarly, it is also explored that the standardized direct effect values between school principals' agile leadership characteristics and organizational justice ($\beta = 0.77$; $p < 0.05$) and external job satisfaction ($\beta = 0.13$; $p < 0.05$) with organizational

TABLE 5 | Standardized total, direct and indirect effect values between variables.

	Agile leadership	Organizational justice
Standardized total effects		
Organizational justice	0.777	0.000
External job satisfaction	0.502	0.471
Internal job satisfaction	0.353	0.455
Standardized direct effects		
Organizational justice	0.777	0.000
External job satisfaction	0.136	0.471
Internal job satisfaction	0.000	0.455
Standardized indirect effects		
Organizational justice	0.000	0.000
External job satisfaction	0.366	0.000
Internal job satisfaction	0.353	0.000

T, Total impact; D, vertical/direct impact; I, indirect effect.

justice and external ($\beta = 0.47$; $p < 0.05$) and internal ($\beta = 0.45$; $p < 0.05$) job satisfaction values. It is also seen that there is a standardized indirect effect between the agile leadership characteristics of school principals and teachers' external job satisfaction ($\beta = 0.36$; $p < 0.05$) and internal job satisfaction ($\beta = 0.35$; $p < 0.05$). While organizational justice is the full mediator in the relationship between agile leadership and internal job satisfaction, organizational justice played a "partial mediator" role in the relationship between agile leadership and external job satisfaction. Goodness-of-fit indices were examined to determine the validity of the model (**Table 6**).

When the goodness of fit indices of the measurement model are examined in **Table 6**, it is seen that it is a valid model according to the reference intervals recommended in the literature to evaluate structural equation/mediation models (Maydeu-Olivares and Garcia-Forero, 2010; Schumacker and Lomax, 2010; Kline, 2011).

DISCUSSION

Factors such as Volatility, Uncertainty, Complexity and Ambiguity have changed the understanding of leadership in the business world and an agile leadership approach that will effectively manage these elements has been presented as an answer (Lombardo and Eichinger, 2000; Joiner and Josephs, 2007; Joiner, 2009, 2019; De Meuse et al., 2010). The effects of agile leadership on the organization and employees, especially in the field of education, remain at the theoretical level. Therefore, in this study, we tried to prove the direct and indirect effects

	χ^2	df	p	χ^2/df	RMR	SRMR	GFI	AGFI	NFI	TLI	CFI	RMSEA
Model	2.452	1	0.117	2.452	0.006	0.0153	0.997	0.970	0.997	0.989	998	0.060
Reached values				Perfect	Perfect	Perfect	Perfect	Perfect	Perfect	Perfect	Perfect	Acceptable

χ^2, Chi-square; df, degree of freedom; $p < 0.01$; RMR, Root mean square residuals; SRMR, Standardized root mean square residual; GFI, Goodness-of-fit index; AGFI, Adjusted goodness-of-fit index; NFI, Normed Fit Index; TLI, Tucker–Lewis Index; CFI, Comparative Fit Index; RMSEA, Root mean square error of approximation.

of school principals' agile leadership characteristics on teachers' job satisfaction and perceptions of organizational justice and to make an empirical contribution to the development of the concept. In the research, the answer to the question of whether organizational justice has a gap role in the relationship between the agile leadership characteristics of school principals and the job satisfaction of teachers was sought. A positive and moderately positive relationship was found between school principals' agile leadership characteristics perceived by teachers and their internal and external job satisfaction and organizational justice perceptions. In addition, a moderate and positive significant relationship is determined between teachers' perceptions of organizational justice and their internal and external job satisfaction. In the literature, it has been revealed that job satisfaction is related to different leadership styles (Chiok Foong Loke, 2001; Rad and Yarmohammadian, 2006; Rumph, 2012). Concordantly, agile leaders establish strong communication with employees, exhibit a collaborative approach, receive feedback from employees, and perceive employees' different ideas as a development tool (Scott et al., 2003; Joiner and Josephs, 2007; Taylor, 2017). It can be said that they try to increase their job satisfaction. In addition to these features, agile leaders develop a sense of belief and confidence in their employees to cope with unfamiliar situations (Cashman, 2011). Leaving a safe space for the employees to express their ideas freely and express their thoughts can develop the idea that leaders can be just. The fair behaviors of their leaders perceived by the employees cause them to think that they are fair in their organization (DeConinck, 2010; Bidarian and Jafari, 2012) and experience job satisfaction (Zynalpoor and Kamaly, 2010). This situation, which is reflected in the results of the research, can be said to be related to the characteristics of the school principals, who are described as agile by the teachers, to meet the expectations of the teachers, and thus to achieve job satisfaction mentally and emotionally. In addition, it is thought that agile school principals' communication, collaborative approaches, creating a trustworthy environment develop the perception that they are managed fairly in their organization. It can be said that teachers' high organizational justice perceptions are related to their school life and provide job satisfaction.

Perceived justice and injustice within the organization cause positive and negative emotional reactions in employees (Cohen-Charash and Mueller, 2007; Murphy and Tyler, 2008). More specifically, job satisfaction increases more when the positive relationships between school principals' agile leadership behaviors and teachers' job satisfaction are included in the organizational justice factor. In the study, it was remarkable to determine the "full mediation" role of organizational justice

in the relationship between the agile leadership characteristics of school principals and teachers' intrinsic job satisfaction. In other words, the agile leadership characteristics of school principals positively affect teachers' internal job satisfaction both directly and indirectly through organizational justice. A number of effective leadership skills such as making fair decisions in organizations, participating in the decision-making process (Muhammad, 2004; Eberlin and Tatum, 2008) positively affect the perception of justice of the employees. The leader's supportive behaviors create a fair sense of organization and more trust on employees (DeConinck, 2010). Thanks to the collaborative, impartial, consistent and fair approach of agile leaders, employees feel strong in uncertain and challenging conditions and strengthen their belief that they will find effective solutions in the face of problems (McKenzie and Aitken, 2012). The fact that leaders have the ability to control both their own emotions and the emotions of others during stress enables employees to develop pleasing behaviors (Mayer and Salovey, 1995; Miao et al., 2016) and to experience high job satisfaction (Ouyang et al., 2015). On the other hand, it has been determined that negative leadership characteristics, which cannot analyze problems in organizations, delay the decision-making process, have difficulty in communicating and do not trust their leadership competence, cause a decrease in organizational justice perceptions of employees (Holtz and Hu, 2017). The flexible and adaptable behaviors, empathy skills, and fast and effective behaviors of agile school principals in the school enable teachers to be more effective in their education-teaching and administrative processes and prevent them from experiencing disappointment. In addition, agile school principals' encouragement of transparent, collaborative approaches and open and comprehensive communication can improve employees' understanding of decisions, and the perception that they are treated fairly in all kinds of decisions and work distribution. Because relationship-oriented leadership behaviors affect the perception of organization-oriented justice (Karam et al., 2019), and the perception of justice for the leader and the perception of organizational justice together cause more positive outcomes on teachers. This situation contributes to teachers' feeling well in the school environment and improving their job satisfaction.

In the research, it has been revealed that organizational justice mediates "partially" in the relationship between the agile leadership characteristics of school principals and external job satisfaction of teachers. To put it differently, the agile leadership characteristics of school principals affect teachers' external job satisfaction both directly and indirectly through organizational justice. An agile leader with high learning agility has the

knowledge and skills to meet the ever-changing business needs and encourages further development by including employees in the learning environment (Cashman, 2011; De Meuse et al., 2012; McKenzie and Aitken, 2012; Drinka, 2018). The continuous learning environment created within the organization affects both leaders and employees to develop new skills (Michinson and Morris, 2014). Effective agile leaders, who learn from their experiences, perform better in management and their collaborative approaches share their employees in the success of the organization (Narel, 2017; Kostrad, 2019). Agile practices and teams developed by agile leaders can cause their employees to provide job satisfaction that will meet their needs (Melnik and Maurer, 2006; Tripp et al., 2016). The ability of high-performing agile leaders to respond quickly to factors such as rewards, promotions, participation in decisions, and wages that will provide external satisfaction (Setili, 2015; Fachrunnisa et al., 2020) can reinforce the belief that material and moral justice will be provided. Ambrose and Schminke (2009) determined that the general perception of justice mediates the relationship between employees' distributive, procedural and interactional justice judgments and their job satisfaction. The high performance of agile school administrators in their administrative processes, the knowledge of teachers about this process, and meeting their wishes and needs can improve the perception that they are treated equally and fairly. To this extent, teachers can provide more external satisfaction by avoiding unproductive negative behaviors such as leaving work, arriving late, and absenteeism that will put the school in a difficult situation. In addition, according to the research findings, the partial mediating role of organizational justice makes us think that there are other variables in the relationship between agile leadership and external job satisfaction. Finally, the relationships between agile leadership, job satisfaction, and organizational justice behaviors should not be ignored. Accordingly, school principals should keep their direct and indirect effects on organizational justice and job satisfaction in mind in school management practices by developing agile leadership characteristics.

CONCLUSION

This research empirically revealed the mediating role of organizational justice in the relationship between school principals' agile leadership characteristics and teachers' job satisfaction. As in every research, there are some limitations in our research as well. The first of these is to evaluate the data of the research by obtaining it from a single source (teachers). Future research can use more than one data source and compare the research findings by revealing the concordance between school principals' agile leadership self-assessments and teachers' assessments. Secondly, organizational structure may be effective in the relationship between agile leadership and job satisfaction because organizational structure shapes the relationship between leadership style and job

satisfaction (McCartney, 1978; Neubert et al., 2016) and affects employee motivation (Worthy, 1950). Because the current research was conducted in schools, findings from different organizational structures may not support our results. This relationship may become more evident in environments where uncertainty and complexity are more struggled, and in organizations that may constantly compete. The third limitation of the study is geographical factors which are an important feature that affects the leadership capacities of school principals (Luo, 2004). The fact that the data were obtained only from teachers working in Istanbul limits the research. With the data to be obtained for school principals in other geographies, school principals in Turkey can be compared and information that will guide education policies can be reached.

This research was conducted during the COVID-19 pandemic. For this reason, it may be necessary to compare the results with the results of the post-pandemic research. Because, during the COVID-19 pandemic period, school principals may not have found a suitable school environment to influence teachers' perceptions of organizational justice and job satisfaction with agile leadership behaviors, since schools suspended education for a long time.

DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

This study was reviewed and approved by the Ethics Committee of Istanbul Sabahattin Zaim University (Date and Number: 27.05.2021-E7179). Written informed consent was obtained from all participants for their participation in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

AUTHOR CONTRIBUTIONS

MÖ devised the research idea, developed the research model, wrote the method part, ran the analytic calculations, limitations, and implications, checked for the literature and discussion part, and arranged the last version of the manuscript. ŞY wrote the introduction part, performed the results, discussion, recommendations, limitations, and controlled the other parts in terms of language and contextual check for the manuscript. AA data collecting process, data analysis, and wrote the introduction part and discussion. All authors contributed to the article and approved the submitted version.

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Beyond the three monkeys of workforce diversity: Who hears, sees, and speaks up?

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The purpose of this study was to explain differences between employees who feel a sense of belonging and those who feel a sense of otherness in terms of their opinions about diversity works in their organizations. We conducted an empirical study to examine the perceptual differences between two independent groups of the study "who feel a sense of belonging" and "who feel a sense of otherness." We collected data from 792 employees working for organizations in different sizes, industries, and capital structures, which enriched the representativeness of the sample. The findings show that out-group members remain less satisfied with diversity works in their organizations based on four main issues such as "competence of diversity actors," "embeddedness of diversity works in organizational policies/practices," "diversity awareness in the HRM functions," and "diversity-related employee satisfaction." This paper makes two contributions. First, it contributes to the extant literature an understanding of the differences between those who remain indifferent to diversity works and those who care to see, speak, and hear about them. Second, with a few exceptions, extant studies on diversity works have been dominated by Western-centered research. Research is needed on countries with different macro-contextual conditions, such as different legal regulations, socio-political status, and history. For this study, survey data were collected from people who work in Turkey, a country which has limited legal measures and underdeveloped discourses for equality, diversity, and inclusion. The paper provides significant insights into leading diversity works in national settings with less developed supportive mechanisms for diversity.

KEYWORDS

workforce diversity, diversity management, diversity works, social identity, human resource management, Turkey, belonging, otherness

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Abbreviations: HRM, human resource management.

Introduction

A recent report by the Organisation for Economic Co-operation and Development (OECD, 2020) demonstrated challenges to a broader recognition of diversity works (policies, practices, and interventions of workforce diversity), one of the most significant of which appears to be the indifference of individuals to diversity issues and concerns. Using the metaphor of three monkeys, which refers to the maxim "see no evil, hear no evil, speak no evil," which signals remaining indifferent, we question whether it is the individuals among those employees with a sense of belonging or otherness are the ones who transcend such indifference to diversity works. We define diversity works as all efforts at the organizational level to engage with, plan, and manage workforce diversity. This paper explores who remains indifferent to diversity works and who cares to see, speak, and hear about them. To query this interesting phenomenon, we turn to social identity approaches, which explore in-group and out-group behaviors (see Tajfel and Turner, 1979; Turner et al., 1987). According to these approaches, cognitive processes and behaviors change based on group identity. We query whether there are differences between in-group (the group to which the person feels they belong, having similar characteristics) and out-group (a group to which the person does not feel belonging, having different characteristics) members in terms of their perceptions of diversity works. So, we question whether feeling a sense of belonging (feeling or experience of having similar characteristics) and otherness (feeling or experience of having different characteristics) (Özbilgin and Woodward, 2004) in the organization explains indifference to diversity works. As indifference presents a significant barrier to effective implementation of diversity works, it is essential to understand how in-group (who feel a sense of belonging) and out-group (who feel a sense of otherness) members respond to diversity works. Such an understanding of different attitudes toward diversity can offer organizations ways to craft their diversity works to cater to the divergent needs and responses of in-group and out-group members.

Human resource management (HRM) often takes on the policies and practices that regulate the relationship between the organization and employees (Gilbert et al., 1999; D'Netto et al., 2014; Sabharwal, 2014; Berger et al., 2016). In countries where diversity management has not developed a unique professional identity, the HRM often takes on the role of managing diversity. Benschop (2001) explained that there is a tendency to treat employees as a homogeneous group whose differences are ignored in the HRM activities. Worse still, the unitarist approach to the HRM even assumes that the interests of employees and employers are aligned (Geare et al., 2006). However, the perceptions, thoughts, feelings, and behaviors of people who see themselves as part of the established order in the organization and those who feel a sense of otherness due

to their particular characteristics may be different (Allen, 2010). The HRM function is uniquely positioned to have insights into employees' sense of belonging and otherness through its access to employee surveys and professional practice.

This study has two major contributions to the literature on diversity works. First, this research contributes to the extant literature an understanding of the differences between those who remain indifferent to diversity works and those who care to see, speak, and hear about them. The literature on the antecedents, correlates, and consequences of diversity works views the relationship between diversity and organizational outcomes as complex and multifaceted (e.g., Shore et al., 2009). Evidence from the studies shows that workforce diversity on its own has both negative and positive consequences (see Yadav and Lenka, 2020). What makes the difference is the effective management of diversity if the organizations wish to accrue the benefits of diversity (Özbilgin et al., 2016). This study shows how employees respond to diversity works based on their position in the axis of belonging and otherness at work.

Second, with a few exceptions, extant studies on diversity works have been dominated by Western-centered research (see Karsten et al., 2011). Because the assumptions of managerial concepts developed in industrialized countries may not be directly transferred to peripheral contexts due to differences in the corporate environment (Erçek, 2016), the assumptions and findings of research conducted in Western-centered countries cannot be universally accepted (Klarsfeld et al., 2019). Therefore, research is needed on countries with different macro-contextual conditions, such as their legal regulations, socio-political status, and history. For this study, survey data were collected from people working in Turkey, an underrepresented context that provides a unique setting to explore diversity works with both Western and non-Western characteristics (Erdur, 2022). Populist and negative reactions to diversity works are rampant internationally (Vassilopoulou et al., 2016; Saba et al., 2021). As a country, which has limited legal measures, and underdeveloped discourses for equality, diversity, and inclusion (Özbilgin and Yalkin, 2019; Kornau et al., 2021; Küskü et al., 2021), Turkey has an increasingly diverse workforce and offers an important context in which to study how individuals with either a sense of belonging or a sense of otherness respond to the limited provision of diversity works. We particularly problematize the indifference of those with a sense of belonging to diversity works in the Turkish context.

Theoretical background, literature review, and hypotheses

Conceptual background from the perspective of social identity

According to the research, individuals are generally more attracted to those similar to themselves, and they tend to

communicate better with them. As a reflection of this, they work more harmoniously (O'Reilly et al., 1989), experience less relationship conflict (Jehn et al., 1999), have a lower turnover rate, and feel more loyalty to their organizations (Tsui et al., 1992). On the contrary, people are less attracted to "others" who are not like themselves and they display difficulty in communicating with dissimilar others (Triandis, 1959), and this experience of difference creates a negative reinforcement in relationships (Martins et al., 2003). In other words, individuals do not trust those they see as different from themselves (Blalock, 1967). Moreover, as the workforce diversity increases over social identity categories such as gender, race, ethnicity, and age, some psychological barriers may arise between the social interactions of different groups (Blalock, 1967; Kamasak et al., 2019). These barriers can be a significant threat that can lead to other problems within the organization. Therefore, according to the principle of social similarity, it is stated that when people are given a free choice, they tend to work and establish relationships with people who are similar to them (Tsui and O'Reilly, 1989; Martins et al., 2003). Of course, organizations can choose to let or not let workforce diversity enter the organization for various reasons (see Ely and Thomas, 2001). However, economic, political, and social developments trigger heterogeneity and greater diversity. In this case, a lack of competencies to understand and craft diversity works causes problems. Ignoring diversity and individual differences in business and management can pose a serious threat to individual rights and the social order and harmony at work. Therefore, organizations try to engage in diversity works to overcome diversity challenges and accrue organizational benefits.

Managing diversity is complicated by social identities, which color individuals' judgment of their competencies compared with their in-group and out-group members (e.g., O'Reilly et al., 1989). Therefore, we think that the social identity approach, which explores in-group and out-group perceptions and behaviors, offers a helpful theoretical lens through which we can examine the differences between people who feel a sense of belonging and those who feel a sense of otherness in terms of their perceptions of diversity work issues at work. Social identity approaches imply that perceptions, thoughts, and behaviors of one's personal identity are different from one's social identity, which emerges in their association with a social group (Tajfel and Turner, 1979; Turner et al., 1987). This means that differences in opinions come to the fore, especially in certain contexts where individuals define themselves through belonging to a group. In other words, social divisions occur in situations where individuals are influenced by their social identities. When people perceive themselves as members of a group, they simultaneously think and act differently from their personal identities (Avanzi et al., 2021). While individuals are likely to favor members of their in-groups above and beyond members of out-groups in their social

interactions, the formation of social identity along with gender, ethnicity, or other demographic lines could lead to negative consequences such as ethnocentrism, mutual influence, shared norms, groupthink, normative behavior, emotional contagion, and stereotyping (Hogg and Terry, 2000).

This process also runs in organizational contexts. Identifying themselves with a social group (e.g., gender, age, ethnicity, etc.), people can classify themselves with their career (personal level), with their team or department (group level), or with their whole organization as a specific form of social identification (Ashforth and Mael, 1989; Van Dick and Wagner, 2002). This kind of self-categorization causes depersonalization in which individuals represent the relevant group prototype above and beyond their personal identity (Hogg and Terry, 2000). The main reason for this situation is the motivation to get rid of uncertainty and to have positive self-esteem by gaining a place in reality. Since having a positive self-esteem derives partly from individuals' social identity, people tend to attribute more positive traits to their in-group than out-group (Tajfel and Turner, 1979). In other words, people must perceive their in-group as superior to out-group to feel better.

Consequently, this situation causes indifference to injustices against the out-group members and discrimination against them (Tajfel et al., 1971). This is particularly important for our study, as diversity works attempt to remedy the historical inequalities that haunt workforces. Individuals from historically disenfranchised groups such as women and minority ethnic groups are likely to be more interested in what diversity works could offer them. However, individuals from dominant in-groups in society are more likely to be disinterested in diversity works.

How identification affects job satisfaction, job involvement, extra-role behaviors, and turnover intention can be seen in some meta-analyses (Riketta, 2005; Lee et al., 2015; Steffens et al., 2017). However, such studies are not concerned with belonging and otherness and concern for or indifference to diversity works. In brief, individuals' perception is influenced by their social identities in the way that individuals act in the interests of their groups, do not accept criticism from their group, consciously or unconsciously hold their group members in a more advantageous position, and do not see the injustices done to others (Mergen and Ozbilgin, 2021). Therefore, we think that when the context is diversity works, the perception of those who feel a sense of belonging and otherness may be somewhat different. We examined two salient aspects of the social identity approach, i.e., in-group (with a sense of belonging) and out-group (with a sense of otherness) responses to diversity works across the following four dimensions: (1) opinions on the competence of diversity actors, (2) opinions on the embeddedness of diversity works into the organizational policies/practices, (3) opinions on diversity awareness in the

HRM activities, and (4) opinions on diversity-related employee satisfaction. We selected these dimensions to cover employees' opinions, observations, experiences, and perceptions regarding organizational attempts to manage diversity. Even though categories such as gender, ethnicity, and disability still dominate diversity works (see Sinicropi and Cortese, 2021; Triana et al., 2021), because of universally accepted human rights values, diversity works are more profound when it considers the intersections between diverse groups and power relations (Tatli and Özbilgin, 2012; Köllen, 2021). Therefore, in the case of our paper, we examine the feelings of belonging and otherness, rather than picking any particular category of diversity, to mobilize the social identity approach.

Opinions on the competence of diversity actors

The relevant competence of diversity actors, who assume responsibility for implementing diversity-related activities, is a necessary condition for the effective implementation of diversity interventions (Riccò and Guerci, 2014; Carstens and De Kock, 2017; Dang et al., 2022). The support, pioneering, and leadership of the senior management, as significant diversity actors, are considered prerequisites for the successful implementation of practices within the scope of diversity management in an organization (Herrera et al., 2011; Ng et al., 2020). If the senior management cannot be sufficiently competent and well versed in managing diversity, the scope of activities to be carried out in this context (Ng and Burke, 2005; Dang et al., 2022) and the level of adoption and acceptance of the activities attempted to be carried out would be low (Ng and Wyrick, 2011; Carrillo Arciniega, 2021). It is essential to examine whether there are any differences in opinion about the competence of diversity actors between in-group and out-group members.

On the contrary, although the most significant responsibility for paying attention to diversity within the organization and the implementation of the programs created within this scope belongs to the senior management, for this understanding to spread within the organization, both HRM unit managers and other managers must assume responsibility (Pitts et al., 2010; Riccò and Guerci, 2014; Mullins, 2018). To manage diversity effectively, all employees in the organization should be included in the process, and they should carry out the operation together (Kalev et al., 2006; Shen et al., 2009; Palalar Alkan et al., 2022). If this can be achieved, the organization's strategic-, tactical-, and operational-level practices could be harmonized to achieve diversity goals, which may lead to both an increase in the scope of diversity management and an increase in the benefit obtained from the activities. If so, to increase the practices within the range of diversity works within the organization, especially the groups responsible for this should have enough knowledge of workforce diversity and its management. As the knowledge level of the responsible persons on the subject increases, it will be easier to understand

the relevant diversity issues among employees. Consequently, the scope of the diversity factors taken into account in organizational practices will naturally expand. According to social identity approaches, individuals do not accept the negative evaluations of their group because these evaluations of their group are perceived as their own. Relatedly, it can be said that even if the diversity actors would not be competent enough, those who feel a sense of belonging will perceive them as competent. Therefore, we can predict that individuals who feel a sense of belonging would be less likely to problematize the competence of the diversity actors, as their interests would be aligned with those of their organizations. Therefore, in Hypothesis 1, we question whether the people who feel a sense of belonging and those who feel a sense of otherness have different perceptions of the competence of diversity actors at work.

> *H1*: Those who feel a sense of belonging will perceive their diversity actors as more competent than those who do not.

Opinions on the embeddedness of diversity works in organizational policies/practices

Although some relationships are mentioned (e.g., Ely and Thomas, 2001; Point and Singh, 2003; Ward et al., 2022), there is no clarity about the causal relationship between accepting, adopting, and managing diversity and individual, group, and organizational benefits (Kellough and Naff, 2004; Pitts et al., 2010; Yadav and Lenka, 2020). But simply complying with established quotas and government regulations does not mean managing diversity effectively (Syed and Ozbilgin, 2019). Accepting and managing diversity within the organization is, in a sense, a significant effort to imagine and support a workplace that recognizes and accommodates differences (Friday and Friday, 2003; Acar, 2010; Berrey, 2014). For this reason, for diversity to be accepted within the organization and to make the necessary arrangements, diversity considerations must be systematically incorporated into the organizational strategies and general policies (Davis et al., 2016; Calvard, 2020). Additionally, fostering a climate of inclusion is essential to achieve diversity goals (Mor Barak et al., 2016). Although developments in this area differ according to institutional contexts, studies (see Riccò and Guerci, 2014) state that activities within the scope of managing diversity are often managed without realizing that they should be a part of the organization's basic strategies and policies. Unless it is transformed into a part of the organization's strategy and policies, it will not be easy to develop the activities carried out within the scope of managing the diversity in the workforce to meet the expectations of all parties. Social identity approaches posit that individuals who feel a sense of belonging in organizations are more likely to have their interests aligned with the strategies and practices of their organizations.

H2: Those who feel a sense of belonging will be more likely to perceive that diversity considerations in their organization are embedded into the organizational policies/practices than those who do not.

Opinions on diversity awareness in the human resource management function

Working together with people with different characteristics in certain respects is not a guarantee of effective management of diversity (Sartori et al., 2022). It is necessary to create supportive cultures that will consider all stakeholders' concerns, including employees from underrepresented backgrounds (Nadarajah et al., 2022). For this to be achieved, there is a need for management practices (Ehrke et al., 2014; Roberson, 2019) and inclusive functions for all employees (Geiger and Jordan, 2014; Roberson and Perry, 2021) that can make people work together in harmony. In many studies (e.g., Pitts, 2006; D'Netto et al., 2014; Berger et al., 2016), it is stated that diversity can only be managed through the HRM activities of the organization. According to some studies, organizations that became aware of this situation started to change their HRM practices by the end of the 1990s (Kemper et al., 2016) and diversity management has become an increasingly important part of HRM in organizations (Davis et al., 2016). Indeed, workforce diversity is one of the main challenges in HRM (Showkat and Misra, 2022).

For this reason, examining diversity awareness in the HRM functions is relevant. To keep justice and impartiality, to be liable to the needs of different people, and to offer equal opportunities through the HRM functions are critical to see the commitment of HRM departments to diversity. Reflecting on the idea of social identity approaches, individuals act to keep their group interests superior to those of the other group to perceive their group in a better position to maintain a positive self-image. Conversely, they behave in such a way that keeps other group members in a disadvantaged position (Tajfel et al., 1971; Schneider and Northcraft, 1999; Kramar and Jepsen, 2021), so that we can predict that individuals who feel a sense of belonging at work would not find the diversity awareness of the HRM function inadequate as they would not view diversity interventions as relevant or necessary for their belonging at work. We formed Hypothesis 3 to understand the difference between the employees' opinions on the issues of fair and impartial conduct of the processes carried out in organizations within the scope of HRM, creating sensitivity to differences and realizing them in a way that ensures equal opportunities.

H3: Those who feel a sense of belonging will be more likely to perceive that there is diversity awareness in the HRM functions in terms of (H3a) justice and impartiality, (H3b)

sensitivity to the needs of people from diverse backgrounds, and (H3c) equal opportunity than those who do not.

Opinions on diversity-related employee satisfaction

When employees' individual identities are salient and they identify with their career, their behaviors and attitudes will be influenced by personal characteristics. On the contrary, if an employee perceives themselves as a member of a team, department, or organization (when the group-team identity is salient), their behaviors and attitudes will be affected by those social ties (Ashforth and Mael, 1989). There are findings that diversity reduces job satisfaction (e.g., Choi, 2013) and employee satisfaction, which refers to the extent to which employees are satisfied with their job in general or the specific facets of the job within the organization (Dineen et al., 2007), and hurts the psychology of employees in general (Taras et al., 2019). However, as highlighted in studies examining the positive relationship between diversity climate, diversity training, trust, and turnover (e.g., Ward et al., 2022, Zhang and McGuire, 2022), the adverse effects of diversity can be compensated for if managed (Stazyk et al., 2012; Showkat and Misra, 2022) and employee satisfaction levels can increase (Pitts, 2009); minority employees may accrue benefits from diversity management activities (Pitts, 2009; Ward et al., 2022). Some studies (e.g., Memon et al., 2021) indicate that the level of employee satisfaction with the HRM practices has a significant effect on the overall satisfaction level of employees.

According to current research, people's experiences with events shape their responses within the organization (see Bond and Haynes, 2014). In this case, employees (those who feel a sense of otherness) who indicate dissatisfaction with the HRM practices in terms of managing diversities, that is, those who have low levels of satisfaction in this regard, will naturally have low levels of overall satisfaction. However, there are studies that have found that the satisfaction levels of different groups among employees will be different (e.g., Tsui et al., 1992; Küskü, 2001, 2003), and the availability of studies that emphasize the satisfaction level of those who feel a sense of belonging and otherness is restricted. Social identity approaches imply that when an individual perceives themselves as a member of an organization, they will get a high level of satisfaction because satisfaction is more likely associated with the relationship with the other members of the group (Leach et al., 2008). The more individuals identify with their organization, the more personnel are satisfied and the more job satisfaction (Van Dick et al., 2006). Therefore, it made sense to us to construct Hypothesis 4.

H4: Those who feel a sense of belonging will show a higher score of diversity-related satisfaction than those who do not.

Methodology

Procedures, sample, and data collection

Diversity management practices vary across countries and organizations (Kellough and Naff, 2004; Bacouel-Jentjens and Yang, 2019). Differences in social concerns and environmental dynamics of the countries should be considered when using the same measurement tool in different countries. Ignorance of contextual differences may result in misleading results. In this study, we have paid attention to using measurement tools appropriate for the research context. For this purpose, we investigated relevant literature and conducted interviews to ensure the contextual appropriateness of the measurement tool.

Data collection through questionnaires is one of the sources of research challenges. "Linguistic, contextual misunderstandings, and respondent carelessness" are potential problem creators that are difficult to determine and correct their effects by statistical analysis (Einola and Alvesson, 2021). To deal with these challenges, we conducted a pre-study to examine and minimize the gap between what we are trying to collect and what respondents attribute meaning to the questions. Doing pre-study mitigates some of the problems that are produced by a gap between "the mind of the researcher" and "the mind of the respondents" (Einola and Alvesson, 2021, p. 3). After testing the functionality of the questionnaire with a pre-study, we made the necessary corrections to the form and moved to the data collection stage.

We collected data from the following two channels to increase the representativeness of the sample: (1) members of the alumni association of the university where the first researcher works and whose graduates are distributed in all cities of the country and (2) Linkedin connections of researchers. To understand whether there is a difference between the data coming from two different channels, the data were collected over two different online systems. Because there was no statistically significant difference between the data collected through different systems, all incoming data were combined and included in the analysis. We sent messages to potential participants that have the purpose of the study, ethical assurances, and the web address of the questionnaire. In this message, we also requested them to share our announcement message with their professional networks to increase the number of participants. We sent our announcement messages ten days after the first invitation.

To deal with the problem of social desirability (Spector and Brannick, 2009) as a result of the usage of the self-administered questionnaire method (Babin and Zikmund, 2015), the participants were informed that the collected data would be used only for scientific purposes in the form of aggregate results and generalizable statements and the collected data will be confidential (see Podsakoff and Organ, 1986). Consent of the participants, voluntary filling out questionnaires, the confidentiality of identities and responses, and using the collected data only in academic studies eradicate ethical concerns about data collection and use (see Ritchie et al., 2013).

The sampling frame of the study that includes employees working for organizations of different sizes, industries, and capital structures enriched the representativeness of the sample. Although 3,485 employees clicked on the questionnaire's web address, 854 employees answered the questionnaire (a response rate is 24.5%). Achieving a high response rate is difficult. This particular challenge could be explained by potential respondents' "declining political and social engagement" and their reluctance to participate due to "increasing number of requests for survey participation" (Breakwell et al., 2020, p. 382). Although using an online questionnaire facilitates access to a representative sample, a lack of contact with units of the sample can explain the non-response rate as well. We removed 15 observations with large numbers of missing data from the study based on the missing data process suggested by Hair et al. (2019). We tested the outliers and the assumptions of normality. Owing to their limited sample size, we excluded the answers of those working in the public sector. We analyzed the data from 792 respondents after the elimination process. This sample size is statistically adequate (Hair et al., 2019) to test our hypotheses. Of the 792 respondents, 311 respondents (39.3%) stated that they "feel a sense of otherness," while 481 respondents (60.7%) said that they "feel a sense of belonging" in the organization. Approximately 40% of the respondents in both groups were women. The majority of the respondents were in the "28–35-year age range" (36.9%) (the lowest age 22, the highest age 64). 54.7% of the respondents have an associate or bachelor's degree. 48.6% of those "who feel a sense of otherness" and 56.5% of those "who feel a sense of belonging" were working as "managers" (see **Table 1**).

The percentage of respondents working for organizations in the manufacturing sector was 54.3. 45.7% of the respondents were working in the service sector. Employees working in large enterprises were represented with a high percentage (72.1%). A representation of the capital structure of organizations respondents were working for was balanced. 47.1% of them were working in "fully domestic capital" organizations (see **Table 2**).

Considering the channels through which we collect data, the study population consists of relatively qualified employees with associate/bachelor's degrees. Considering the characteristics such as the profile of the workforce and the distribution of enterprises in Turkey, it can be said that the sample rate of this study is sufficient to represent the population.

Measures

We used five-point Likert-type scales in this study, as suggested by Hinkin (2005), to collect information about the

feelings and opinions of respondents. The Likert-type scale makes it easier to understand and decreases the time to measure constructs (1: strongly disagree, 5: strongly agree). We explained the differences between employees who feel a sense of belonging and those who feel a sense of otherness based on the following four main issues: "competence of diversity actors," "embeddedness of diversity works in organizational policies/practices," "diversity awareness in the HRM functions," and "diversity-related employee satisfaction," in connection with the hypotheses that we have formulated based on a context that focuses on the Turkish background.

Opinions on the competence of diversity actors

Although the middle managers and direct supervisors also have roles, people working in the top management and HRM units of the organizations have the primary responsibility for decisions on and practices of diversity management. Therefore, we focused only on those who work in the top management and HRM units as actors in the diversity issue. The competence of diversity actors was measured with two items (*Cronbach's alpha* = 0.848). Items measure to what extent they are perceived knowledgeable on diversity

TABLE 1 Demographic profile of the respondents.

Profile	Sense of otherness		Sense of belonging		Total	
	n	%	*n*	%	*n*	%
Gender						
Female	124	39,9	188	39,1	312	39,4
Male	187	60,1	293	60,9	480	60,6
Education						
Associate/bachelor's degree	170	54,7	263	54,7	433	54,7
Postgraduate degree	141	45,3	218	45,3	359	45,3
Position						
Manager	151	48,6	272	56,5	423	53,4
Other	160	51,4	209	43,5	369	46,6
Age						
Less than 28	113	36,3	150	31,2	263	33,2
28–35	125	40,2	167	34,7	292	36,9
36 and above	73	23,5	164	34,1	237	29,9
Length of working time in the organization						
Less than 3 years	158	50,8	209	43,5	367	46,3
3–5 years	93	29,9	133	27,7	226	28,5
6 years and above	60	19,3	139	28,9	199	25,1
Total length of working time						
5 years	154	49,5	194	40,4	348	44
6–10 years	75	24,1	100	20,8	175	22,1
11 years and above	82	26,4	186	38,8	268	33,9

TABLE 2 Profile of the organizations where respondents work.

Profile	Sense of otherness		Sense of belonging		Total	
	n	%	*n*	%	*n*	%
Sector						
Manufacturing	182	58,5	248	51,6	430	54,3
Service	129	41,5	233	48,4	362	45,7
Size						
Large	207	66,6	364	75,7	571	72,1
Medium–small	104	33,4	117	24,3	221	27,9
Capital structure						
Domestic	169	54,3	204	42,4	373	47,1
Foreign-owned or joint venture	142	45,7	277	57,6	419	52,9

management practices (items: Our organization's top managers have adequate knowledge of managing diversities. HRM employees of our organization have adequate knowledge of managing diversities).

Opinions on the embeddedness of diversity works into the organizational policies/practices

To understand the extent to which employees perceive that diversity works are incorporated into business practices, we used eight items (*Cronbach's alpha* = 0.937) based on prior research (e.g., Pitts, 2006; Choi and Rainey, 2010; Herrera et al., 2011; Sabharwal, 2014) on the embeddedness of diversity (e.g., item: Diversity management practices are integrated into the organizational policies and strategies).

Opinions on diversity awareness in the human resource management functions

We measured the opinions on diversity awareness in the HRM functions (recruitment, promotion, training, career development, and appraising performance and compensation) based on three dimensions as follows: (1) justice and impartiality (six items, *Cronbach's alpha* = 0.919; e.g., *Training procedures and policies are conducted fairly and impartially for all employees in our organization*), (2) sensitivity to the needs of a diverse workforce (six items, *Cronbach's alpha* = 0.918; e.g., *Training procedures and policies are generated based on the needs of diversified people in our organization*), and (3) equal opportunity (six items, *Cronbach's alpha* = 0.884; e.g., *Training opportunities for diversified people were restricted in our organization*). These items were adopted from Brinkman's (1992) items related to recruitment, promotion, and training. One item from the "equal opportunity" dimension was removed to enhance explained variance and make it clearer (omitted item: *Performance of diversified employees was measured based on the same indicators with other employees*).

Opinions on diversity-related employee satisfaction

This dimension was measured based on four items (*Cronbach's alpha* = 0.904). Items question to what extent employees are satisfied with studying in the organization and HRM practices of the organization. Additionally, suggested organization for "acquaintances" and "acquaintances who are diverse" were other questions respondents answered (items: *1—In general, I am satisfied with the Human Resource Management activities in the organization I work for; 2—All things considered, I am generally satisfied with working for this organization; 3—I recommend all my acquaintances to work in this organization; and 4—I recommend all my acquaintances who are atypical to work in this organization*).

Method of analysis and hypothesis tests

Mainly two independent groups of the study, namely, "who feel a sense of belonging" and "who feel a sense of otherness," were examined whether there was a significant difference between these two independent groups in terms of their opinions about diversity works in their organizations. We compared the opinions of these two groups based on the four dimensions, namely, "competence of diversity actors," "embeddedness of diversity works into the organizational policies/practices," "diversity awareness in the HRM functions," and "diversity-related employee satisfaction," with a *t*-test.

To summarize the variables with a minimal loss of information and define fundamental dimensions, we performed exploratory factor analysis before testing hypotheses (Hair et al., 2019). We tested the existence of correlations between variables based on the Bartlett sphericity test and the Kaiser–Meyer–Olkin sampling adequacy measure to assess the appropriateness of the factor study, and we did not detect any problems.

Results

Opinions on the competence of diversity actors

Those who feel a sense of otherness evaluated the competence of diversity professionals as lower than those who feel a sense of belonging. According to independent *t*-test analysis, the results of Levene's test for equality of variances showed no violations, $p = 0.32$. The difference between the opinions of the respondents "who feel a sense of otherness (out-group)" ($M = 2.74$, $SD = 1.08$) and "who feel a sense of belonging (in-group)" ($M = 3.15$, $SD = 1.03$) was significant [$t_{(764)} = 5.29$; $p < 0.001$, Cohen's $d = 0.43$]. So, Hypothesis 1 is supported (see Table 3). A lack of knowledge of those responsible for implementations regarding the scope of diversity works is the possible cause of their inability to address the concerns of people who do not feel a sense of belonging.

On the contrary, diversity actors who are the formulators and practitioners of diversity works will network with their "in-group" and share more information based on the social identity approaches. This does not happen with those who are in their "out-group." People who feel a sense of belonging rate the competencies of the diversity actors as adequate.

Opinions on the embeddedness of diversity works into the organizational policies/practices

The results of an independent sample *t*-test indicated that Levene's test for equality of variances showed no violations,

TABLE 3   Mean comparison of sense of otherness and sense of belonging on perceived diversity works.

	Sense of otherness		Sense of belonging					
	M	*SD*	*M*	*SD*	*t*	df	*p*	Cohen's *d*
H1	2.74	1.08	3.15	1.03	5.29	764	0.000	0.43
H2	2.63	0.97	2.85	0.91	2.80	607	0.005	0.23
H3								
H3a)	2.95	1.04	3.42	0.95	6.30	591.86	0.000	0.47
H3b)	3.02	0.95	3.36	0.89	4.82	587.03	0.000	0.37
H3c)	3.05	0.96	3.41	0.85	5.11	558.17	0.000	0.40
H4	3.09	1.07	3.53	0.90	5.87	577.08	0.000	0.44

Cohen's *d* = 0.20 small; 0.50 medium; 0.80 large effect size (Cohen, 1992). H1: Competence of diversity professionals. H2: Embeddedness of diversity management into the organizational policies/practices. H3a: Justice and impartiality. H3b: Sensitivity to the needs of people from diverse backgrounds. H3c: Equal opportunity. H4: Diversity-driven organizational satisfaction.

$p = 0.12$. Employees "who feel a sense of otherness" assessed diversity works of their organization and harmonization of these practices with the general organizational policies relatively weaker ($M = 2.63$, $SD = 0.97$) than employees "who feel a sense of belonging" ($M = 2.85$, $SD = 0.91$). Hypothesis 2 is supported based on the significance of the difference between the groups [$t_{(607)} = 2.80$; $p < 0.005$, Cohen's $d = 0.23$]. This finding can be a sign that employees tend to support the decisions and priorities of those in the same group. Decisions and priorities to integrate diversity works into the organizational policies may be raised by employees who feel a sense of belonging. On the contrary, to what extent organizations have a diverse workforce, their attempts will be questioned as long as diversity works are embedded into the organizational policies/practices to meet the demands and priorities of people in the "out-group."

Opinions on diversity awareness in the human resource management functions

Justice and impartiality, sensitivity to the needs of diverse people, and equal opportunity are prominent indicators of diversity awareness in the HRM functions. The results of Levene's test for equality of variances showed violations, $p = 0.01$. The test statistics of equal variances not assumed showed that employees "who feel a sense of otherness" evaluated justice and impartiality in HRM functions ($M = 2.95$, $SD = 1.04$) less than employees "who feel a sense of belonging" ($M = 3.42$, $SD = 0.95$). The significant difference between the two groups supported Hypothesis 3a [$t_{(591.86)} = 6.30$; $p < 0.001$, Cohen's $d = 0.47$]. A sensitivity to the needs of people from diverse backgrounds in HRM functions was another dimension. Similarly, the results of Levene's test for equality of variances showed violations, $p = 0.03$. The test statistics of equal variances not assumed showed a difference between the opinions of employees "who feel a sense of otherness" ($M = 3.02$, $SD = 0.95$) and "who feel a sense of belonging" ($M = 3.36$, $SD = 0.89$). Based on the t-test result, Hypothesis 3b is supported [$t_{(587.03)} = 4.82$; $p < 0.001$, Cohen's $d = 0.37$]. Organizational attempts to provide equal opportunity in HRM functions were perceived

relatively lower by those who feel a sense of otherness ($M = 3.05$, $SD = 0.96$) compared with those who feel a sense of belonging ($M = 3.41$, $SD = 0.85$). Hypothesis 3c is supported [$t_{(558.17)} = 5.11$; $p < 0.001$, Cohen's $d = 0.40$]. The results of Levene's test for equality of variances showed violations for this dimension, $p = 0.000$. According to the analysis of these three hypotheses, employees who feel a sense of otherness evaluate justice and impartiality, sensitivity to the needs of diverse people, and equal opportunity in HRM functions weaker. Diversity actors who are the formulator and practitioners of diversity works may give more voice to employees who feel a sense of otherness to make the HRM functions comply with the principles such as equality, fairness, and justice.

Opinions on diversity-related employee satisfaction

In general, diversity-related satisfaction levels of employees who feel a sense of belonging were higher ($M = 3.53$, $SD = 0.90$) than those of employees who feel a sense of otherness ($M = 3.09$, $SD = 1.07$) in the organization. Because of a significant difference between the satisfaction levels of the two groups, Hypothesis 4 is supported [$t_{(577.08)} = 5.87$; $p < 0.001$, Cohen's $d = 0.44$]. The results of Levene's test for equality of variances showed violations, $p = 0.000$. The indifference of individuals to diversity issues in the context of the limited provision of diversity works confronts organizations with the adverse effects of a lack of job satisfaction among employees.

Discussion

Ethnic and other types of diversity are rapidly becoming visible in organizations as Turkey hosts many migrants, refugees, and displaced persons from the Middle East, Asian, and African countries due to various political and social instabilities (UN News, 2018). This makes Turkey an important context for research on diversity works. In general, various studies (e.g., Küskü et al., 2021; Erdur, 2022)

indicate the inadequacy of supportive equality laws and the reliance on organizations to self-manage diversity efforts without accountability structures the apparent absence of supporting discourses such as business case arguments. There are contradictions and paradoxes in diversity works in Turkey. Despite the growing significance of diversity in the Turkish labor market in terms of generic categories of gender, ethnicity, age, disability, and local concerns such as internal and international migration, there is limited provision for diversity works in organizations.

Furthermore, legal and constitutional arrangements for diversity and inclusion remain ceremonial (Özbilgin and Yalkin, 2019) because of the country's political discourse and policies characterized by nationalism, Islamism, and patriarchal traditionalism (Erdur, 2022). Due to a general atmosphere of indifference and socio-economic turmoil at macro-national and meso-organizational levels, Turkey's position in terms of gender equality has declined from the first quarter to the last quarter among 150 countries in the previous 20 years (Yamak et al., 2016). As highlighted in previous research (e.g., Küskü and Ataman, 2011), due to the high rate of unemployment and the effect of social and religious values, organizations increasingly prefer recruiting men over women. There remains the challenge for Turkish organizations to develop effective diversity works to garner benefits of diversity such as cognitive, pragmatic, and moral legitimacy (see Özen and Önder, 2021). In particular, it is important for organizations to understand how employees receive diversity works across identity lines.

All four hypotheses, which we formed taking into account the four prominent aspects in the development of diversity works in organizations, were accepted: opinions on (1) competence of diversity actors, (2) embeddedness of diversity works into the organizational policies/practices, (3) diversity awareness in the HRM activities, and (4) diversity-related employee satisfaction. Accordingly, the satisfaction levels of those who feel a sense of otherness in the working environment are lower than those of those who do not feel a sense of otherness. As we outlined above, this result may not be surprising because individuals who feel a sense of otherness are likely to face more challenging circumstances than individuals who feel that they fit in. However, our findings are significant as no previous study has attempted to understand whether the in-groups and out-groups hold different views of diversity works. In the context of a country with adversarial and poorly supported diversity efforts, it is again poignant to see that out-group members are more dissatisfied with diversity works. As a note of caution, we acknowledge that there are ethical problems in enterprises operating in Turkey, such as unfair discrimination among employees, non-promotion, and non-reward of employees according to their abilities (Torlak et al., 2008). These adverse conditions may also help explain why out-groups are more dissatisfied with diversity works in our study.

We controlled organizations' sector, size, and capital structure where respondents were working to understand whether opinions on four dimensions differ based on these variables. Findings supported the argument that there is no significant difference based on the sector (manufacturing/service). This can be interpreted as expectations and judgments of employees on organizational diversity practices are independent of the sector they are actively working in. The size of organizations produced a significant difference in the "embeddedness of diversity works into the organizational policies/practices." Diversity work integration was found higher by respondents working in large-sized organizations than in medium-sized organizations. We found that the capital structure of organizations created a significant difference. The competence of diversity actors who are responsible for implementations regarding the scope of diversity works in foreign-owned and joint ventures was perceived as higher. Correspondingly, respondents working in foreign-owned organizations or joint ventures evaluated the embeddedness of diversity works into the organizational policies higher. As expected, their diversity-related employee satisfaction was higher. Additionally, our sample's lifestyle, culture, education, profession, age, and gender were the most frequently cited diversity dimensions.

Discontent with diversity works occurs at multiple levels, causing a level of cynicism about diversity efforts among workers and scholars alike. Authors such as Dobbin and Kalev (2018) and Noon (2018) have identified the reasons for rising levels of cynicism and dissatisfaction with diversity interventions as an overemphasis on training- and individual-level interventions and a lack of focus on systemic and institutional change in diversity efforts. A recent report (CIPD, 2019) also highlights that apathy and indifference to diversity prevent diversity interventions from being taken up within organizations. Indifference to diversity works presents a major challenge. For example, Kalev et al. (2006) show that those who should be centrally responsible remain indifferent to diversity works, and diversity efforts may be ultimately abandoned. We take this debate further and contribute to an understanding of who might help the individuals who remain cynical and dissatisfied with diversity interventions be. Earlier research on belonging and otherness has highlighted that individuals and groups that feel a sense of belonging have privileged access to resources, opportunities, and networks of power at work (Özbilgin and Woodward, 2004; Neiterman et al., 2015). Yet, we do not know how individuals who feel that they belong and those who feel a sense of otherness evaluate diversity works in organizations.

Social identity approaches imply that, with the effect of stereotyping and depersonalisation, identification with a group

changes the individual's emotions, thoughts, and behaviours (Tajfel and Turner, 1979; Turner et al., 1987). Individuals put group interests above their interests and discriminate against the out-group (Tajfel et al., 1971). Discrimination of out-group members occurs because identification leads individuals to make sense of the world based on in-group values, eliminate uncertainty, and increase their self-esteem as part of a group (Jetten et al., 2017).

As diversity interventions seek to promote social justice and fairness, the out-group members who are more likely to feel excluded experience higher levels of dissatisfaction with the diversity practices, competencies, and policies at work. According to social identity approaches, individuals simultaneously belong to many social categories and some identities sometimes become more important than others. For example, organizational identity can be more important than ethnicity, age, gender, etc. (Hogg and Terry, 2000). Accordingly, diverse people can be combined in a team, and team identification can be enhanced by pro-diversity beliefs (Van Dick et al., 2008). Pro-diversity beliefs decrease identity threat; as a consequence, team members react more positively toward diverse members, and this allows members to work harmoniously, cause creative and quality solutions for tasks, and increase performance (Van Knippenberg et al., 2004), and this also provides positive self-esteem to diverse employees (see Wilkins et al., 2018). Our paper shows how people in an organization cognitively might ignore atypical individuals and unequal practices because of their social identity. We hope that our results may be helpful for organizations to understand this kind of perceptual process to recultivate more pro-diversity beliefs, be aware of apathy and indifference to diverse people, and get advantages from them.

However, our study shows perceptual differences in terms of the effectiveness of diversity works between in-group and out-group members. In-group members show little concern for the effectiveness of diversity works, when diversity works are poorly coordinated and practiced, suggesting the strength of the interplay between social identity and shared concern. Meliou et al. (2021) argue that responsible leadership, i.e., leadership that cares about improving effectiveness of diversity works, emerges out of shared concerns. Thus, our study sheds light on where responsible leaders could draw inspiration for improving diversity works: the opinions of out-group members. Our study calls for attention to differences among workers when shaping diversity works (see Marescaux et al., 2021). To accrue even the much mentioned economic benefits of diversity (Gilbert et al., 1999; Köllen, 2021; Nadarajah et al., 2022), organizations should transcend one size fits all, standardized HRM and diversity works activities for all employees, and co-design HRM practices and diversity works to cater for not only the in-group members but also the out-group members.

Practical implications

In Turkey, diversity works operate with limited legal protections, low levels of responsibilization of organizations, and poorly formed supportive discourses (Küskü et al., 2021). In this context, our findings highlight that out-group members are dissatisfied with diversity works in organizations. There is a need to move toward more robust legal supports, responsibilization of organizations, and supportive diversity discourses for diversity works to be perceived on equal footing by in-group and out-group members at work. Achievement of this will benefit organizations not only morally but also strategically, such as improving organizational performance (see Siegel, 2020; Showkat and Misra, 2022). Similarly, understanding perceptual differences across social identity lines could help improve HRM processes and career choices and chances of employees (Özbilgin et al., 2005).

The management of organizations should also deal with in-group and out-group differences in assessing the effectiveness of diversity interventions. Specific interventions could be planned to transform the three monkeys of diversity into active supporters. It is of particular import for in-group members to support diversity interventions as allies. Our findings suggest that senior management and managers of HRM units in organizations should not be indifferent to the opinions of employees who feel different. Thus, we call for attention to indifference to difference and how this should be monitored and managed in organizations. Doing this is also essential in terms of sustainability approaches (see Ehnert and Harry, 2012) that emphasize that organizations should also consider their activities' short- and long-term effects on many stakeholders.

Limitations and future research directions

Although our study has many important insights to contribute to developing diversity works in business life, naturally, our findings also have some limitations. First, in this study, we did not compare the perceptual differences between out-group and in-group employees based on a particular diversity category (such as age, gender, ethnicity, and race) that caused them to feel different. Instead, we asked about their perception of belonging and otherness work in recognition that sociodemographic characteristics alone may not fully account for in-group and out-group formations. Second, to categorize the participants in terms of belonging and otherness, we have just asked whether they feel a "sense of belonging" or a "sense of otherness." A question like this is too scarce to attribute an in-group out-group distinction robustly and could be linked with other issues of organizational identification which are pretty

distinct from diversity issues. Third, the sample of this research consists of trained, highly skilled/qualified employees.

Future studies could focus on low-qualified workers who are more likely to feel threatened in their positions, bringing different results. Fourth, public sector employees are not included in the research. Private sector organizations, which we focused on, are relatively more dynamic and ready to adapt to external changes (see Tüzüner, 2014). It will be beneficial to conduct similar studies on public sector employees in future studies. Another issue to be careful about when interpreting existing data is the size of the companies the respondents work with. The vast majority of enterprises operating in Turkey are small- and medium-sized enterprises. Even though most of these enterprises try to improve their HRM practices in parallel with economic, social, and technological developments, they have practices reflecting Turkish culture (Tüzüner, 2014). Although it is possible to see the reflection of Western values in managerial practices, imprinting effects of traditional values are still available in Turkish management culture (Aldemir et al., 2003). The fact that the majority (66.6%, see **Table 2**) of the enterprises in which the people included in the sample of this study work is large-scale organizations. Future studies could focus on small- and medium-sized enterprises, which may bring different results.

The characteristics of the organizational (such as workforce composition and organizational status) and external (such as the impact of the social environment on the social identity process) context affect the practices related to workforce diversity and the perception of these practices by the employees very closely (Joshi and Roh, 2009; Bacouel-Jentjens and Yang, 2019). For this reason, it would not be right to generalize about developing countries based on the results of this study, which was created by collecting data from Turkey. To better understand the grievances arising from the point of view of groups who feel different and to make efforts to eliminate the grievances, we must continue to work toward different contexts.

Conclusion

In this paper, by collecting data from Turkey, where demographic diversity and concomitant fault lines grow without adequate institutional awareness and effort, we contribute to the debate on the satisfaction and dissatisfaction with diversity works as manifest in perceptual differences between in-group (who feel a sense of belonging) and out-group (who feel a sense of otherness) employees. We demonstrate that the out-group members transcend the three monkeys and express dissatisfaction with diversity issues at work, whereas in-group members are not affected by the absence of attention to diversity works in general. Our empirical contribution is the need for diversity research to focus on in-group and out-group members to explore the varied perceptions of diversity work in organizations.

Data availability statement

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

Author contributions

FK and OA contributed to the idea generation, data collection, and preliminary data analysis. All authors list have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

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.

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What hinders team innovation performance? Three-way interaction of destructive leadership, intra-team conflict, and organizational diversity

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This paper aims to clarify the impact of destructive leadership on team innovation performance. It also explores the relevant conditions that maximize the above relationship. Specifically we examine how intra-team conflict organizational diversity moderate the relationship between destructive leadership team innovation performance. Finally the three-way interaction between destructive leadership intra-team conflict organizational diversity is analyzed for the worst conditions to maximize the negative effect of destructive leadership on team innovation performance. This paper used a cross-sectional design with questionnaires administered to 87 teams with 479 team members working in Korean manufacturing service firms. It applied a hierarchical regression analysis to test the hypothesized relationships including three-way interaction effect among destructive leadership intra-team conflict organizational diversity on team innovation performance. This paper provided empirical insights about how destructive behaviors of team leader hindered team innovation performance. The three-way interaction effects also revealed that the higher the levels of both intra-team conflict organizational diversity the greater the negative effect of destructive leadership on team innovation performance. This paper demonstrates how team leaders' behavior team organizational conditions result in discouraging overall innovation outcomes. This paper contributes to the innovation leadership literatures by identifying possible leadership type hindering innovation performance at team level the specific conditions their dynamic interaction strengthening the negative effect of destructive leadership on team innovation performance.

Introduction

Previous studies have analyzed negative leadership through concepts such as abusive supervision (Tepper, 2000; Fischer et al., 2021), bullies (Namie and Namie, 2000), derailed leaders (Shackleton, 1995), psychopaths (Furnham and Taylor, 2004), and toxic leaders (Lipman-Blumen, 2006). Leaders' destructive behavior, including taking actions not aligned with the goals of the organization, has also been studied (McCall and Lombardo, 1983; Lipman-Blumen, 2006; Einarsen et al., 2007). Based on these studies, destructive leadership can be defined as a repetitive negative behavior by a leader that harms the organization by hindering its goals, resources, and efficiency as well as members' motivation, well-being, and job satisfaction (Einarsen et al., 2007). This leader's destructive and abusive behaviors also influenced a psychosocial work environment which in turn has been related to negative health outcomes of employee (Useche et al., 2019). This psychosocial work environment covers matters concerning both our work and all aspect of our working conditions including leaders' behavior, leader-member interaction, and conflict and diversity situation among work team members. Thus, understanding effects of negative leadership style and work condition is an important clue for reducing employee stress and burnout, and eventually increasing their health and welfare (Sangal et al., 2021). In this vein, destructive leadership makes employees experience a negative work environment. These negative work environments will negatively affect the well-being and health of employees by increasing the workload and workaholism (Molino et al., 2019), sleep problems (Salanova et al., 2016). It also negatively affect psychological recovery, resulting in burnout and exhaustion (Derks and Bakker, 2014; Molino et al., 2019), and unnecessary intra-conflict situation (Jehn et al., 2008; Leon-Perez et al., 2016; Tafvelin et al., 2020).

Destructive leadership which is our main topic has the following characteristics. First, it includes various behavior types of destructive leaders such as physical, verbal, active, passive, direct, and indirect behaviors that hinder employees' work motivation (Namie and Namie, 2000; Tepper, 2000). Second, a leader may misuse or abuse their power to harm the organization and its members. Their destructive behavior not only reduces member motivation and satisfaction, but also weakens organizational efficiency (Vredenburgh and Brender, 1998). We speculate that it profoundly influences employees' innovative intention and eventually team innovation performance. Third, destructive leadership is systematic and repetitive, for example, behavior that is repeated every week, or over 6 months (Einarsen et al., 2003). Fourth, the leader's intent is not a factor for consideration. Although they may have no intention of causing harm, their destructive behaviors can result from carelessness, insensitivity, or lack of leadership capability (Einarsen et al., 2007). Fifth, destructive leadership includes the violation of the legitimate interest

of the organization which according to Sackett and DeVore (2001) is illegal, immoral, or deviant. For example, behavior that goes against the legitimate decisions, goals, or strategies of an organization can be regarded as destructive behavior (Einarsen et al., 2007). Additionally, national and international standards, laws, and contracts must be implemented by all members of the organization and infringing these regulations can be considered destructive leadership (Einarsen et al., 2007). Destructive leadership is being actively studied in the organizational behavior area. For example, Wu et al. (2018) addressed the mechanism of destructive leadership and found that employees may show to silence due to their feeling of role conflict, role ambiguity, and role overload when they suffered destructive leadership. Furthermore, a high level of job complexity made the negative effect of destructive leadership even worse. Moreover, other study (Molino et al., 2019) found a positive relationship between destructive leadership and workload, off-work hour technology-assisted job demand (off-TAJD), and workaholism. In addition, they found that both workload and workaholism mediated the relationship between destructive leadership and exhaustion. According to Dolce et al. (2020), destructive leadership was related to exhaustion *via* autonomy. Moreover, they found that autonomy, cognitive demands, and off-work-hours technology-assisted job demand mediated the relationship between destructive leadership and recovery.

Innovation refers to the successful implementation of new ideas by members (Zhou and George, 2001), as well as the introduction of new products and services (Klingebiel and Rammer, 2014). Innovation performance is a part of business performance and makes a significant contribution to the survival and prosperity of the company. Previous studies have identified knowledge sharing (Hu et al., 2009), transformative leadership (Pieterse et al., 2010), shared leadership (Cox et al., 2003), creative self-efficiency (Newman et al., 2018), voice behavior (Guzman and Espejo, 2019), and openness and knowledge (Wang et al., 2020) as antecedents that positively influence and increase a company's innovation. However, we believe destructive leadership negatively impacts team innovation performance based on various negative effects such as increased stress from the effected company performance, job satisfaction, positive self-evaluation, and well-being, exhaustion (Schyns and Schilling, 2013; Dolce et al., 2020).

Majority of previous studies on innovation have focused on positive factors increasing innovation at individual and organizational levels (Anderson et al., 2004; Crescenzi and Gagliardi, 2018; Newman et al., 2018; Ali et al., 2020; Kaya et al., 2020). These studies have discovered positive effects of leadership types with other positive antecedents of innovation. As leadership is seen as an important driver of innovation, many studies have actively conducted the effects of positive leader's behaviors that increase creativity

and innovative performance (Hughes et al., 2018; Ali et al., 2020). However, few studies have analyzed factors that hinder innovation, especially at the team level. Additionally, some studies have found that leaders do not show positive behaviors in stressful or crisis situations that ultimately lead to negative outcome (Brandebo, 2020). Hence, this study examined negative leadership styles and contexts that hinder team innovation performance. Destructive leadership refers to the leader's systematic and repetitive behavior that negatively affects the achievement of organizational goals and exacerbates the team members' motivation (Einarsen et al., 2007). Such destructive leadership continuously abuses the members of the team and negatively impacts their job satisfaction, motivation, and behavior (Schyns and Schilling, 2013; Brandebo, 2020; Mackey et al., 2021), and innovative behaviors, creativity and ultimately reduces innovation performance (Lee et al., 2020).

This study investigated the conditions under which destructive leadership hinders innovation and analyses factors that magnify or weaken these conditions. By examining the direct effects of destructive leadership on team innovation performance, we seek conditions moderating this relationship. In this sense, we bring together two important moderating factors from team and organizational perspectives. First, we postulate that the level of intra-team conflict has a negative impact on destructive leadership and innovation performance by increasing conflict and disagreement between members of the team (De Dreu and Weingart, 2003). In other words, if the level of intra-team conflict is high due to interaction between team members, the team leader's destructive leadership is expected to further reduce team innovation performance (Badke-Schaub et al., 2010). Second, this study analyzed the effect of organizational diversity as an organizational factor that affects team innovation performance. Organizational diversity refers to the degree of difference among team members in age and gender, as well as their different opinions, knowledge, skills, values, and principles (Dahlin et al., 2005). Recent studies have already revealed that organizational diversity provides various ideas or methods for problems that arise while working (Jehn et al., 1999; Horwitz and Horwitz, 2007). Conversely, it may also lead to conflicts while implementing organizational strategy and delays the decision-making process (Shemla et al., 2016; Chen et al., 2019). Therefore, we expected that the negative effects of destructive leadership on team innovation performance will worsen by level of organizational diversity. Furthermore, we analyzed the three-way interaction effects of individual and organizational variables such as destructive leadership, intra-team conflict, and organizational diversity. Thus, the detailed and dynamic conditions that maximize negative effects of destructive leadership on innovation performance were identified through an integrated approach.

Theoretical background and research hypotheses

Employees' attitude and behavior toward organization can be influenced by many factors which organizations have various contexts. Thus, the use of one theoretical lens is not sufficient to understand the organizational performance. For this reason, we used several theories for building the hypotheses of this study.

First, leader behavior strongly affects the organizational member's attitude and behavior. Social exchange theory explains social interaction through the economic and social exchange process (Blau, 1964). Blau (1964) suggested trust as an important antecedent for establishing better relationships because social exchange relationships have voluntary and informal characteristics. According to the social exchange theory (Blau, 1964), organizational members who have received favorable treatment and support from the organization and leaders, have a sense of obligation to effort for the organization. In this vein, employees who received abusive supervision and unfair treatment by leader will have negative sense and emotion toward leader and organization. Therefore, employees' trust, intrinsic motivation, and obligation toward the team innovation will be decreased. As a result, we assume that employees who experienced the leaders' destructive behavior have negative perception and behaviors on team innovation activity **(Hypothesis 1)**.

Second, threat-rigidity theory suggested that members, teams, and organizations exhibit rigidity or inability to act and do something new, in the face of adversity (Staw et al., 1981). Hence, it suggested that perceived social threat, as in relationship conflict, activates a stress reaction, which creates cognitive rigidity, defensiveness, closed-mindedness, and avoidance response (Carnevale and Probst, 1998; O'Neill and Mclarnon, 2018). This point is that conflicts among team members negatively affect team innovation because team members cannot make flexible thinking and new attempts. Thus, we can assume that in leaders with high destructive leadership, teams with higher conflict would have a higher pain among team members thereby decreasing team innovation performance **(Hypothesis 2)**.

Third, we also apply the social categorization theory (Tajfel, 1981) to address that organizational diversity moderates the relationship between destructive leadership and team innovation performance. Social categorization theory (Tajfel, 1981) explain that people do not feel prejudiced or attracted to heterogeneous groups because they categorize themselves by characteristics and those who do not. Similarly, people are attracted to others with similar characteristics (Byrne, 1971). Referring to the premises of the this theory, organizational members can be further categorized into smaller groups with regard to diversity elements such as age, gender, education, and experience (Telyani et al., 2022). Segmentation within

a team based on a variety of factors can further reinforce the negative effects of disruptive leadership by increasing the negative attitudes and behaviors of team innovation by team members who have experienced disruptive leadership behavior (**Hypothesis 3).**

Finally, contingency theory postulates that no one best management method exists (Donaldson, 2001). Therefore, theorists who argued for contingency theory tried to identify the meet point of the organization and environment for high performance. Based on contingency theory, prior studies investigated contingent factors that could activate the negative or positive side of diversity (Van Knippenberg et al., 2004; Richard et al., 2007; Wegge et al., 2008; Sung and Choi, 2021a). In this study, we highlighted the role of intra-team conflict and organizational diversity as important contingency factors that enhances or minimizes the effect of destructive leadership on performance (Joshi and Roh, 2009). If organizational diversity is high, the team split a group into subgroups. This leads to conflict and hinders team cohesion and commitment (Zouaghi et al., 2020). Therefore, we expect that both organizational diversity and intra-team conflict which are important contingent factors moderate the relationship between destructive leadership and team innovation performance (**Hypothesis 4).**

Destructive leadership and team innovation performance

Destructive leadership offends members' work life in the organization by making unreasonable demands or a mockery of them (Schyns and Schilling, 2013). Destructive leadership increases negative emotions, feeling and attitudes among team members (Tepper et al., 2004; Erickson et al., 2015), causing stress and degrading their well-being. In such situations, the members' job dedication and satisfaction decrease, causing them to put in less effort, thereby negatively affecting individual innovation performance and eventually reducing team innovation performance. The continuous destructive behavior of the leader makes it difficult for members to maintain long-term motivation for innovation (Aryee et al., 2007; Schyns and Schilling, 2013). Innovative actions based on job satisfaction cannot be expected from members who are less satisfied, committed, and motivated because of destructive leadership (Connolly and Viswesvaran, 2000).

Furthermore, members treated unfairly by destructive leaders feel threatened by interpersonal injustice (Skarlicki and Folger, 1997; Collins and Jackson, 2015), emotional exhaustion (Xu et al., 2015), and identity (Aquino and Douglas, 2003), while also feeling anger and frustration toward the team and the leader. Consequently, undesirable attitudes (Tepper, 2000; Duffy et al., 2002), such as reduced organizational commitment, increased turnover intention (Ashforth, 1997; Iqbal et al., 2021), and increased unproductive work activity

(Mitchell and Ambrose, 2007) may be triggered, leading to bad team innovation performance. Therefore, members who are tired of destructive leaders become more focused on controlling their emotions and finding their identity rather than trying to contribute to organizational goals. As a result, insufficient resources and efforts necessary to achieve innovation are put in, which negatively affect team innovation performance.

Members who have suffered great stress and emotional exhaustion from destructive leadership are evasive and passive to ease their psychological distress (Tepper et al., 2007). According to the conservation of resources theory, members adopt strategies to deliberately avoid contact or feedback to minimize resource loss in stressful situations (Hobfoll, 1989; Tepper et al., 2007; Whitman et al., 2014), which negatively influences team innovation performance. As a form of evasive and passive behavior, members engage in passive actions, including organizational silence, reducing work-related productive remarks, not reporting problems, and not proposing new ideas (Xu et al., 2015). That is, members tend to remain silent if the leader shows no interest in their suggestions to solve work-related problems creatively (Vakola and Bouradas, 2005). Constructive and diverse opinions of members in the course of job implementation are an important element for creating new ideas for innovative change and continuous improvement (Van Dyne and LePine, 1998; Ng and Feldman, 2012). However, destructive leadership that leads to the silence of members encourages intentional omission and neglect and eventually negatively affects team innovation performance.

> **Hypothesis 1 (H1).** Destructive leadership will have a negative influence on team innovation performance.

The moderating effect of intra-team conflict

Intra-team conflict refers to a state in which opinions, arguments, and interests clash between two or more team members on an issue (Wall and Callister, 1995; Shetach, 2009). The concept of conflict can be divided into task and relationship conflict. Task conflict refers to a state of conflict in which active discussion and personal excitement among members arise related to the task given by team (Pelled et al., 1999; Simons and Peterson, 2000); continuous task conflicts may lead to negative emotions about interpersonal relationships. Conversely, relationship conflict is the recognition of inconsistency and differences over interpersonal preferences, values, and personality differences, and involves negative emotions (Jehn, 1995; Jehn and Bendersky, 2003). Previous studies have shown that normal task conflict has a positive impact on performance, while relationship conflict has a negative impact (Jehn and Bendersky, 2003; Hu et al., 2019; Downes et al., 2021).

De Dreu and Weingart (2003) show that task conflicts have a positive relationship with team performance only partly, with an overall negative relationship with everything else. Thus, the impact of task conflict on organizational performance remains controversial and leads to mixed results (Arazy et al., 2011; Chang, 2020). Therefore, conflict within a team is subject to management, and relationship conflict in particular negatively affects team performance (Badke-Schaub et al., 2010).

Job autonomy, peer support, leader-member exchange relationships, and organizational support awareness have been addressed as organizational environmental factors that promote innovation (Scott and Bruce, 1994; Axtell et al., 2000; Janssen, 2005; Ramamoorthy et al., 2005). Previous studies show that innovative actions by employees were positively moderated by organizational support and relationships with coworkers (Kwon and Kim, 2020). However, if the relationship between team members is not good and conflict occurs, members risk losing motivation for innovation. Intra-team conflict is also a phenomenon caused by interaction between members, and the satisfaction or performance of members depends on the degree of conflict management by the organization (Jehn, 1995; De Dreu and Weingart, 2003; Jehn and Bendersky, 2003; O'Neill et al., 2013; Yin et al., 2020). However, destructive leaders negatively affect members' psychological condition by continuously abusing them (Park et al., 2018; Ogunfowora et al., 2021). As a result, not only is the members' immersion in their work reduced, but conflict between members cannot be resolved smoothly, eventually maximizing the negative effects of interaction of destructive leadership and team intra-conflicts.

Conflicts cause lack of communication among members and increase stress, incurring psychological unsafe in the course of completing their task (Suifan et al., 2019; Esbati and Korunka, 2021). Additionally, members become increasingly passive toward implementing given work and creative problem-solving (Nightingale, 1974; De Dreu and Weingart, 2003; Beitler et al., 2018). As previous studies have identified, relationship conflicts increased tension among team members, further hindering their innovation behaviors (Lu et al., 2011). Thus, we assumed that intra-team relationship conflicts which act as a psychological mechanism, causing emotional confrontation and abuse, profoundly hinder knowledge sharing and cooperation among members (De Dreu, 2006; Lu et al., 2011; Vinarski-Peretz et al., 2011). In other words, the higher the intra-team conflict level, the more negatively it will affect the team innovation performance. Therefore, the intra-team conflict level can be expected to further increase the negative effect of destructive leadership on team innovation performance. Based on the above discussion, we established the following hypothesis.

Hypothesis 2 (H2). Intra-team conflict level will further strengthen the negative relationship between destructive leadership and team innovation performance. That is to say, the negative impact of destructive leadership on team innovation performance will be further strengthened if the intra-team conflict level is higher than when it is lower.

The moderating effect of organizational diversity

In the field of organizational behavior, diversity can be explained by differences in a variety of areas (Griggs, 1995) including race (Zopiatis et al., 2014), gender (Pinar et al., 2011), income and education level (Hsiao et al., 2015), length of employment, rank (Kim et al., 2009; Waight and Madera, 2011), and opinions, beliefs, and values (Dahlin et al., 2005). Many studies on organizational diversity have confirmed that it has both positive and negative effects on performance (Soni, 2000; De Meuse and Hostager, 2001; Reynolds et al., 2014). However, according to social identity theory (Tajfel, 1978; Cannella et al., 2015) and self-categorization theory (Turner and Reynolds, 2011), individuals are motivated to enhance their social identity and thus classify their team members into individuals who have the same characteristics as them and those who do not. They show favorable and positive attitudes toward those who have similar characteristics (Tajfel and Turner, 1986; Turner and Haslam, 2001) and a false bias develops between members. Furthermore, according to the similarity-attraction paradigm (Barsade et al., 2000; Hoppe et al., 2014), there is a stronger bond between people who show similarity in interpersonal interaction. Based on these logics, we speculate that the effect of organizational diversity will further amplify the negative effect of destructive leadership on team innovation performance.

In heterogeneous groups with high organizational diversity, members respond positively to those with similar characteristics, while perceiving those who are not similar as less trustworthy and uncooperative (Turner and Reynolds, 2011). This can cause conflict among members and reduce cooperative attitude for innovation (Mohammed and Angell, 2004; Zouaghi et al., 2020). Low level of team cohesion and frequent conflict among members due to high diversity may hinder the innovation process in various ways. For example, organizational diversity increases the differences in characteristics among team members, leading to the level of members' satisfaction, cooperation, and communication in the course of completing team tasks (Kim and Song, 2020). This also increases the rate of turnovers and conflict and ultimately negatively effects task progress and internal motivation for innovation (Williams and O'Reilly, 1998; Shemla et al., 2016; Homan et al., 2020).

Therefore, if the level of diversity in a team is high, members will not communication actively and they will not focus on achieving the organizational objectives led by the

leader. Due to the effect of social categorization, teams with high organizational diversity have low cooperation among members and have a negative effect on the formation of cooperation-oriented norms within the team (Chatman and Flynn, 2001). These again reduce negative effects, undermining team efficiency and effectiveness, increasing the negative effects of disruptive leadership on team process activation. Additionally, by hindering teamwork and making it difficult to share information and knowledge among members (Ancona and Caldwell, 1992; Kim, 2018), organizational diversity contributes to further strengthening the hindering effect of a team leader's destructive leadership on innovation performance. Furthermore, organizational diversity prevents them from overcoming the negative effects of destructive leadership (Smith et al., 1994). Destructive leaders often engage in destructive behavior due to their lack of capability in leading members, rather than pursuing innovation to achieve organizational goals more effectively (Einarsen et al., 2007). Diversity, when managed, is also a source of creativity and innovation, but the behavior of destructive leaders strengthens the short of diversity management. Therefore, diversity management will not be able to reduce the negative effects of diversity experienced by members. Furthermore, organizational diversity will amplify the negative impact on innovation by interacting with destructive leadership. Based on the above discussion, we established the following hypothesis.

Hypothesis 3 (H3). Organizational diversity will further strengthen the negative relationship between destructive leadership and team innovation performance. That is to say, the negative impact of destructive leadership on team innovation performance will be further strengthened if the level of organizational diversity is higher than when it is lower.

Integrated model: Three-way interaction

Based on the above discussions, we hypothesized that intra-team conflict and organizational diversity mutually interact and negatively influence team innovation performance and that they interact with destructive leadership and further reduce team innovation performance. In other words, we anticipated that the organizational diversity interacts with destructive leadership and intra-team conflict negatively influences team innovation performance. As mentioned earlier, in relation to the moderating effect of organizational diversity, a team with a high level of organizational diversity interacts with destructive leadership and escalates the negative effect of intra-team conflict on team innovation performance by decreasing team cohesion and delaying decision-making on implementation of innovative problem-solving trial.

Specifically, intra-team conflict not only weakens trust among members, but also reduces organizational commitment, bringing about a negative attitude in members toward the organization and their work. Therefore, the negative relationship between destructive leadership and team innovation performance will change depending on the intra-team conflict level. Furthermore, if organizational diversity at the team level is high as well, the team's cohesion and trust will be weakened, further strengthening the negative relationship between destructive leadership and team innovation performance. In other words, the higher the organizational diversity, the more the negative effects of intra-team conflict and destructive leadership. Similarly, if organizational diversity exists within the team, members go through the social classification process and become biased, thereby weakening team cohesion, collaboration, and eventually innovation (Williams and O'Reilly, 1998; Shemla et al., 2016; Kim, 2018). Furthermore, if there is a high level of conflict among team members, such negative effects of organizational diversity will be even greater. In other words, if the level of intra-team conflict and organizational diversity are simultaneously high, members will not be able to cooperate and the negative effects of destructive leadership (innovation performance) will increase due to the stress caused by conflict and diversity. Therefore, the following hypothesis was established.

Hypothesis 4 (H4). The intra-team conflict and organizational diversity will have a moderating effect on the relationship between destructive leadership and team innovation performance. That is to say, when both the intra-team conflict level and organizational diversity are high, the relationship between destructive leadership and team innovation performance will become more negative.

The hypothesized research model is presented in Figure 1.

Methodology

Data collection and sample characteristics

To conduct an empirical analysis, we collected data from Korean firms. Data collection for this study was conducted through an online and offline questionnaire. To carry out the online and offline survey procedure, we collected the contact information of each team leader in advance. We tried to ensure anonymity in the course of survey. In the first step, we contacted the team leader to explain the purpose of the survey. In the second step, when we obtained their permission, we requested to ensure anonymity and consider the diversity of samplings such as gender, tenure, and age. Next, we distributed anonymous online and offline questionnaires to employees. Participants

FIGURE 1
Hypothesized research model. *Three-way interaction (H4).
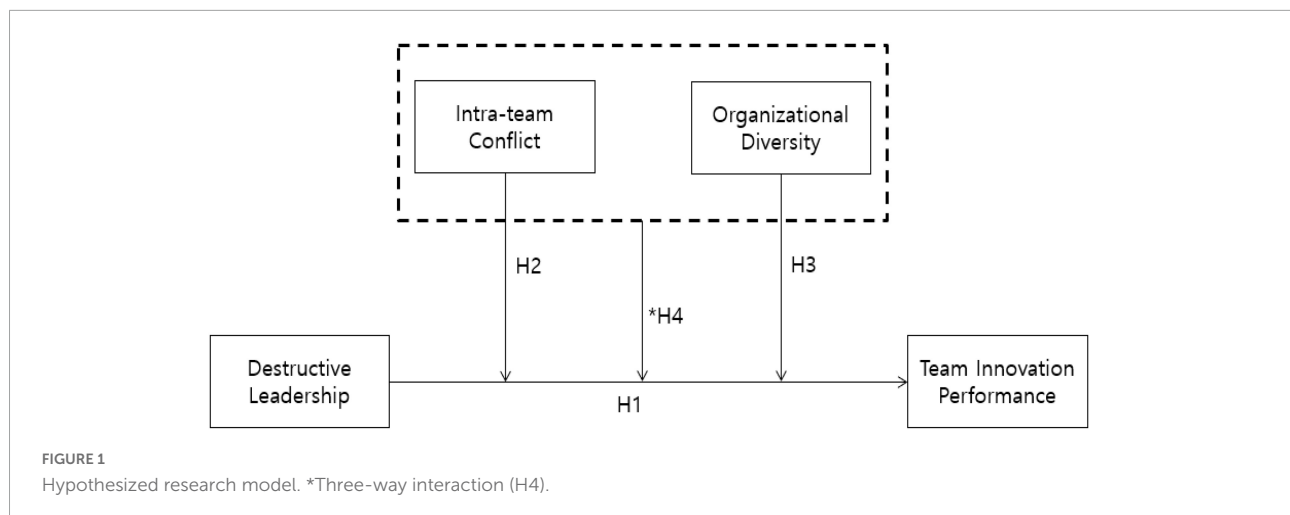
were explained through the purpose and procedures of the survey and the benefits and disadvantages that may arise from participating. An informed consent was obtained from all participants involved in the study. Moreover, we guided them to have the freedom to withdraw from the survey at any time. Based on their acceptance, we collected data from 95 teams (460 team members), of which 87 teams (429 team members) provided valid responses that were used for this study. The proper sample size in this research has followed that of previous studies published in main journals of this filed. The sample size was determined by referring to prior studies which are similar to the subject of this study such as team-level study (Kipkosgei et al., 2020), team innovation (Liang et al., 2019), leadership and team innovation (Tang et al., 2020), innovative behavior (Choi et al., 2016; Saeed et al., 2018), and creativity study (Zhang and Bartol, 2010). Thus, we confirmed that the number of samples used in this study was proper for empirical analysis. The demographic characteristics of the respondents are as follows. Each team comprised a minimum of four and a maximum of nine members. The average size of the team was 4.93 (SD = 1.45). Among the 429 respondents, 91.4% were male and 8.6% were female. The average age of the respondents was 40.32 (SD = 8.06) and average tenure was 13.66 (SD = 8.59).

Measures

The questionnaire used in this study was originally prepared in English and translated into Korean. We followed Brislin's (1980) back translation procedure. A professional translator translated the original version into Korean, which was then back-translated into English by a bilingual scholar who had no prior knowledge of the objectives of the study and had not seen the original survey.

Destructive leadership

Destructive leadership is defined as leadership in which the leader continuously manages the members in an abusive supervision. Leadership was measured by employees' perceptions of their team leader behavior. In this study, leaders refer to those who have the authority to evaluate employees' performance such as department head, team manager, and supervisors. We used the five items that were used by Mitchell and Ambrose (2007) (see **Appendix A**). This measurement was based on Tepper's (2000) abusive supervision measures. Mitchell and Ambrose (2007) further developed by focusing on active interpersonal abuse by the supervisor (e.g., "ridicules me" and "tells me my thoughts and feelings are stupid"). Because the active dimension is more consistent with our research interest, we used this Mitchell and Ambrose (2007)' 5 items version as our indicator of destructive leadership. Sample items include the following: "My team leader ridicules me." and "My team leader puts me down in front of others." The Cronbach's alpha was 0.879.

Intra-team conflict

Intra-team conflict is defined as relational conflict including negative emotions, recognizing inconsistencies and confrontations on interpersonal preferences, values, and differences in personality outside of work (Jehn, 1995). We used the four items that were developed by Jehn (1995). Sample items include: "Our team tends to have personality conflicts between members" and "Our team tends to have emotional conflicts between members." The Cronbach's alpha was 0.904.

Organizational diversity

Organizational diversity refers to the diversity of members' gender, age, education level, and tenure. The combined measure of diversity was created by calculating prior study (Schippers et al., 2003). Standard deviation was used for the age and tenure

of the members (Bedeian and Mossholder, 2000; Harrison et al., 2002) and gender was used as the proportion of minority members in the team (Kanter, 1977; Pelled, 1996). Education level was calculated according to the calculation method of Blau's index (Blau, 1977). Organizational diversity index ranged also from 0 to 1, where a higher score indicated a greater distribution of demographic characteristics within the team, thus indicating higher levels of diversity. For the sample, organizational diversity ranged from 0.01 to 0.64 ($M = 0.28$, $SD = 0.13$).

Team innovation performance

Team innovation performance is defined as the level of effort by which team members perform work efficiently to achieve goals and to practice innovative actions (Pirola-Merlo and Mann, 2004). We used the four items developed by Pirola-Merlo and Mann (2004). Sample items include the following: "My team's recent output is new" and "My team's recent output is creative." We aggregated the responses of members to use individual-level variables as team-level group variables. The Cronbach's alpha was 0.887.

Control variables

The control variables included the team members' average marital status, wage, job type and position, and team size, which could affect innovation performance (Katz, 1982; Ancona and Caldwell, 1992; Brown and Eisenhard, 1995). The control variables were used at the team level.

Results

Preliminary analysis

Since all data were collected at the same source, it could have resulted in the common method bias (CMB), leading to false internal consistency and potentially misleading results. Thus, to assess the effect of common method variance, we followed the recommendation by Podsakoff et al. (2003) and conducted Harman's single-factor test by loading all the items of the study constructs into an exploratory factor analysis. The results indicated that no single factor explained more than 28% of the covariance among the variables. Thus, it was concluded that CMB did not significantly alter the validity of the study results.

To analyze the respondents' individual-level data at the team level, the within-group agreement rWG(J) index (James et al., 1993) was used to aggregate responses. To further analyze variation in the data, individual responses were matched to team membership by calculating interclass correlation coefficients (ICC): ICC (1) and (2). Then, the hypotheses were tested using hierarchical regression analysis. A rWG(J) index value larger than 0.70 is considered to represent a satisfactory agreement

TABLE 1   rWG(J), ICC (1), ICC (2) of all team-level variables.

Variables	rWG (J)	ICC (1)	ICC (2)
Destructive Leadership	0.91	0.23	0.59
Team Innovation Performance	0.92	0.17	0.51
Intra-team Conflict	0.87	0.26	0.63

within a group (Bliese, 2000). ICC (1) was used to measure the inter-respondent reliability, with a range of 0.05–0.30 or statistical significance considered adequate. ICC (2) assessed the mean reliability of a group; previous literature suggested that values of 0.70 or larger are acceptable and values between 0.50 and 0.70 are marginally acceptable (Kipkosgei et al., 2020). Table 1 presents the rWG(J), ICC (1) and (2) results. All values were above the acceptable standard cut-off values, indicating that all values were within the acceptable range.

Correlation and reliability analyses

We conducted a correlation analysis to investigate the relationship between the measured variables and their direction. The means, standard deviations, reliabilities, and correlations among the key variables are shown in Table 2. As can be seen, there was a correlation ($p < 0.001$) between destructive leadership, intra-team conflict, and team innovation performance. Team-level variables are mean centered to solve the multicollinearity problem (Aiken et al., 1991). The maximum variance inflated index of the key variables is 3.11. Hence, there was no multicollinearity problem (Hocking and Pendleton, 1983).

Hypothesis testing

We used hierarchical regression analysis to test the hypothesized relationships (Wiklund and Shepherd, 2005; Hoch et al., 2010). The results of the hierarchical regression analysis are shown in Table 3. Hypothesis 1 stated that destructive leadership would have a negative effect on team innovation performance. In Model 2, destructive leadership was found to negatively affect team innovation performance ($\beta = -0.529$, $p < 0.001$), supporting Hypothesis 1. As shown in Model 4, the interaction term of destructive leadership and intra-team conflict was negatively related to team innovation performance ($\beta = -0.260$, $p < 0.01$). Thus, Hypothesis 2 was supported. However, the interaction term of destructive leadership and organizational diversity did not significantly affect team innovation performance ($\beta = -0.097$, n.s.). Thus, Hypothesis 3 was not supported. To test Hypothesis 4, we studied the three-way interaction of destructive leadership, intra-team conflict, and organizational diversity for predicting

TABLE 2 Means, standard deviations, correlations, and reliabilities.

Variables	M	SD	1	2	3	4	5	6	7	8	9
1. Team size	4.93	1.45	–								
2. Marital status	1.72	0.22	0.020	–							
3. Wage	3.56	0.66	−0.133	0.580***	–						
4. Job type	1.93	0.92	0.060	0.158	−0.128	–					
5. Position	4.08	0.81	−0.211*	0.509***	0.792***	−0.217*	–				
6. DL	1.58	0.39	−0.242*	0.078	0.032	0.035	0.053	(0.879)			
7. IC	2.14	0.51	−0.079	0.186	0.281**	0.035	0.172	0.472***	(0.904)		
8. OD	0.28	0.13	0.057	−0.591***	−0.598***	0.155	−0.546***	0.085	−0.009	–	
9. IP	3.29	0.38	0.123	−0.009	−0.084	0.087	−0.056	−0.517***	−0.449***	0.032	(0.877)

$N = 87$. $^*p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$, Cronbach's alpha coefficients are reported in diagonal; Destructive Leadership (DL); Intra-team Conflict (IC); Organizational Diversity (OD); Team Innovation Performance (IP).

TABLE 3 Summary of regression analysis results.

Variables	Team innovation performance				
	Model 1	Model 2	Model 3	Model 4	Model 5
Step 1: Control variables					
Team size	0.118	−0.017	−0.006	−0.004	0.030
Marital status	0.009	0.073	0.136	0.161	0.161
Wage	−0.131	−0.165	−0.009	−0.009	0.037
Job TYPE	0.080	0.091	0.076	0.137	0.183
Position	0.085	0.081	0.055	0.085	0.077
Step 2: Main effect					
DL		−0.529***	−0.411***	−0.335**	−0.357**
Step 3: Moderators					
IC			−0.289*	−0.304**	−0.256*
OD			0.158	0.154	0.237
Step 4: Two-way interaction					
DL × IC				−0.260**	−0.290**
DL × OD				−0.097	−0.020
IC × OD				0.215*	0.146
Step 5: Three-way interaction					
DL × IC × OD					−0.279**
R²	0.028	0.288	0.350	0.438	0.494
R² change		0.260***	0.062*	0.088*	0.056**

$N = 87$; $^*p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$(two-tailed test); Standardized regression coefficients reported; Destructive Leadership (DL); Intra-team Conflict (IC); Organizational Diversity (OD).

team innovation performance in the last step of the moderated hierarchical regression model. Here, with $\beta = -0.279\,(p < 0.01)$, we found a significant negative effect in predicting team innovation performance.

As shown in **Figure 2**, when destructive leadership and intra-team conflict are high, the negative relationship between destructive leadership and team innovation performance is stronger. Moreover, as shown in **Figure 3**, when destructive leadership, intra-team conflict, and organizational diversity are high, the negative relationship between destructive leadership and team innovation performance is stronger than whey they are low. Thus, Hypothesis 4 was supported.

Discussion

This study aimed to examine the interaction effects of intra-team conflict and organization diversity on the relationship between destructive leadership and team innovation performance. The core findings of our empirical analysis can be summarized as follows. First, we found that destructive leadership negatively influenced team innovation performance. Second, the negative effect of destructive leadership on team innovation performance was strengthened when intra-team conflict level was high. Third, organizational diversity did not significantly strengthen the relationship between
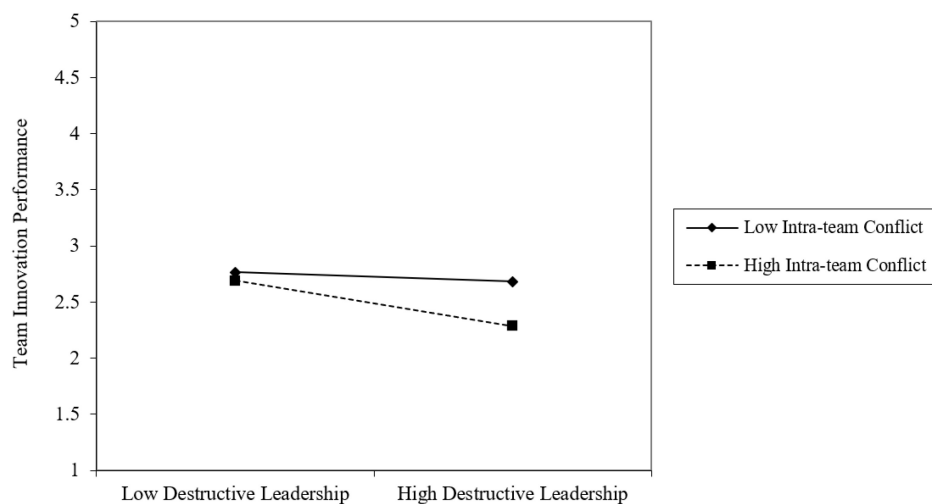
FIGURE 2

Moderating effect of intra-team conflict on the relationship between destructive leadership and team innovation performance.
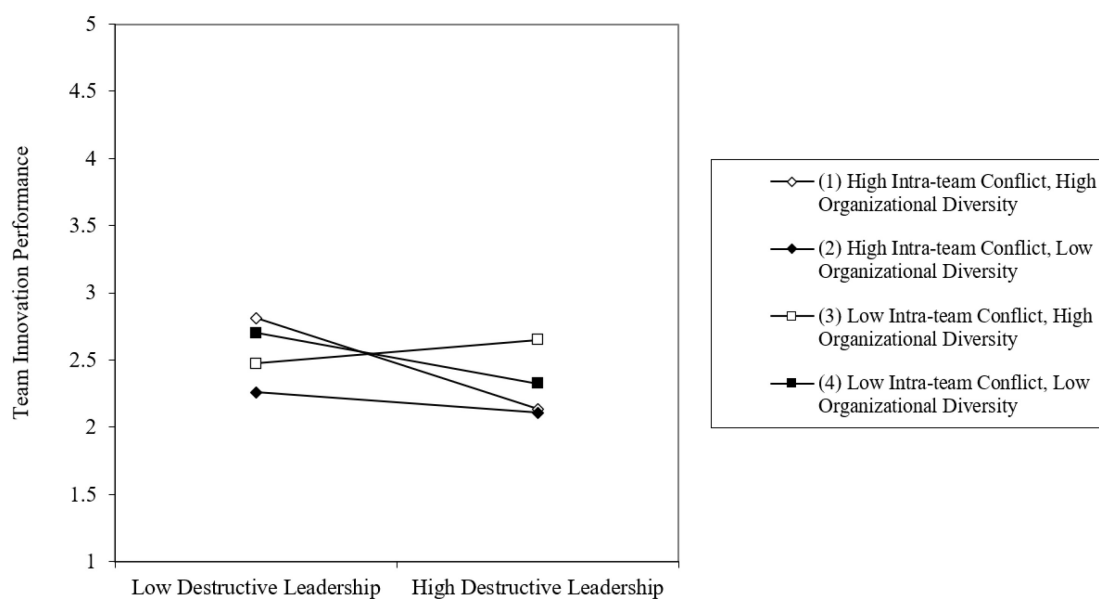
FIGURE 3

Three-way interaction effect of destructive leadership, intra-team conflict, and organizational diversity on team innovation performance.

destructive leadership and team innovation performance. Fourth, the relationship between destructive leadership and team innovation performance was more negative when both intra-team conflict and organizational diversity were high. A previous study on leadership with negative effects, such as destructive leadership, show that the destructive behaviors of leaders negatively affect not only innovation performance, but also well-being, job satisfaction, and corporate performance (Schyns and Schilling, 2013). In this context, this study sought to identify the specific conditions or situations in

which the negative effect of destructive leadership on team innovation performance is maximized. Our results show that intra-team conflict is a moderating variable that increases the negative relationship between destructive leadership and team innovation performance. However, organizational diversity was shown to not have moderating effects. Analysis using the three-way interaction model shows that the negative effect of destructive leadership on the team innovation performance was found to be strongest when both the intra-team conflict level and organizational diversity are high.

Theoretical contributions

Based on the empirical analysis of this study, the following theoretical implications were derived. First, previous research on destructive leadership have generally focused on verifying its negative effects but have not been able to draw a clear conclusion about the relationship between destructive leadership and organizational performance (Detert et al., 2007; De Hoogh and Den Hartog, 2008). In this vein, our results also confirm that social exchange theory was worked in explaining the negative relationship between destructive leadership and team innovation performance. Therefore, we have contributed by extending it to leadership study and Korean workers context. Recent research indicates that a more systematic study is needed on the extent of the effect of destructive leadership on individual or team performance (Kellerman, 2004; Kelloway et al., 2005). Therefore, this study focused on exploring factors that amplify the negative effect of destructive leadership, taking into consideration the possibility that the effects of destructive leadership on performance may vary depending on complex internal and external characteristics of the organization. Our results confirm that the negative effects of destructive leadership are strengthened when members are exposed to conflict situations within the team. The results of this study are consistent with the demands of previous studies to focus on the importance of a psychosocial working environment for employee happiness and health creation (Useche et al., 2019). In such a situation, members will not only be negatively affected psychologically by the destructive behavior of the leader, but also lose motivation to work due to conflict with other members which is not handled properly by the leader. Therefore, this study explored situational factors that increase the negative effects of destructive leadership.

Second, organizational diversity, the second moderating variable of this study, was predicted to have a negative effect on team innovation performance through interaction with destructive leadership but showed non-significant results. It can be inferred that the more diverse the members, the less the negative effect of destructive leadership based on the positive interaction between members. This result was also explained through previous studies on diversity that confirmed its positive aspects (Watson et al., 1993; Drach-Zahavy and Somech, 2001). There are several benefits to diversity among team members, such as improved quality in creativity, innovation, and performance (Watson et al., 1993; Drach-Zahavy and Somech, 2001). There is an advantage in achieving innovation in the process of collecting information from different individuals and presenting various solutions (Northcraft et al., 1995; Jehn et al., 1999; Kickul and Gundry, 2001). Furthermore, a highly diverse group pursues innovative strategies and has a positive influence on performance (Richard, 2000). It can challenge past practices and make members more open to change, which can drive organizational flexibility and strategic change (Wiersema

and Bantel, 1992; Boeker, 1997; Cummings, 2004; Roberson et al., 2017). Therefore, this study is meaningful in that it examined the effect of diversity, which has both negative and positive effects in the process of destructive leadership affecting team innovation performance.

Third, various situational factors may exist in the process of how destructive leadership negatively impacted team innovation performance. However, there are few studies that have analyzed these conditions by simultaneously applying them, especially at the team level. This study found that the three-way interaction between destructive leadership, intra-team conflict, and organizational diversity, that affect team innovation performance, is effective. It was shown that when intra-team conflict level and organizational diversity are high, destructive leadership highly negatively impacts team innovation performance. What is noteworthy is that when intra-team conflict level is low while organizational diversity is high, team innovation performance increases. It can be inferred that this is because of the positive effects of diversity as suggested by other studies (Watson et al., 1993; Drach-Zahavy and Somech, 2001; Kickul and Gundry, 2001). As such, this study closely analyzed the conditions for maximizing the damage of destructive leadership in a team. As presented by Burke (2006), this study broadened the research on leadership by exploring the "dark side" of leadership which has been underdeveloped. In addition, we confirmed the role of moderating variables to strengthen the relationship between destructive leadership and team innovation performance through threat-rigidity theory, social categorization theory. We also explained the three interaction effects of two moderating variables based on the contingency theory. Our findings confirmed that these theories dealt with in organizational behavior research could be operating in the Korean employee context. Thus, these results contributed to theoretical expansion as they revealed the applicability of existing theories.

Lastly, most of the research on the negative behaviors of leaders has focused on the individual level (McCall and Lombardo, 1983; Lipman-Blumen, 2006; Einarsen et al., 2007). This study is meaningful as it expands individual-level research into team-level research.

Managerial implications

The practical implications of this study are as follows. First, it identified that destructive leadership is a key factor that hinders team innovation performance. Therefore, organizations should strengthen their leadership education programs so that team leaders can avoid destructive leadership and adopt better leadership styles. Moreover recently, most Korean companies have rapidly applied a performance-oriented and hierarchically operated system to survive in global competition, destructive leadership appears relatively frequently in Korea due to

the emergence of supervisors empathizing high pressure for superior performance (Ashkanasy, 2002; Lee et al., 2013). However, work-life balance, employees' well-being, welfare, and health in workplace are importantly considered as a source of sustainable society in recent South Korea. In this vein, there is a tendency to change a work climate in which employees do not make enough efforts for the performance when they are treated unfairly by leaders and organizations. Thus, we confirmed that destructive leader behaviors prevailed in Korean workplaces to push their employees to meet performance expectations incur more harm than benefit in the South Korean context. Thus, organization should establish a proper control system and culture to reduce the destructive leadership.

Second, considering that intra-team conflict is an important factor that increases the negative effect of destructive leadership, top management must recognize the importance of conflict management for team members. Team members may work in a constructive way through interaction, cooperation, and knowledge sharing but their relationship conflicts may negatively affect these work-related actions (Lu et al., 2011), eventually reducing team innovation performance. When experiencing conflict with other members, the leaders' conflict management ability will be most important. Therefore, they must pay attention to conflicts between team members and manage them appropriately. Traditionally, Korean culture is characterized by collectivism, high power distance, and uncertainty avoidance (Lee and Lee, 2014). Korean employees are basically sensitive to incurring interpersonal tensions and involving group conflict issues because of collectivism tradition emphasizing the community interest and harmony than individuals' preference (Sung and Choi, 2021b). The Confucianism prevailed in Korean society have also emphasized harmonious relationships among leader and follower as well as organizational members, so any sort of intra-conflict is less accepted (Lee et al., 2018). In this vein, proper conflict management is the crucial point for enhancing organizational innovative capability and effectiveness of Korean firms.

Third, a direct moderating effect of organizational diversity in the relationship between destructive leadership and team innovation performance could not be found in this study. However, when conflict within the team intensified, negative effects of organizational diversity were found. Therefore, to prevent negative effects and encourage positive effects of organizational diversity, top management must put in additional effort to maintain an appropriate level of organizational diversity.

Limitations and future research

This study also has a few limitations despite its theoretical and practical contributions. Future researchers should consider our several limitations. First, our variables were collected from

a self-reported questionnaire at the same time from the same source. Although, previous study could not find strong evidence that self-reported questions prevent meaningful interpretations of data, self-report data can show common method bias (Chan, 2009). To reduce this problem, we efforted to ensure anonymity in the data collection process. In addition, organizational diversity was measured using gender, age, education level and tenure (Schippers et al., 2003). Despite our efforts, future studies should collect data from various sources and different times. For example, team innovation performance should be measured by different sources like R&D expenditure, number of new product and patent registration at team level.

Second, this study was designed as cross-sectional research, therefore, the causal relationship between destructive leadership and team innovation performance could not be analyzed in depth. Although this study hypothesized that the destructive leadership of the team leader undermines team innovation performance, the effect of destructive leadership on team innovation performance can change over time. Therefore, longitudinal research could be designed in the future to analyze the causal relationship between destructive leadership and team innovation performance more accurately.

Third, our data were collected from South Korean employees only, it is possible that the cultural background significantly influenced employees' attitudes and perceptions. Therefore, our results had limitations in generalizing the findings to other sectors and firms in different countries. Future researchers may replicate our findings in different country contexts.

Fourth, this study found important roles of moderating variables in maximizing the negative effect of destructive leadership on team innovation performance. However, we suggest that examining the various frames can provide meaningful implications such as mediating relationship. Especially, previous research suggested a curvilinear relationship between abusive supervision and creativity (Lee et al., 2013). Thus, if future studies explore the various paths and process to explain how destructive leadership led to innovation performance, they could contribute to the research on explaining the effects of negative destructive leadership and enhancing team innovation. In addition, as the health of workers in Korean workplaces has recently attracted much attention, useful implications can be obtained if the destructive leadership and intra-conflict issues dealt with in this paper, are expanded to the studies of health and welfare of workers in future.

Conclusion

In summary, this study investigated the important situational factors that maximize the effect of destructive leadership on team innovation performance. The findings

of our study confirmed the negative effect of destructive leadership on team innovation performance. Moreover, we found that intra-team conflict played moderating roles in enhancing the negative effect of destructive leadership. In addition, this study also highlighted the importance of interaction between the three factor- destructive leadership, intra-team conflict and organizational diversity- for team innovation performance. We found something interesting in the effects of the three-way interaction. It was found that the negative impact of destructive leadership was large under three conditions, excluding low intra-team conflict and high organizational diversity. On the other hand, if the level of conflict is low and diversity is high, innovation performance is high even if the level of destructive leadership is high. In this case, it was found that even if destructive leadership exists, the conflict between team members is low, so it shows stronger team cohesion and cooperation. Therefore, it was inferred that the innovation process and performance can be influenced according to the conditions of conflict and the level of organizational diversity. Thus, our findings highlight new insights to understand the impact of conflict and organizational diversity dynamics on team innovation performance along with disruptive leadership. In sum, this study has contributed to uncovering the factors that can maximize the negative effect of destructive leadership on team innovation performance. Despite several limitations, our research on substantial moderators provides useful insights for firms that wish to manage the negative work environment and the key condition which drive teams' innovation.

Data availability statement

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

Author contributions

SBC was the principal researcher and prepared the first draft of the article and added valuable theoretical and methodological insights based on his knowledge and expertise regarding the topic. S-WK supervised the study and refined the draft into a publishable article. KBJ collected the data and performed empirical analysis, and in addition to motivating the publication of this article. All authors have read and agreed to the submitted version of the 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.

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Appendix A

Destructive Leadership (α = 0.879) (Mitchell and Ambrose, 2007)

1. My team leader ridicules me.
2. My team leader tells me my thoughts or feelings are stupid.
3. My team leader puts me down in front of others.
4. My team leader makes negative comments about me to others.
5. My team leader tells me I'm incompetent.

Intra-team Conflict (α = 0.904) (Jehn, 1995)

1. Our team tends to have personality conflicts between members.
2. Our team tends to have emotional conflicts between members.
3. Our team tends to have personality conflict between members.
4. Our team tends to have tension between the members.

Team Innovation Performance (α = 0.877) (Pirola-Merlo and Mann, 2004)

1. My team's recent output is new.
2. My team's recent output is creative.
3. My team's recent output is useful.
4. My team's recent output is innovative.

The relationship between empowering leadership and radical creativity

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Drawing on the conservation of resource theory, we theorized and tested a serial mediation model linking empowering leadership with employee radical creativity through job control and willingness to take risks. We tested our hypotheses using data collected from a time-lagged and multisource survey of 385 employees in 84 research and development teams from 20 different companies. The results demonstrated that empowering leadership had a positive indirect effect on employee radical creativity *via* job control and willingness to take risks, and the error management climate was found to strengthen this indirect effect. Theoretical and practical implications are also provided in the discussion section.

KEYWORDS

empowering leadership, radical creativity, job control, willingness to take risks, error management climate

Introduction

Radical creativity, referring to "ideas that differ substantially from an organization's existing practices" (Madjar et al., 2011), is an innovation engine and a critical source of development and competitiveness that can bring considerable benefits to organizations (Shalley et al., 2004). Due to the significance of radical creativity for companies in the current dynamic and competitive environment, researchers and practitioners have begun to explore the antecedents and practices that can predict employees' radical creativity (Gong et al., 2017; Tang et al., 2017). Previous studies have found personal factors, such as intrinsic motivation (Malik et al., 2019), experiencing tensions (Liu et al., 2022), and openness to experiences (Xu et al., 2018), and contextual factors, such as structural holes of knowledge networks (Tang et al., 2017) and social network ties of employees' immediate leaders (Venkataramani et al., 2014), have positive effects on employee radical creativity.

However, research into the effect of leadership on employee radical creativity has been very limited. While, leadership has long been considered an essential antecedent of individual creativity (Qu et al., 2015; Hughes et al., 2018), only a few empirical studies have focused on the impact of specific types of leadership, such as paternalistic leadership (Wang et al., 2019) and supportive supervision (Gilson et al., 2012), on employee radical creativity. Notably missing from research attention has been empowering leadership, despite it has been proved having a positive impact on creativity (e.g., Zhang and Bartol, 2010; Harris

et al., 2014; Zhang and Zhou, 2014; Zhang et al., 2018). Empowering leadership aims to promote employees' psychological empowerment and self-leadership through three core processes: power sharing, motivational support and developmental support (Amundsen and Martinsen, 2014). Earlier studies have proved that empowering leadership can influence employee creativity by improving employees' intrinsic motivation (Zhang and Bartol, 2010) and creative self-efficacy (Zhang and Zhou, 2014). However, previous researches on the relationship of empowering leadership on employee creativity failed to address two important issues.

First, prior researches have all treated creativity as a very general and homogeneous construct, ignoring scholars' calls to address specific forms of creativity (Unsworth, 2001). Because scholars have proved that creativity can range from minor changes to radical breakthroughs (Mumford and Gustafson, 1988; Shalley et al., 2004), and that makes the antecedents and mechanisms leading to different forms of creativity vary (Malik et al., 2019). As mentioned above, radical creativity tends to be disruptive (Madjar et al., 2011), which is distinctive with other forms of creativities. Therefore, the mechanism linking empowering leadership with employee radical creativity can not be confused with the mechanism linking empowering leadership with employee general creativity, which has been ignored in the existing studies.

To fill this gap, drawing on the conservation of resource (COR) theory (Hobfoll, 1989), we propose that empowering leadership can influence employee radical creativity *via* job control and willingness to take risks. As known, instigating employee radical creativity requires considerable psychological resources (Zhang and Bartol, 2010; Chen et al., 2011; Zhang and Zhou, 2014), while empowering leadership, offering authority and external resources to employees, can enhance their internal resources (i.e., job control, referring to "the belief that one can exert some influence over the environment, either directly or indirectly, so that the environment becomes more rewarding or less threatening," Aryee et al., 2013, 797). After being empowered and experiencing a high degree of job control, employees would obtain psychological resources to defend against the risk of failure, which may increase their willingness to take risks, which refers to one's willingness to take potential risks at work, striving to achieve positive organizational outcomes while also having an open attitude to the possibility of adverse personal outcomes (Dewett, 2006). Moreover, willingness to take risks is crucial for engaging in radical creativity because radical creativity, representing a challenge and disruption to the current status quo, is risky (George, 2007). Hence, we propose job control and willingness to take risks are the precise dynamics linking empowering leadership with employee radical creativity.

Second, majority of existing researches often invest the boundary effect of employee's personal trait on the relationship of empowering leadership on employee creativity, such as empowerment role identity (Zhang and Bartol, 2010) and uncertainty avoidance (Zhang and Zhou, 2014), few has discussed the boundary effect of organizational factor (i.e., perceived organizational support for creativity, Harris et al., 2014), but have

focused on the individual level. Prior researches have rarely considered how the group climate influence the effect of empowering leadership on employee creativity, especially on the group level. However, plenty of existing researches have proved that group climate could superimpose or substitute the effect of leadership on employee creativity (Hughes et al., 2018), that is valuable to explore.

With regard to forementioned, filling this gap, we focus on the boundary effect of error management climate (EMC), referring to employees' common perceptions of their group's practices related to dealing with errors and their consequences (Van Dyck et al., 2005; Cigularov et al., 2010). Preceding has expounded that radical creativity involves high levels of uncertainty and low levels of predictability (Madjar et al., 2011), which means errors are bound to creep in during the process. Thus, the attitudes toward errors in the work units (organization and/or group) may influence employees' perceptions of the work unit, which in turn may affect whether employees choose to invest in radical creativity. We propose that EMC could moderate the linkage between job control and willingness to take risks, thereby serving to moderate the indirect effects of empowering leadership on radical creativity.

The present study contributes to the existing knowledge base in several ways. First, this research extends the antecedents of work carried out to investigate radical creativity by exploring the effect of empowering leadership behavior. Previous research has focused on factors that predict employee radical creativity, but less is known about the effect of leadership. This study aims to supplement the existing knowledge with insights about the influence of leadership on employee radical creativity. Second, based on the COR theory, the research examines and explains a dynamic process linking empowering leadership and employee radical creativity, describing how the resources invested by leaders increase employees' personal resources and strengthen their courage to explore less routine perspectives. Finally, this research contributes to the empowering leadership literature by exploring how the group climate superimpose the effect of empowering leadership on employee's creative behavior. Specifically, we argue that a team EMC might enhance employees' psychological process of transforming and accumulating personal resources, obtained from empowering leadership, and then motivate them to engage in radical creativity. This research provides important guidance on how to utilize team contextual factors to amplify the effectiveness of empowering leadership on employee radical creativity.

Theory and hypotheses

Empowering leadership and job control, willingness to take risks

Empowering leadership delegates and shares working power to employees, by strengthening the significance of work to employees, encouraging and cultivating employees' participation in work decisions, expressing affirmation of employees work

performance, and offering job autonomy power to employees (Arnold et al., 2000; Ahearne et al., 2005; Zhang and Bartol, 2010). Previous studies have revealed that empowering leadership can have a positive impact on employees' attitudes and behaviors through enhancing the psychological resources of employees in the workplace. For instance, scholars found that psychological empowerment (Zhang and Bartol, 2010; Chen et al., 2011, 2019; Lorinkova and Perry, 2017), self-efficacy, (Arnold et al., 2000; Ahearne et al., 2005; Cheong et al., 2016) and intrinsic motivation (Zhang and Bartol, 2010) are important explaining mechanisms of empowering leadership on employees' work outcomes, such as job satisfaction (Arnold et al., 2000; Vecchio et al., 2010), in-role performance (Ahearne et al., 2005; Chen et al., 2007), organizational citizenship behavior (Li et al., 2017) and creativity (Zhang and Bartol, 2010; Chen et al., 2011; Harris et al., 2014). Therefore, we infer that empowering leadership would influence employees' behaviors through enriching their psychological resources.

Job control refers to a perceived ability to influence the work environment making it more rewarding and less threatening (Bond and Bunce, 2003; Aryee et al., 2013). Some scholars argue that job control reflects the degree of an employee's discretion at work, including their possibilities to use technology and knowledge, their opportunities to participate in decision-making (Karasek, 1990; Elovainio et al., 2001), and their ability to influence their work environment (Demerouti et al., 2001a). Previous studies have shown that offering job autonomy and flexibility to employees may increase their job control. For example, researchers found that family supportive supervisor would increase an employee's job control by delegating to them the responsibility to flexibly arrange their own working time and locations (Thomas and Ganster, 1995; Aryee et al., 2013). The formulation and implementation of these work practice policies are usually determined by leaders, which means their thoughts and behaviors would probably impact employee job control. Therefore, we propose empowering leadership, with an emphasis on delegation to, and enabling, employees, would have positive effect on employees' job control.

According to the COR theory (Hobfoll, 1989), empowering leadership that provided job autonomy to employees would be interpreted as offering them working resources, which may transform into their own resources and enhance their psychological resources. To be specific, first, empowering leadership can improve employees' perception of the identification and valuing of their work, by strengthening their sense of the meaning of their work, which may increase employees' perceived psychological rewards from their work (Kahn, 1990). This perception of the significance of their work would establish and enhance their competence at work and strengthen their sense of job control. Second, empowering leadership provide their skills and perspectives as resources for employees to learn and apply, through encouraging and cultivating employees to participate in work decision-making. This will enrich and broaden employees' ability to control their

work, including improving their work content and methods. Third, empowering leadership can enhance employees' positive psychological resources (Cheong et al., 2016), such as confidence, optimism, and self-efficacy, through expressing affirmation and their belief in their employees' high performance, enabling employees to feel confident in their work abilities. However, self-efficacy is a key element to improve an individual's sense of control (Litt, 1988). Finally, empowering leadership delegate and share discretionary power resources to employees, enabling them to arrange their work schedule and allocate work resources according to their needs, thus improving their job control. All in all, we predict that through delegating and enabling, empowering leadership have a positive effect on employee job control. Thus, we propose:

> *Hypothesis 1 (H1)*: Empowering leadership is positive related to employee job control.

Willingness to take risks refers to the willingness of employees to undertake potential risks at work in striving to achieve positive organizational results, while keeping an open mind about the possible negative impacts on themselves (Dewett, 2006). We infer that a sense of control may increase the psychological resources necessary for employees to undertake risks, in turn increasing their willingness to take risks. Job control is a positive psychological resource, helping individuals to resist pressure (Hobfoll, 1989, 2002). Previous research has also shown that job control can effectively alleviate negative emotions from risk at work (Greenberger and Strasser, 1986; Ganster and Fusilier, 1989; Schaubroeck and Merritt, 1997). Therefore, employees with a high degree of job control would possess more resources to protect themselves, helping them resist harm and failure more successfully. This may decrease their hesitation when considering risky behaviors, increasing their willingness to take risks. Additionally, researchers have shown that employee job control is highly related with work involvement and affective commitment (Demerouti et al., 2001b; Salanova et al., 2005). If employees identify strongly with and committed to their organization, they would likely be more motivated to take risks to benefit their organizations. For example, employees will proactively report their errors, if they have more consideration for their organization (Zhao and Olivera, 2006). According to the definition, a willingness to take risks is a motivation for contributing to organizational benefit. Therefore, we infer that employees' job control may enhance their affective attachment to an organization, and increase their willingness to take risks for organizational benefit. Thus, we propose:

> *Hypothesis 2A(H2A)*: Employee job control is positive related to willingness to take risks.

As aforementioned, after receiving power from empowering leadership, employees may perceive confidence and efficacy in controlling their work, increasing their own psychological resources. This can enhance their resilience upon suffering defeat

and then increase their motivation to engage in risky behavior for organizational benefit. Thus, we assume job control to be a psychological mechanism explaining how empowering leadership can positively influence employees' willingness to take risks. Therefore, we propose:

Hypothesis 2b (H2b): Employee job control mediates the positive relationship between empowering leadership and employee willingness to take risks.

Willingness to take risks and radical creativity

Radical creativity emphasizes novelty (Litchfield, 2008; Litchfield et al., 2015), disrupting established processes and frameworks (Gilson and Madjar, 2011), which means breaks the existing balance (Albrecht and Hall, 1991). Hence, radical creativity is always viewed as being highly uncertain and risky (George, 2007). We infer that employees with a high level of willingness to take risks are more likely to engage in radical creativity. Willingness to take risks is essential for employees to become persistently involved in any risky working behaviors for their organizations. Researchers have found that willingness to take risks is one of the core cultural characteristics in some successful technology companies (Abbey and Dickson, 1983). Employees need to be strongly motivated to face and undertake risks so that they can continue to engage in radical creativity, due to the unconventional nature of radical creativity, which makes employees cannot clearly predict or control the processes or their results and may be more likely to fail. Therefore, employees with a high level of willingness to take risks are more likely to invest in and improve their radical creativity. Additionally, employees with a willingness to take risks are rational, rather than blindly, emotionally impulsive, for having assessed the risks and pressures they would suffer, they would make the same choice (Dewett, 2006). Thus, employees with a high level of willingness to take risks are more likely to capture subtle and unconventional ideas, from the surrounding environment and from a wide range of information sources, less concerned with errors and failure that could constrain the breadth and width of their thought. Therefore, they have more potential to generate radical creativity.

Thus, we propose:

Hypothesis 3(H3): Employee willingness to take risks is positive related to radical creativity.

Taken as a whole, the prior hypotheses imply an indirect effect model. Specifically, we proposed that empowering leadership would be associated with willingness to take risks *via* job control, and that willingness to take risks is related to radical creativity. Based on our earlier discussion, willingness to take risks is thus proposed to be a mechanism by which empowering leadership and job control relate to radical creativity. Thus, we propose:

Hypothesis 4(H4): Empowering leadership has a positive indirect relationship with employee radical creativity, via job control and willingness to take risks.

The moderating role of the EMC

The EMC, referring to employees' common perceptions of a team's practices in relation to error communication, error competence, learning from errors, and thinking about errors (Van Dyck et al., 2005; Cigularov et al., 2010), reflects a team's attitudes when dealing with errors. It focuses on reducing the negative impact of errors and increasing their positive effects (Van Dyck et al., 2005). Previous research suggests EMC can have a positive effect on employees' extra-role behavior and performance, such as error reporting (Gronewold et al., 2013), employee voice (Cheng et al., 2022), and innovation performance (Edmondson, 2004), as it enhances employees' consideration of safety and reduces the costs and burdens of engaging in behaviors that are risky but beneficial to the organization. Accordingly, we infer that the EMC can moderate the effect of employees' job control on their willingness to take risks.

Researchers have shown that EMC can effectively weaken the negative consequences of errors (Cigularov et al., 2010). At a high level of EMC, the team tolerates errors, and employees perceive that their team can understand and accept the errors that inevitably accompany risky behaviors but that this will benefit the team to a certain extent (Van Dyck et al., 2005). In this context, employees may suffer less pressure and require fewer resources to resist the pressure. Based on the COR theory, individuals will have greater motivation to access new resources, when they need fewer resources to withstand pressure (Hobfoll, 2002). Hence, at a high level of EMC, employees will have less concern about the pressure of taking risks for the team, and that would amplify the effect of their sense of job control on their willingness to take risks. At a low level of EMC, however, the team focuses on preventing errors from occurring, severely punishing employees when they make an error. Employees will have a psychological burden and utilize more resources when engaging in risky behavior, which would increase the difficulties and costs they anticipated before taking the action, suppressing and weakening their willingness to take risks. Therefore, in this situation, the effect of employees' job control on their willingness to take risks will be weakened. Thus, we propose:

Hypothesis 5A (H5A): The EMC strengthens the relationship between job control and willingness to take risks.

As discussed above, employee radical creativity peaks when employee has perceived high level of empowering leadership. After being empowered, employees whose group has a high level of EMC, would have more energy and courage to take adventure, consequently generating unconventional ideas. Additionally, a group with high level of EMC, is always regarded as innovation oriented (Frese and Keith, 2015; Chen et al., 2021; Cheng et al.,

2022). Therefore, integrating our inference in the current section with our earlier theorizing, we consider that the indirect effect of empowering leadership on employee radical creativity can be superimposed on the group climate of tolerating errors. To sum up, we predict that the EMC will moderates the indirect of empowering on employee radical creativity through job control and willingness to take risks. Thus, we propose:

> *Hypothesis 5B (H5B)*: The EMC strengthens the indirect effects of empowering leadership on employee radical creativity, via job control and willingness to take risks.

Based on the COR theory, we predict an indirect effect from empowering leadership to employee radical creativity through job control and willingness to take risks and examine how EMC moderates this mechanism. A conceptual model is shown in Figure 1.

Materials and methods

Sample and procedure

To test our hypotheses, we randomly recruited 20 students from two EMBA classes of a Double First-Class university in Wuhan to participate in the survey. These students are all senior managers or executive directors of their enterprises, so they can provide sufficient opportunities and resources for researchers to collect data. Their companies are from cities in mainland China, including Beijing, Changsha, Shenzhen and Wuhan. The industries include information technology (IT), metallurgy, automobile manufacturing, biomedical companies and real estate. In each of these 20 companies, we randomly recruited five R&D teams to participate in the survey. The primary reason we chose R&D teams is that there is a more obvious correlation between the work content of technical positions and innovation, so the participants are more sensitive to creativity compared with other job areas, and this would be more easily reflected in the survey results. With the assistance of the directors of each R&D department and human resources managers, we assigned each team member and their leaders a numerical code (the coding rule

was: leader code = "team member"; member code = "team member-participant number").

We collected the data in 2020; to reduce common-method bias, we conducted three waves of data collection, with a 2-month time lag between each successive time point. At Time 1, the team members were asked to report their demographic characteristics, including gender, age, education level and organizational tenure, as control variables, as well as their evaluation of empowering leadership. Two months later, at Time 2, all team members were asked to evaluate their sense of job control and willingness to take risks, as well as their perception of the EMC in their team. After 8 weeks, at Time 3, team leaders were asked to complete a questionnaire assessing the radical creativity of their members.

A total of 480 team members from 100 teams were asked to complete the questionnaires at the beginning of the survey. We obtained valid responses from 385 team members (80.2% valid response rate) from 84 teams (84.0% valid response rate), after removing those invalid questionnaires lacking completing three-phase responses or with the same score for all items. From the final sample, the mean number of members per team was 4.58. Of the 385 team members, 51.7% were male, with an average age of 30.65 years (SD = 5.52) and an average of organizational tenure of 4.51 years (SD = 4.73). They were highly educated: 58.2% had a bachelor's degree and 19.0% had obtained a master's degree or higher.

Measures

All the scales we used were initially written in English. By using a common back-translation process (Brislin, 1986), we translated all the items into Chinese. Except for control variables, all the variables were measured on seven-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Empowering leadership

A 12-item scale developed by Ahearne et al. (2005) was used in the present study. Each team member was asked to evaluate the extent to which they perceived their team leaders' empowering behaviors. A sample item was "My leader makes many decisions together with me." (Cronbach's $\alpha = 0.92$).

FIGURE 1
Proposed theoretical model.
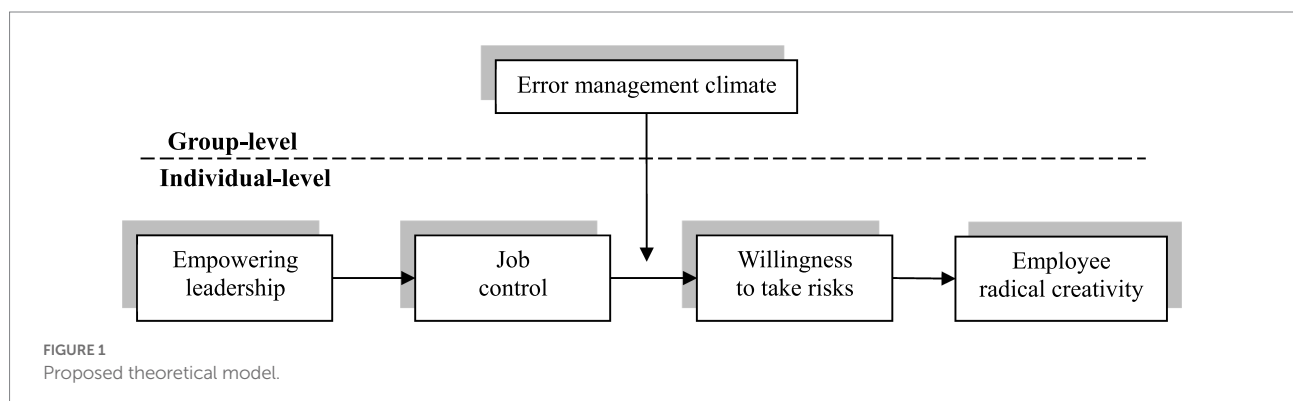
Perceived control

An 11-item scale developed by Van Yperen and Hagedoorn (2003) was used in the present study. Each team member was asked to evaluate their sense of job conditions. A sample items was "I can plan my own work" (Cronbach's $\alpha = 0.89$).

Willingness to take risks

A two-item scale developed by Schilpzand et al. (2018) was used in the present study. Each team member was asked to assess the extent to which they were willing to take a risk with their work. A sample item was "I will take a risk and try something new that might improve work" (Cronbach's $\alpha = 0.79$).

Radical creativity

A three-item scale developed by Madjar et al. (2011) was used in the present study. Each team leader was asked to assess their team members' performance in terms of radical creativity. A sample item of radical creativity was "This team member demonstrates originality in his/her work" (Cronbach's $\alpha = 0.91$).

EMC

A 16-item scale developed by Cigularov et al. (2010) was used in the present study. Each team member was asked to assess their perception of how their team treated and managed errors. A sample item of the EMC was "Our errors point us at what we can improve" (Cronbach's $\alpha = 0.94$). We computed r_{wg}, ICC(1) and ICC(2) to assess whether this variable was appropriate for aggregation to the team level. The results showed an acceptable within-team agreement and a qualified intraclass correlation coefficient (average $r_{wg} = 0.98$, ICC[1] = 0.36, ICC[2] = 0.73), supporting the aggregation of the EMC.

Control variables

We controlled the demographic variables such as employee gender, age, educational level and organizational tenure, as these variables have been found to exert an influence on employee radical creativity (Gong et al., 2017).

Results

Confirmatory factor analyses, descriptive statistics, and correlations

We conducted a series of confirmatory factor analyses (CFA) using Mplus 8.3 to examine the discriminant validity of our measures. Results indicated that our measurement model with five factors, including empowering leadership, job control, willingness to take risks, radical creativity, and the EMC, showed a significantly better fit (χ^2 [109] = 378.91; CFI = 0.94, TLI = 0.92; RMSEA = 0.08) than a four-factor model grouping independent variables and mediating variables (i.e., empowering leadership and job control: χ^2 [113] = 828.90; CFI = 0.83, TLI = 0.80;

RMSEA = 0.13), and another four-factor model grouping two mediating variables (i.e., job control and willingness to take risks: χ^2 [113] = 700.44; CFI = 0.86, TLI = 0.83; RMSEA = 0.12), suggesting the distinctiveness of these variables.

Table 1 shows the means, standard deviations, and correlation coefficients among the variables in this study.

Hypothesis testing

To test the research hypotheses, we conducted a multilevel path analysis in Mplus 8.3, in which empowering leadership was included as the independent variable, job control and willingness to take risks were included as the mediators, radical creativity was included as the dependent variable, and EMC was included as the moderator. The results are displayed in Table 2. Hypothesis 1 proposed the direct effect of empowering leadership on employee job control. As shown in Table 2, the result revealed that empowering leadership was positive related to employee job control ($b = 0.46$, $p < 0.01$), supporting Hypothesis 1. In keeping with Hypothesis 2A, employee job control was found to significantly influence willingness to take risks ($b = 0.23$, $p < 0.01$). Hypothesis 2B suggested that employee job control mediated the effect of empowering leadership on employee willingness to take risks. The bootstrapping approach with 20,000 replications revealed that the indirect effect of empowering leadership on employee willingness to take risks *via* job control was significantly positive (*indirect effect* = 0.11, 95% *CI* = [0.05, 0.17]), thus supporting Hypothesis 2B.

Hypothesis 3 proposed the direct effect of employee willingness to take risks on radical creativity. The result, as displayed in Table 2, revealed that employee willingness to take risks has significantly positive effect on radical creativity ($b = 0.42$, $p < 0.01$), supporting Hypothesis 3. Hypothesis 4 stated that there was a positive indirect relationship between empowering leadership and employee radical creativity *via* job control and willingness to take risks. Following aforementioned procedures, bootstrapping result indicated that the indirect relationship between empowering leadership and employee radical creativity *via* job control and willingness to take risks was significant and positive (*indirect effect* = 0.04, 95% *CI* = [0.02, 0.08]), supporting Hypothesis 4.

Hypothesis 5A predicted that EMC moderates the effect of job control on willingness to take risks, such that the positive effect of job control on willingness to take risks become stronger as EMC higher. Table 2 showed that the cross-level interaction term for EMC and job control was significant and positive ($b = 0.08$, $p < 0.05$). Figure 2 displayed the plot of this interaction. We further examined the simple slope test. The result indicated that when EMC is high, job control was positively related to willingness to take risks (*simple slope* = 0.27, $p < 0.01$) and when EMC is low, job control was positively related to willingness to take risks (*simple slope* = 0.18, $p < 0.01$). Additionally, the difference between the two conditional indirect effects was significant (*simple slope* = 0.08, $p < 0.05$), thus supporting Hypothesis 5A.

TABLE 1 Means, standard deviations, correlations, and reliabilities.

Individual-level variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	0.48	0.50	–								
2. Age	30.65	5.52	0.07	–							
3. Education	3.96	0.69	−0.13*	−0.19**	–						
4. Tenure	4.52	4.73	0.01	0.65**	−0.16**	–					
5. Empowering leadership	5.27	0.83	0.05	0.01	−0.05	−0.01	(0.92)				
6. Job control	5.04	0.83	0.00	0.02	0.03	0.01	0.49**	(0.89)			
7. Willingness to take risks	4.76	0.85	0.11*	−0.10*	−0.11*	−0.06	0.31**	0.38**	(0.79)		
8. Radical creativity	4.64	1.08	0.16**	−0.06	0.08	−0.07	0.40**	0.50**	0.46**	(0.91)	
Group-level variables											
1. EMC	5.36	0.54	–								(0.94)

$N = 385$, $n = 84$; Cronbach's alphas were reported along the diagonal. *$p < 0.05$; **$p < 0.01$.

TABLE 2 Results of the path analysis.

Independent variables	Mediators				Dependent variables	
	Job control		**Willingness to take risks**		**Radical creativity**	
Individual-level	**Estimate**	**S.E.**	**Estimate**	**S.E.**	**Estimate**	**S.E.**
Gender	−0.07	0.08	0.07	0.08	0.17	0.10
Age	−0.00	0.01	−0.02	0.01	−0.01	0.01
Education	−0.02	0.08	−0.15	0.08	0.13	0.09
Tenure	0.01	0.01	0.01	0.01	−0.01	0.02
Empowering leadership	0.46**	0.05	0.22**	0.07	0.15	0.09
Job control			0.23**	0.06	0.42**	0.09
Willingness to take risks					0.42**	0.08
Group-level						
EMC			0.01	0.20		
Cross-level interaction						
Job control × EMC			0.08*	0.04		

$N = 385$, $n = 84$; *$p < 0.05$; **$p < 0.01$; Unstandardized coefficients are reported.

Meanwhile, Hypothesis 5B proposed that EMC strengthens the indirect effects of empowering leadership on employee radical creativity, *via* job control and willingness to take risk. The bootstrapping results revealed that the conditional indirect effect of empowering leadership on employee radical creativity was significant when EMC was low (*indirect effect* = 0.04, 95% *CI* = [0.01, 0.07]), and also significant when EMC was high (*indirect effect* = 0.05, 95% *CI* = [0.02, 0.09]). Additionally, the difference between the two conditional indirect effects was significant (*difference* = 0.02, 95% *CI* = [0.00, 0.04]). Thus, Hypothesis 5B received support (Appendix).

Discussion

The present study explored and examined a theoretical model to explain how empowering leadership can positively affect employee radical creativity. Consistent with our prediction, all the hypotheses are supported. The results revealed that empowering

leadership exerted a positive indirect effect on employee radical creativity *via* job control and willingness to take risks. Additionally, the EMC moderated the relationship between job control and willingness to take risks, such that the positive effect was stronger when the EMC increased. We also found that the beneficial effect of empowering leadership on employee radical creativity *via* job control and willingness to take risks could be attenuated when the EMC was high. Our findings offer several theoretical and practical implications.

Theoretical implications

Our findings make some useful theoretical contributions to the existing research.

First, increasing numbers of researchers have called for an end to the use of a general concept of creativity in research, a widely recognized dualistic variable (*cf.* radical creativity and incremental creativity; Unsworth, 2001; Gilson and Madjar, 2011; Madjar et al.,

FIGURE 2
Interaction between Job control and EMC on willingness to take risks.
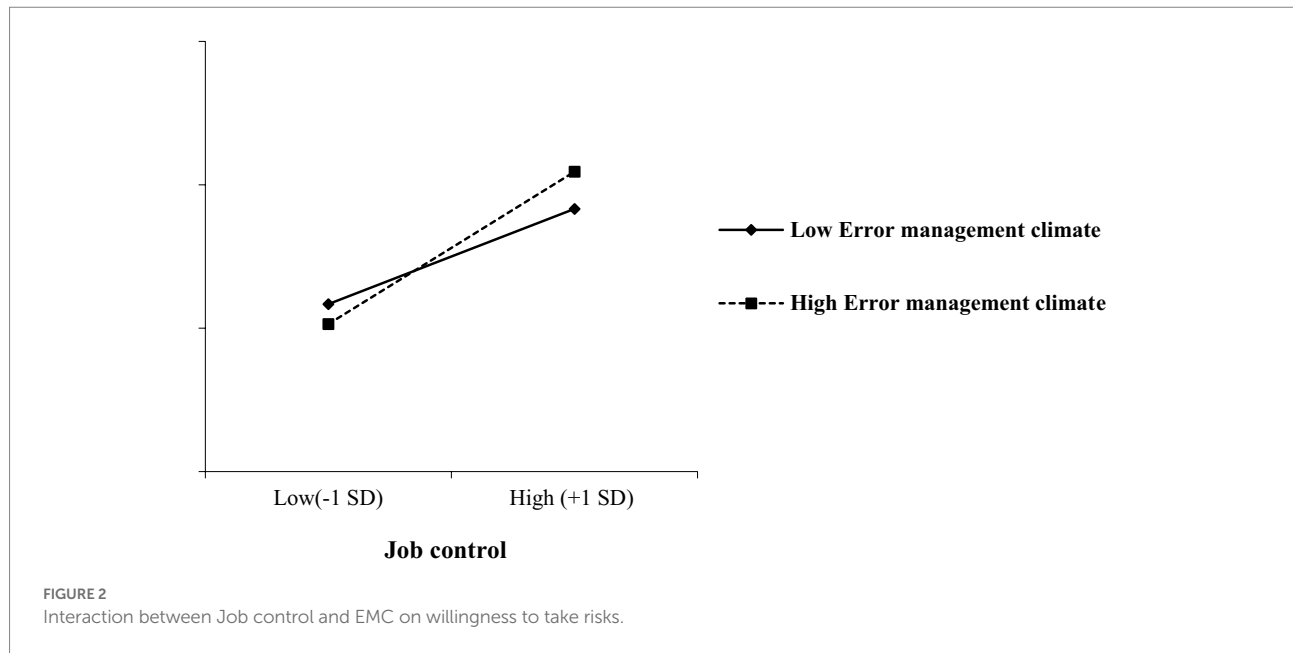
2011). Responding to this call, the present study focused on the antecedents of radical creativity, examining the positive relationship between empowering leadership and employee radical creativity, which to fill the knowledge gap relating to the effects of leadership on employee radical creativity. Specifically, the results showed that empowering leadership can improve employee radical creativity, verifying previous views on the effect of empowering leadership on employee creativity (Zhang and Bartol, 2010), and enriched the research perspectives on the antecedents of radical creativity.

Second, this study revealed the mediating role of employees' willingness to take risks, offering a new perspective on research into the effect of empowering leadership on employee radical creativity. Previous studies on the mediating mechanism of empowering leadership and employee creativity have mainly focused on psychological empowerment (Zhang and Bartol, 2010; Li et al., 2017; Lorinkova and Perry, 2017), self-efficacy (Arnold et al., 2000; Cheong et al., 2016) and intrinsic motivation (Zhang and Bartol, 2010), neglecting the possible linking mechanism from the perspective of risk taking. This may be due to the use of the general concept of creativity, masking the concept of incremental creativity, not being seen as a high-risk behavior. Due to its high degree of uncertainty and subversion of conventional frameworks, radical creativity is a considerably high-risk behavior (Gilson and Madjar, 2011), which requires employees to be prepared to take risks. Therefore, this study explored and verified that employees' willingness to take risks serves as an explanatory mechanism for empowering leadership and employee radical creativity, extending previous research.

Finally, this study enriched the knowledge base from studies on the boundary conditions of the impact of empowering leadership on employee creativity. Reviewing previous studies in this field, mainstream researches have focused on employee traits (Zhang and Bartol, 2010) and the interaction relationships

between employees and leaders (Harris et al., 2014), as the boundary conditions, ignoring the influence of group climate. Our findings introduced the EMC as a group situational factor, and explored and verified its moderating effect on the effect of empowering leadership on employee radical creativity, enriching the existing research results that the effectiveness of empowering leadership can be superposed by suitable group climate.

Practical implications

Our findings also have some practical implications. First, from the perspective of power distribution, a flat team structure and an authorized management style, rather than a centralized team structure and a direct imperative management style, may be more conducive to promoting employee radical creativity. Leaders can enhance employees' sense of control over their job and work environment by delegating some responsibilities and powers to employees, enhancing their job discretion, reducing the hierarchy in the team, and expanding their scope of authority, which in turn further stimulates employee radical creativity.

Second, from the perspective of team member management, enhancing employees' sense of ownership may be more conducive to enhancing their radical creativity. When employees have high affective commitment to their organization, they are more likely to engage in risky but beneficial behaviors for that organization. Therefore, leaders can improve employee radical creativity by encouraging employees to participate more in decision-making and by treating employees' work with a positive attitude, such as encouragement and praise. This promotes employees' affective commitment to the team and strengthens their willingness to strive for the benefit of the organization, regardless of personal gain or loss.

Finally, from the perspective of fostering team culture, a positive error management climate in a team is more conducive

to increasing the efficiency of empowering leadership and fostering employee radical creativity. A relaxed environment is more suitable for employees' emancipation and to stimulate bold thinking outside of the conventional framework, thus promoting their radical creativity. Therefore, team leaders can encourage empowered employees to think more, with fewer constraints, by fostering a more inclusive and relaxed environment to promote radical creativity. This can be achieved by designing appropriate management practices, such as reducing or even removing punishment for non-subjective errors, encouraging trial-and-error behavior by employees (within a reasonable range), organizing regular meetings to focus on error improvement efforts, and related practical strategies.

Limitations and future directions

The current study has several limitations. First, the present research explored the influence of empowering leadership on employee radical creativity, responding to researchers' calls to discuss the effect and mechanism of specific creativity. However, according to the definition, in addition to radical creativity, creativity has another dimension: incremental creativity, which has different definitions and characteristics compared with radical creativity. Therefore, it is also worth exploring the mechanisms that link empowering leadership with incremental creativity. For instance, the factors such as willingness to take risks influencing incremental creativity and radical creativity maybe different, because the risks accompanied with these two forms of creativities would vary. Accordingly, future research could simultaneously investigate the effect of empowering leadership on employee incremental creativity and dual creativity, comparing and contrasting the differences between the mechanisms linking empowering leadership and incremental creativity or radical creativity.

Second, this study suggests that employee traits may also influence the relationship between empowering leadership and employee radical creativity, although this was not specifically explored. For example, previous studies have suggested that employee uncertainty avoidance may affect the impact of empowering leadership on employee creativity and can also influence employees' risk preferences. Therefore, it can be speculated that employee uncertainty avoidance may also affect the positive effect of employees' job control on their willingness to take risks. This study suggests that the influence of employees' traits on the impact of empowering leadership on employee radical creativity should be considered in subsequent research.

Finally, this study mainly explored the positive impact of empowering leadership on employee radical creativity. Although the positive effect of empowering leadership is widely recognized, it should not be ignored that it may also have a "dark" side. Some studies have begun to focus on the possible negative effects of empowering leadership on employees. For example, some scholars have explored the negative effects of empowering leadership, in the form of intimidating passion, on both the routine performance and innovation performance of employees. Therefore, future research should explore any negative impacts of empowering leadership on employees' breakthrough creativity.

Data availability statement

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

Author contributions

WY wrote the manuscript. SL helped with the paper revision and collected the data. All authors contributed to the article 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.

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Appendix

Items for all measures.

Variables	Measure
Empowering leadership (Ahearne et al., 2005)	1. My leader helps me understand how my objectives and goals relate to that of the company.
	2. My leader helps me understand the importance of my work to the overall effectiveness of the company.
	3. My leader helps me understand how my job fits into the bigger picture.
	4. My leader makes many decisions together with me.
	5. My leader often consults me on strategic decisions.
	6. My leader solicits my opinion on decisions that may affect me.
	7. My leader believes that I can handle demanding tasks.
	8. My leader believes in my ability to improve even when I make mistakes.
	9. My leader expresses confidence in my ability to perform at a high level.
	10. My leader allows me to do my job my way.
	11. My leader makes it more efficient for me to do my job by keeping the rules and regulations simple.
	12. My leader allows me to make important decisions quickly to satisfy customer needs.
Job control (Van Yperen and Hagedoorn, 2003)	1. I can choose the methods to use in carrying out my work.
	2. I can plan my own work.
	3. I can set my own pace.
	4. I can vary how I do my work.
	5. On my job, I have the freedom to take a break whenever I wish to.
	6. I can decide on the order in which I do things.
	7. I can decide when to finish a piece of work.
	8. I have full authority in determining how much time I spend on particular tasks.
	9. I can decide how to go about getting my job done.
	10. My job allows me to organize it by myself.
	11. I have full authority in determining the content of my work.
Willingness to take risks (Schilpzand et al., 2018)	1. I will take an informed risk at work in order to try and get better results.
	2. I will take a risk and try something new that might improve work.
Radical creativity (Madjar et al., 2011)	1. This team member demonstrates a good source of highly creative ideas.
	2. This team member demonstrates originality in his/her work.
	3. This team member suggests radically new ways for doing something.
Error management climate (Cigularov et al., 2010)	1. For us, errors are very useful for improving the work process.
	2. After an error, people think through how to correct it.
	3. Although we make mistakes, we do not let go of the final goal.
	4. An error provides important information for the continuation of the work.
	5. After an error has occurred, it is analyzed thoroughly.
	6. When people are unable to correct an error by themselves, they turn to their co-workers.
	7. If something went wrong, people take the time to think it through.
	8. Our errors point us at what we can improve.
	9. After making a mistake, people try to analyze what caused it.
	10. When an error is made, it is corrected right away.
	11. When people make an error, they can ask others for advice on how to continue.
	12. When working for this contractor, people think a lot about how an error could have been avoided.
	13. When mastering a task, people can learn a lot from their mistakes.
	14. When an error has occurred, we usually know how to rectify it.
	15. If people are unable to continue their work after an error, they can rely on others.
	16. When someone makes an error, he shares it with others so they do not make the same mistake.

The influence of empowering team leadership on employees' innovation passion in high-tech enterprises

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How to stimulate the innovation passion of employees and then improve the innovation performance of enterprises is an important proposition faced by high-tech enterprises. Whether and how to stimulate the innovation passion of employees is of great research value. Based on the social information processing theory, this study takes innovation self-efficiency and innovation climate based on advantages as the path variable and obtains the following conclusions through cross-level analysis with the data of 93 high-tech enterprises as the sample: The empowering team leadership has cross-level direct positive influence and indirect positive influence on innovation passion, and the innovation self-efficiency and innovation climate based on advantages positively adjust the relationship between innovation self-efficiency and innovation passion. At the same time, an innovation climate based on advantages positively moderates the relationship between innovation self-efficacy and innovation passion. This study has some innovations in exploring the function mechanism of empowering team leadership on employees' innovation passion, and the relevant conclusions can guide the innovation management of high-tech enterprises.

Introduction

High-tech enterprises take technological leadership as their development strategy. How to improve their innovation ability to obtain and maintain competitive advantages is an important source (Anderson et al., 2014). Employees's innovation ability is the core element in the innovation ability system of high-tech enterprises. In the dimension of employee innovation ability, innovation incentive ability is the basic ability (Liu et al., 2019), it is crucial to motivate employees' innovation desire and passion.

According to the concept of work passion (Chen et al., 2020), the innovation passion of employees is a positive inner experience of positive innovation influenced by the external environment, which depends on personality and individual differences, and externally is influenced by leadership behavior and organizational support

(Thibault-Landry et al., 2018). The discussion on the relationship between leadership type and employees' innovation has always been a hot topic in academia (Niu et al., 2018; Özsungur, 2019; Wang et al., 2019). Due to the rapid change and uncertainty of the external environment of enterprises, the increasing knowledge level, and the comprehensive quality of employees, empowering leadership behavior has attracted much attention (Wang and Sun, 2018). The research on the innovation relationship between empowering leaders and employees, mainly involves innovation behavior and innovation performance, and the research on the innovation passion of employees has not been reported.

Related research confirmed that employees could effectively improve their work passion when enterprises encouraged them to participate in decision-making and work autonomy (Gao and Jiang, 2019). At this time, employees will show great passion for attaching importance to their job or even enjoying these tasks (Salas-Vallina et al., 2020). This study believes that the knowledge level and demand level of high-tech enterprise employees are higher. If leaders can fully empower and give knowledge workers greater job autonomy, it will be possible to greatly stimulate their enthusiasm for innovation, thereby improving the innovation performance of enterprises.

If empowering team leadership can indeed enhance the innovation passion of employees in high-tech enterprises, then what is their internal mechanism? By reviewing relevant studies, it can be found that these studies are carried out from the perspectives of individual psychology and organizational context, respectively (Lee et al., 2020). Early studies from a single point of view, while recent research began to pay attention to the integration of the two perspectives. Therefore, this paper will also analyze the influence mechanism of empowering team leadership on the innovation passion of employees from the perspective of integration.

Social information processing theory holds that individuals will determine their attitudes and behaviors based on contextual cues (Salancik and Pfeffer, 1978). Empowering team leadership style will release a positive signal to employees, which has an important impact on employees' attitudes and behaviors. Studies have found that different leadership styles convey different social information to employees and have different impacts on innovation performance (Dai and Lu, 2021). On the one hand, empowering team leadership to express trust and respect for employees and confidence and good expectations in their ability to innovate (Cheong et al., 2019; Gao and Jiang, 2019), increases the motivation of innovation from the perspective of individual psychology. On the other hand, empowering team leadership will send a signal to employees to encourage independent exploration and encourage the development of personality traits (Smallfield et al., 2020; van Knippenberg et al., 2021), which in turn allows employees to perceive a climate of innovation that encourages everyone

to take advantage (Yang et al., 2021). As social information processing theory can explain the influence of empowering team leadership on employees' individual psychology and organizational context, it is the theoretical basis of this study.

Compared with the existing research, this study has the following differences: (1) Select employee innovation passion as the target variable, and which can thoroughly interpret how the empowering team leadership promotes employees' innovation from the micro perspective; (2) Analyze the influence mechanism of the organizational situation and individual psychology; (3) Analyze the relative variables based on the team level and individual level and use the cross-level analysis method to explore the influence path of empowering team leadership on employees' innovation passion. In the process of research, innovation self-efficacy was selected as the variable of individual level and individual psychology, and the innovation climate based on advantages was selected as the variable of the organizational situation and team level for mechanism and path analysis.

The rest of this article is as follows. Section 2 introduces the theoretical basis of this paper and constructs the research model of the paper on this basis. Section 3 puts forward the research hypothesis of this paper. Section 4 explains the research methods and data testing process. Section 5 presents the results of our analysis and insightful comments. Section 6 reports the main conclusions and describes the theoretical contributions and practical implications of this paper.

Research model

Passion for innovation

Work passion is an emerging topic in the field of organizational and management research because it can well-explain how other variables cannot be thoroughly interpreted in previous studies (Thibault-Landry et al., 2018). In the past decade, it has attracted scholars' much attention (Weng et al., 2020; Smith et al., 2022). At present, by embedding work passion into different situations, some specific concepts have appeared, such as entrepreneur passion (Lex et al., 2022), innovation passion (Kiani et al., 2020), and entrepreneurial passion (Cardon et al., 2017) etc.

Most of the studies related to work passion used it as leading and intermediary variables to explore the effect of work passion, while studies on the pre-factors of work passion are still fewer. In the current research on the causes of work passion, at the individual level, scholars believe that work passion is influenced by self-esteem, autonomy, self-identity, controllability perception, and goal pursuit (Collewaert et al., 2016; Ho et al., 2018). At the team level and organizational level, leadership behavior and leadership style (Afsar et al.,

2016), the similarity and differences in member passion (Cardon et al., 2017), and the organizational environment (Ho and Astakhova, 2020) are important variables affecting the teamwork passion and organizational work passion. This study takes the innovation work of high-tech enterprises as the situation, defines innovation passion as the psychological emotion of employees actively producing innovative ideas, and actively seeking new methods, new technologies, and new processes to implement innovative ideas.

Innovative self-efficacy

Innovation self-efficacy is an individual's belief that they can achieve innovative achievements and master innovative methods (Farmer, 2002). Focusing on innovation self-efficacy, scholars mainly carry out research on the influencing factors, influencing effects, and mediating or moderating effects of innovation self-efficacy. The influencing factors of innovation self-efficacy mainly include organizational factors, leadership factors, work factors and staff factors, such as Wang et al. (2018) studied the innovation climate of innovation self-efficacy, Wang et al. (2014) found that transformational leaders in hotel enterprise change leadership have a positive impact on employees' innovative self-efficacy. The effect of innovation self-efficacy includes employees' innovation behavior, creativity, and innovation performance, such as Michael et al. (2011) in Taiwan enterprise female employees, for example, found that innovation self-efficacy has a positive influence on employees' innovation behavior. Teng et al. (2020) analysis of paired data from supervisors and subordinates found that creative self-efficacy has a greater impact on employees ' creative behavior in an environment of high knowledge sharing. Teng et al. (2020) analyzed the paired data of superiors and subordinates and found that innovative self-efficacy has a greater impact on employees' innovative behavior in an environment of high knowledge sharing.

Innovation climate based on advantages

Existing researchers have found that the innovative climate has an important impact on employee behavior and employee performance (Thibault-Landry et al., 2018), But, the innovative climate is defined based on the perspective of the employer and organizational needs. Research on organizational climate based on employee needs is relatively lacking (Chen and Huang, 2007), so Van Woerkom and Meyers (2015) proposed a strengths-based psychological climate concept to measure employees' perception of the identification, development, and support of organizations and believes that the improvement of the psychological climate level of the employees based on advantages is equivalent to increasing employees' perception

on the organizational recognition, concerns, and use of their own strengths.

This study draws on the concept of psychological climate based on the advantage of Van Woerkom and Meyers (2015), combined with the situation of innovation management, and puts forward the concept of advantage based on innovation climate. It is used to measure the overall climate perception created by the team that can stimulate their innovation advantages. Compared with the psychological climate based on advantages, the innovation climate based on advantages measures the innovation climate at the team level, rather than the psychological climate at the individual level.

Model based on social information processing theory

According to the social information processing theory, employees will form their own feelings, attitudes, and behaviors based on the information obtained from the organization (team). Using the integration of leadership behavior and employee performance perspective (Cheong et al., 2019), employees perceive empowering team leadership, this information will be based not only on their own individual perspective but also based on the indirect organization perspective. This paper starts from the individual psychology and organizational situation to explore the influence mechanism of empowering leadership on employee innovation passion, which chooses innovation self-efficacy as the individual level of employee psychological experience variable, choose the innovation climate based on advantages as the organization level (team). It can be inferred from the existing research that they have strong explanatory properties in predicting employees' innovation willingness and innovation behavior, so this paper explores whether they have an important impact on the formation of innovation passion.

According to the meta-analysis of Cui et al. (2019), most existing researchers think that climate variables have affected the production of self-efficacy or play, together with organization climate as an environmental variable, they often have a boundary influence on organization behavior (Schneider and Reichers, 1983), so this paper thinks that advantage-based innovation climate has a regulatory effect on the path of "innovation self-efficacy," and put forward the theoretical model shown in Figure 1.

Although Van Woerkom and Meyers (2015) psychological climate based on the advantages emphasized more employee demand, for the implementation of incentive staff, in the specific study of Figure 1 whether the innovation climate based on the advantage model can be replaced with an innovation climate, or

FIGURE 1
The theoretical model of studies.
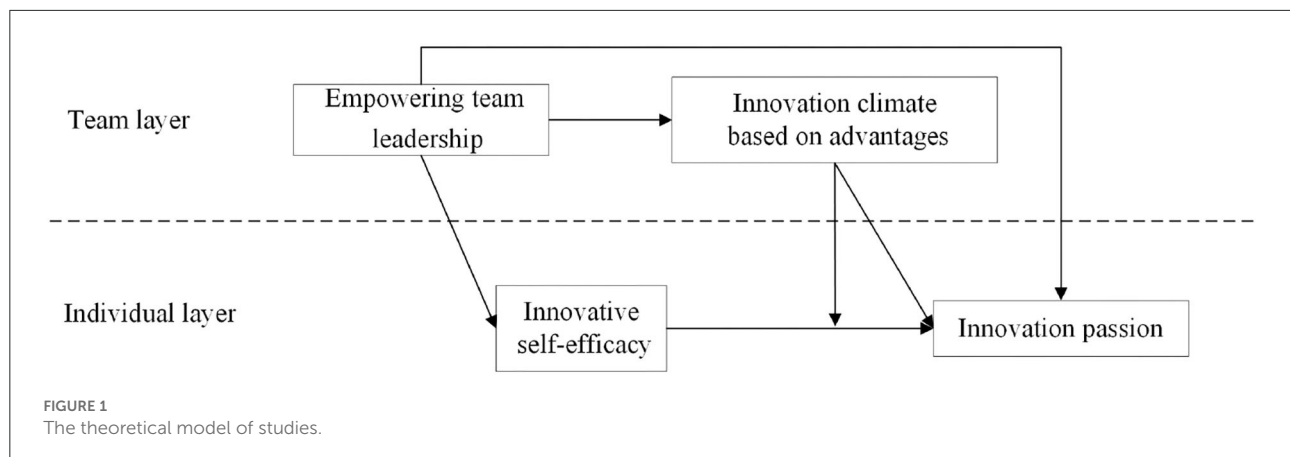
what is the difference between them is still worth discussion. The empirical research will make a comparative analysis between them to answer this question.

Research hypotheses

Empowering team leadership and employees' innovation passion

As mentioned above, innovation passion is working passion embedded in innovation activities. For high-tech enterprises, especially the innovation team, employees' innovation passion is employees strong willingness working state to carry out innovation activities (Thibault-Landry et al., 2018). It is the employees' active production of innovative ideas in the process of work, and actively try to seek new methods, new technology, and new processes to implement the psychological mood of innovative ideas.

The definition of empowering team leadership (Wang et al., 2018) can be seen that it includes the whole process of licensing employees through a series of activities, involving enhancing the work significance of employees, expressing their appreciation for their good performance, and helping employees to eliminate obstacles to improve their performance. For high-tech enterprises, innovative activities are often exploratory, prospective, and risky, therefore, the influence of empowering team leadership on innovation passion can be analyzed from the following aspects: First, empowering team leadership drives employees to continuously improve their self-value and increase the work significance of the employees. To maintain a positive self-evaluation, employees will strive to carry out innovative work. Next, empowering team leadership to convey the recognition and appreciation of their employees greatly improve the work confidence and participation of employees, and promote employees to make forward-looking innovation with greater passion (Farmer, 2002). Once more, empowering team leadership can help employees remove the boundaries

between work content and roles and make the innovative thinking of employees not be imprisoned, which creates favorable conditions for employees' innovative behaviors (Xie et al., 2018). Last, empowering team leadership contributes to interaction and sharing of information among team members and helps to reduce the possible risks in the innovation process, which further increases the desire of employees to participate in innovation (Lee et al., 2020). Based on the above analysis, the following assumptions are proposed:

> Hypothesis 1. High-tech enterprise empowering team leadership has a positive impact on employees' passion for innovation.

Mediating role of innovation and self-efficacy

The willingness, ability, and confidence of each employee to innovate is critical for innovation teams in high-tech companies. Therefore, how to improve employees' innovative self-efficacy is highly valued (Park et al., 2021). Many studies have shown that empowering team leadership can indeed improve the perception level of self-efficacy of employees (Cheong et al., 2019). According to the social information processing theory, the influence of empowering team leadership of high-tech enterprises on innovation self-efficacy is mainly reflected in the following aspects: First, empowering team leadership will express their confidence and good expectations about their innovation ability and future innovation performance to their employees, which can make employees full of confidence in their own innovation ability. Next, empowering team leadership will encourage employees to realize the overall value of innovation better in their own work to the organization (team), which makes them actively invest in innovation work. Moreover, when employees discover that empowering team leadership uses their own innovative ideas and methods in decision making, they

often perceive their innovative behavior as very valuable. Finally, empowering team leadership put more emphasis on giving employees full power to independent innovation, which is very matched with the characteristics that innovation work needs to break through the routine and dare to take risks.

Existing research points out that innovative self-efficacy has an important impact on employees' innovative behavior (Ho and Astakhova, 2020). According to the above definition of innovation passion, compared with innovation behavior, innovation passion focused more on expressing motivation and willingness. But a consistent conclusion hasn't been achieved on whether there is a correlation between innovation self-efficacy and innovation motivation, or whether innovation self-efficacy affects innovation motivation or innovation motivation affects innovation self-efficacy (Newman et al., 2018). In practice, employees with high competence or strong confidence often show a stronger passion for innovation (Su and Zhang, 2020). Compared with passion, the longer ability is acquired and more stable performance. Ability is more likely to predict passion. Although self-efficacy is a subjective perception of ability, it is based on objective ability. This paper believes that innovative self-efficacy is predictive of innovation passion. The above analysis makes the following assumptions:

Hypothesis 2. Innovation self-efficacy plays a mediating role in the influence of empowering team leadership on employees' passion for innovation.

Mediating role of innovation climate based on advantages

High-tech enterprises are innovation-oriented compared with other types of enterprises. Its staff management is no longer a rule-based governance model but promotes the establishment of open and inclusive, encouraging autonomy and exploration of the working atmosphere to give full play to the innovative advantages of each employee (Gong et al., 2021). From the perspective of situational empowerment, the management measures of empowering team leadership include moving down, establishing an independent working group, establishing a self-management team, enriching work, etc. Many studies have found that leadership style has an important influence on the climate of organizational innovation (Niu et al., 2018). However, the perspective and degree of influence have their own characteristics. For empowering team leadership, this paper believes that their influence on the innovation climate is mainly based on encouraging independent innovation behavior and encouraging self-advantages, it plays an important role in predicting the innovation climate based on advantages.

From the definition of innovation passion (work passion), it can be found that passion is often manifested as a

kind of willingness, emotion, and cognition. According to the perspective of social information processing theory, the information always affects the cognition of innovation work. Therefore, the innovation climate based on advantages can effectively stimulate the innovation passion of employees. In conclusion, the following assumptions are proposed:

Hypothesis 3. Advantage-based innovation climate plays a mediating role in the influence of empowering team leadership on employees' passion for innovation.

Moderating effect of advantage-based innovation climate

According to the previous analysis, empowering team leadership influences employees' innovation passion through the situational mechanism and psychological mechanism, respectively. Is there any cross influence on these two aspects? This paper believes that the situational variable advantage-based innovation climate may have some influence on the performance of the psychological variable innovation self-efficacy, which can be obtained from the following analysis. Firstly, the innovation climate based on advantage is the perception of the enterprise or team, which can feel the attention and support of the innovation ability, and it is easy to stimulate their positive emotions and improve their ability and confidence. Secondly, the high-tech enterprises or their innovation teams develop various policies and systems for their innovation advantages and encourage employees to have a more positive belief in self-innovation ability.

When high-tech enterprises or their innovation teams create a stimulating climate of individual innovation advantage, some innovation specialties and innovation advantage of the employees are often attached to great importance by the leadership or organization, which is considered that these individual advantages are conducive to enterprise innovation. The stronger the innovation climate based on advantage, the more willingness the employees will be induced to think their own advantages and skills are beneficial to the innovation, which will improve their innovation self-efficiency. On the contrary, when employees think that the enterprises or teams' environment can only act according to the rules and does not encourage the development of personality, they will think that some of their strengths are useless, or cannot contribute to the organizational performance, which will greatly reduce their innovative self-efficiency. The above situation is very common in the actual high-tech enterprise management practice. Many high-tech enterprises are advocating platform-based operations and empowering employees to create a working atmosphere that advocates autonomy and gives full play to individual or team

advantages (Tian et al., 2021). Based on the above analysis, the following assumptions:

> Hypothesis 4. Advantage-based innovation climate has a positive moderating effect on the mediating effect of innovation self-efficacy.

Materials and methods

Study samples and procedures

The survey selected 150 high-tech enterprises from several provinces, mainly distributed in East and North China. The questionnaire distribution and recycling were conducted by site and post. To avoid homologous errors, this study uses leader-member pairing to collect data in a team with the cooperation of human resources departments. Leaders of each team (department) select 5 to 10 subordinates to evaluate their passion for innovation and self-assessment of empowering team leadership. Then the subordinates of each team evaluate the three variables of empowering team leadership, innovative self-efficacy, and innovation climate based on advantages and match the data of leaders and subordinates by coding. Seven hundred and ninety-four questionnaires from 30 enterprises were collected on the spot, and 801 questionnaires from 67 enterprises were collected by mail. Total 97 enterprises, 196 teams, and 1,548 questionnaires.

In the recovered data, the questionnaires with unmatching, improper answers, and obvious response tendencies were excluded. Finally, 162 teams and 1,226 sets of matching questionnaires were obtained from 93 enterprises, with an effective rate of 79.20%. In terms of sample structure, 807 employees are male, accounting for 65.82 %, and 419 are female, accounting for 34.18 %. Most employees are between 20 and 40 years old, accounting for 88.99 %. Approximately 319 people have worked for <5 years, accounting for 26.02 %; 744 people have worked for 5–15 years, accounting for 60.69%; 163 people have worked for more than 15 years, accounting for 13.29%. Among the leaders, 114 were male, accounting for 70.37%, and 48 were female, accounting for 29.63%. All of them had undergraduate education or above, and 35.19% of them had postgraduate education.

Variable measurement

Most of the measurement items in the scale are selected from mature scales abroad. When making the scale, the three experts first translated it into Chinese and then summarized the

feedback, and then translated it back into English to confirm the accuracy of the scale.

Empowering leadership (EL): using Ahearne et al. (2005). The developed scale contains 12 items; typical items include "Leaders often ask my advice when making strategic decisions." The Cronbach's α value of the scale is 0.899, the composite reliability (CR) is 0.898, and the Average Variance Extracted (AVE) is 0.564.

Innovative Self-efficacy (ISE): Using the scale developed by Karwowski et al. (2013). There are 6 items on the scale, including "I think I can effectively solve even complex problems." The Cronbach's α value of the scale is 0.907, the Composite reliability (CR) is 0.907, and the Average Variance Extracted (AVE) is 0.599.

Innovation climate based on advantages (ICA): We modified the scale developed by Van Woerkom and Meyers (2015) to adapt to new measurement requirements. The scale includes identifying and developing, appreciating, and using three dimensions, there are 12 items in it. The items include "In this organization, my innovation ability will be appreciated." The Cronbach's α value of the scale is 0.849, the Composite reliability (CR) is 0.850, and the Average Variance Extracted (AVE) is 0.532.

Innovation Passion (IP): Based on the scale developed by Vallerand and Houlfort (2003), imitate Fang et al. (2017). The two dimensions included 12 items, including "Try new methods and find new things at work." The Cronbach's α value of the scale is 0.95, the Composite reliability (CR) is 0.895, and the Average Variance Extracted (AVE) is 0.548.

In this study, due to the core task of this study, we treat all variables as single-dimension constructs. In addition, this paper takes employee gender (C1), age (C2), education level (C3), and length of service in the enterprise (C4) as the control variables of this study.

Common method bias

To reduce the impact of common method bias, first, set up some reverse questions in the questionnaire design to determine whether the logic of the respondents is accurate. Second, it emphasizes that the questionnaire is not used for commercial purposes and is completely anonymous. Finally, the two groups of employees and team leaders complete different questionnaires, as far as possible to reduce the single individual answer the common method bias.

Empowering team leadership, innovation self-efficacy, innovation climate, and innovation passion were combined into a single factor for measurement analysis based on recycled data. The results showed that the single factor model fitting degree or matching effect is not ideal. At the same time, the Harman single-factor test analysis method

was used to conduct the exploratory factor analysis of each variable measurement item. The results found that the first factor of the unrotated exploration factor analysis was 24.478%, less than half of the total explanatory variables. In conclusion, the problem of common method bias of the data is not prominent.

Within-group consistency test

The two variables of empowering leadership and innovation climate based on advantages are the team (enterprise) level. But the sample data comes from individuals. Therefore, aggregated individual-level data at the team level requires a consistency test, as shown in Table 1.

The average Rwg number of both variables is >0.7, ICC (1) value >0.12, and ICC (2) value >0.7, indicating the high intra-group consistency of sample data. The individual level can be aggregated to the team level by averaging.

Discrimination validity analysis

Through the comparative analysis of cross-layer confirmatory factors and competition model, the discrimination validity of empowering team leadership, innovative self-efficacy, and innovation climate based on advantages and innovation passion are tested. The results are shown in Table 2. In the four-factor model, $\chi^2/df = 1.266$, RMSEA $= 0.023$, GFI $= 0.913$, CFI $= 0.973$, TLI $= 0.972$. All indicators were better than the other models, which indicates that the four-factor model fits the actual data best, namely, the four factors involved in the study had good discrimination validity.

Descriptive statistical analysis

Table 3 shows the mean, standard deviation, Pearson linear correlation coefficient, and significance level of each variable. The correlation coefficient between constructs is below 0.6, indicating that the measurement data is reliable, indicating that the data homology deviation problem is not serious, the square root of AVE is greater than the correlation coefficient of the corresponding variables, and indicating that the differentiation validity is good and can be used as the purpose of this study.

TABLE 1 Team variables Rwg mean value, ICC (1), ICC (2).

	Rwg average value	ICC (1)	ICC (2)
EL	0.972	0.454	0.838
ICA	0.969	0.318	0.748

Result

The variables in the theoretical model (Figure 1) involve both team and individual levels, and the variables are latent variables. This study uses Mplus7.4 statistical analysis software to construct and analyze hierarchical linear modeling (HLM) to test the previous hypothesis.

Total effect test

The structural equation model is used to analyze the influence of empowering team leadership on an advantage-based innovation climate and the influence of innovation self-efficacy. The correlation coefficient ICC (1) is 0.111 and 0.06, respectively, so the multi-level regression model for the hypothesis test. The results are shown in Table 4.

In Table 4, to compare the difference between innovation climate (IC) and advantage-based innovation climate, the advantage-based innovation climate is replaced with innovation climate to reanalyze the models m1 and m4.

M3 shows that empowering leadership has a cross-level positive impact on innovation passion, and the impact is significant. Hypothesis 1 is verified. M4 shows that an innovation climate based on advantages also has a cross-level positive impact on innovation passion. When the innovation climate based on advantages is replaced with the innovation climate, m4 shows that the innovation climate does not have a cross-level positive impact on the formation of innovation passion.

Direct and mediating effect test

Without considering the moderating effect, a cross-level full model of the relationship between the corresponding variables in Figure 1 was established, and the random effect model and the fixed effect model were estimated, respectively. By comparing the random effect model, the direct influence of each variable on the innovation passion was obtained as shown in Table 5.

As can be seen from the cross-hierarchy model hypothesis testing in Table 5, in addition to having a cross-level direct impact on the passion for innovation ($\gamma = 0.101$, $p < 0.01$), it also has an indirect impact on innovation passion through cross-level innovation self-efficacy ($\gamma = 0.053$, $p < 0.01$), which has a cross-level indirect influence on the innovation passion through the innovation climate based on advantages at the same level ($\gamma = 0.067$, $p < 0.01$). The sum of direct and mediating effects $0.101 + (0.067 + 0.053) = 0.221$ is slightly different from the total effect of 0.218 in the M3 model in Table 5, it is due to the influence of the remaining variables of the model.

Interval estimation of the mediation effect of innovation self-efficacy found a 95% confidence interval of [0.013, 0.092],

TABLE 2 Cross-layer confirmatory factor analysis.

Model	χ^2/Df	RMSEA	NFI	TLI	CFI
Single factor model	5.675	0.095	0.483	0.505	0.529
The two-factor model	4.486	0.082	0.591	0.630	0.648
The three-factor model	2.710	0.058	0.753	0.818	0.828
The four-factor model	1.266	0.023	0.885	0.972	0.973

The single-factor model does not distinguish any variables; two-factor model: empowering team leadership, innovative self-efficacy + innovation climate based on advantages + innovation passion; three-factor model: empowering team leadership, innovative self-efficacy + innovation climate based on advantages, innovation passion; four-factor model: this research hypothesis model.

TABLE 3 Means, standard deviation, and correlation coefficients of the variables.

Variable	Mean	Standard Deviation	EL	ICA	ISE	IP
EL	3.574	0.656	**0.751**			
ICA	3.502	0.466	0.472**	**0.729**		
ISE	3.528	0.722	0.471**	0.285**	**0.774**	
IP	3.481	0.483	0.275**	0.246**	0.328**	**0.740**

* Representation $p < 0.1$, ** representation $p < 0.05$, *** It means $p < 0.01$; the diagonal is AVE square root. The bold values indicate the square root of the Ave.

TABLE 4 Total effect hypothesis test.

	Administrative levels		Parameters estimates			
The same level	Model: relationship path		Estimate	S.E.	C.R (t)	p
	M1:EL $\rightarrow$ ICA		0.295	0.033	8.854	0.000
	m1:EL $\rightarrow$ ISE		0.339	0.040	8.472	0.000
	M2: ISE $\rightarrow$ IP		0.248	0.035	7.122	0.000
	Dependent variable	Cross-level model	γ_{00}	γ_{01}	σ^2	τ_{00}
Cross-level		Zero model	3.487***		0.207	0.026
	Innovation passion	M3:EL $\rightarrow$ IP	2.713***	0.218***	0.208	0.007
		M4:ICA $\rightarrow$ IP	2.530***	0.296***	0.207	0.013
		m4:ISE $\rightarrow$ IP	2.879***	0.175	0.208	0.020
		Zero model	3.485***		0.386	0.133
	Innovative self-efficacy	M5:EL $\rightarrow$ ISE	1.488***	0.564***	0.392	0.004

The ***symbol indicates the value of $p < 0.01$.

which did not contain zero, so we can determine that innovation self-efficacy act as a mediation variable for the influence of empowering team leadership on innovation passion. Hypothesis 2 was verified. When estimating the intermediary effect of innovation climate based on advantage, we found that the 95% confidence interval was [0.021, 0.114], which does not contain zero. Therefore, the innovation climate based on advantages acted as the moderating variable of the influence of empowering team leadership on innovation passion. Hypothesis 3 was verified.

If the innovation climate based on advantages (ICA) is replaced with the innovation climate (IC), it can be seen from the replacement model that the innovation climate does not appear

on the intermediary path of empowering team leadership and innovation passion.

Test of moderating effect

When the psychological climate based on innovative psychological advantage was added as a regulatory variable to the model, the individual level variable relationship (β: ISE $\rightarrow$ IP) was regulated by AIC ($\gamma = 0.114$, $p < 0.01$), and the 95% confidence interval [0.054, 0.173], which does not contain 0, so that the adjustment effect was valid, assuming hypothesis 4 was verified. As can be seen from Figure 2, when the innovation

TABLE 5 Cross-hierarchical models contain all variables.

Cross-level model (M6)	Research model estimate	Replace the model S.E.	C.R(t)	p	Estimate	S.E.	C.R(t)	p
EL → IP	0.101	0.038	2.642	0.008	0.161	0.039	4.185	0.000
ICA → IP	0.188	0.060	3.150	0.002				
IC → IP					0.021	0.041	0.518	0.604
ISE → IP	0.093	0.036	2.630	0.009	0.114	0.034	3.385	0.001
EL → ICA	0.358	0.054	6.689	0.000				
EL → IC					0.351	0.040	8.862	0.000
EL → ISE	0.563	0.043	13.005	0.000	0.564	0.043	13.270	0.000
EL → ICA → IP	0.067	0.024	2.825	0.005	0.008	0.014	0.530	0.596
EL → ISE → IP	0.053	0.020	2.595	0.009	0.064	0.020	3.296	0.000

climate based on advantages is at a high level, innovation self-efficacy and innovation passion show a significant positive correlation ($\beta = 0.158$, $p < 0.01$). When the advantage-based innovation climate is at a low level, the positive correlation between innovation self-efficacy and innovation passion is no longer significant ($\beta = 0.036$ n.s.).

The bootstrap method set resampling to 2,000 times to obtain the following analysis results: when the innovation climate based on advantages was low, the 95% confidence interval was [-−0.047, 0.032], and 95% [0.0073, 0.153].

When the innovation climate based on advantages (ICA) is replaced with innovation climate (IC), the model shows that the individual-level variable relationship (β: ISE → IP) is regulated by IC is ($\gamma = 0.254$, $p < 0.01$), 95% confidence interval is [0.143, 0.364], which does not contain 0, it can determine the adjustment effect is true.

Overall analysis, the hypothesis of this study is supported, namely the influence of empowering team leadership on innovation passion mechanism has the following path: empowering team leadership → innovation passion, empowering team leadership → innovation self-efficacy → innovation passion, empowering team leadership → innovation climate based on advantages → innovation passion, empowering team leadership → innovation climate based on advantages × innovation self-efficacy → innovation passion. When the innovation climate based on advantages is replaced with the innovation climate, the innovation climate no longer appears in the intermediary path, but the innovation climate moderates the intermediary effect of innovation self-efficacy.

Discussion

This study takes the data of 162 teams from 93 high-tech enterprises in China as samples, and uses the cross-level structural equation model analysis method to find that: Empowering team leadership has a positive impact

on innovation passion, in which innovative self-efficacy and innovation climate based on advantages play a partial mediating role. The innovation climate based on advantages positively regulates the relationship between innovation self-efficacy and innovation passion. The specific conclusions are as follows:

(1) Empowering team leadership in the high-tech enterprise have a significant positive impact on employees' innovation passion, including both direct and indirect effects. According to the theoretical analysis, the empowering team leadership mode increases the autonomy and participation of employees through empowerment and realizes the unity of responsibilities and rights and tasks and interests to a certain extent, then effectively stimulating employees' passion for innovation (Xie et al., 2018; Wang et al., 2019). The research in this paper shows that empowering team leadership in high-tech enterprise create an innovation climate based on advantages and stimulate innovation self-efficacy, thus improving employees' innovation passion.

(2) Innovation self-efficacy and innovation climate based on advantages can partly explain the influence of empowering team leadership on employees' innovation passion. The theoretical analysis and empirical test of this paper show that, on the one hand, empowering team leadership increases innovative self-efficacy by giving employees confidence and expectations for innovation (Teng et al., 2020; Park et al., 2021). On the other hand, the innovation climate based on advantages is improved by encouraging self-advantage, and the innovation self-efficacy and the innovation atmosphere based on advantages can effectively stimulate the innovation passion as intermediary variables.

(3) The innovation climate and innovation climate based on advantages can explain the influence of empowering leadership on employees' innovation passion, but the action mechanism is not the same. Empirical research in this study found that although empowering team
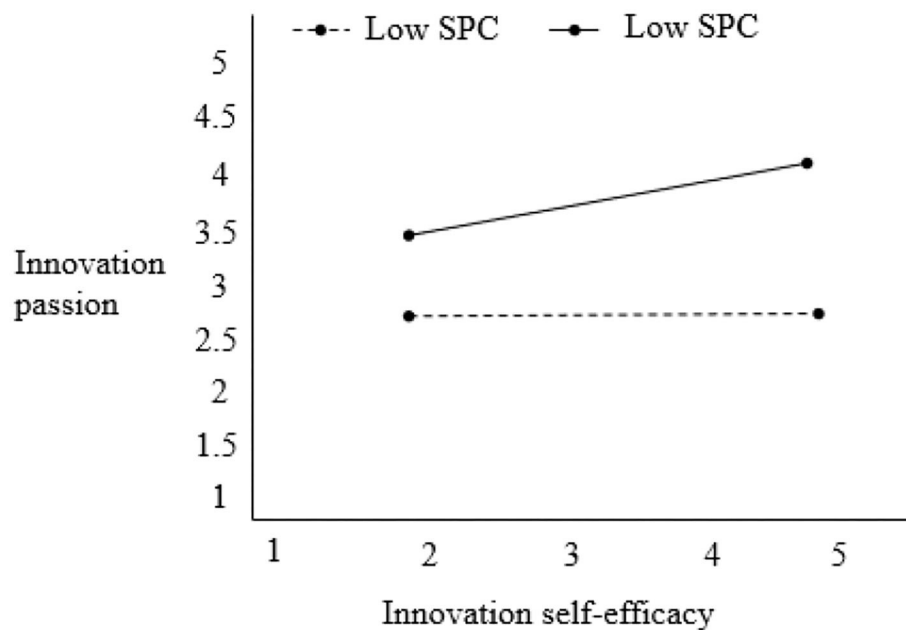
FIGURE 2
Regulating effect of the innovation climate based on advantages.

leadership has a positive predictive effect on both innovation climate based on advantages and innovation climate, their influencing mechanisms on innovation passion are different. Innovation climate based on advantages has a direct influence on innovation passion and moderates the relationship between innovation self-efficacy and innovation passion, while innovation climate only moderates the relationship between innovation self-efficacy and innovation passion as environment and boundary (Yang et al., 2021).

Theoretical contribution

Compared with the current research, this study has made the following theoretical progress, which has important theoretical significance for enriching similar research.

First, the formation mechanism of employees' innovative passion is analyzed with empowering team leadership as the influencing factor. In recent years, work passion and innovation passion have been used as atomic constructs in related fields to analyze many organizational behavior problems and phenomena (Gielnik et al., 2015; Cardon et al., 2017). However, most studies use it as a pre-factor or path variable (Türk et al., 2019; Yukhymenko-Lescroart and Sharma, 2019), and there are few studies on its formation mechanism (Breu and Yasseri, 2022). This paper analyzes the formation mechanism

of innovation passion with empowering team leadership as the pre-factor.

Second, from the two paths of individual psychology and organizational context, the cross-level analysis method is used to explore the influence mechanism of empowering team leadership on employees ' innovative passion based on the integrated perspective. Most of the studies on the relationship between leadership style and employee innovation were carried out from the perspectives of individual psychology and organizational context (Wang et al., 2021; Xu et al., 2022). This study integrates two perspectives, each choosing a path variable to analyze the impact of empowering team leadership on employees' innovative passion (Individual psychological perspective is innovative self-efficacy; Innovation climate based on advantages from the perspective of organizational context). Since the relevant constructs in the study involve the organizational level and the individual level, the cross-level analysis method (Wood et al., 2021) is selected and the research shows that the design is rational.

There are still many limitations and shortcomings in this study. First, this study uses cross-sectional data. Although there are many theories to support the causal relationship between variables, it is still very limited to infer a causal relationship from data analysis. Future research can use quasi-experimental or experimental research methods to further do robustness test. Secondly, this study only controls the individual level variables such as employee gender, age, education, and length of service in the enterprise, but not the team level variables. The path

of innovation climate based on advantages may not be robust enough, and future research should be supplemented.

Practical implications

First, for high-tech enterprise employees, especially the innovation team staff, it is recommended to fully empower them. Empowering team leadership is an effective way to stimulate employees' innovative passion. On the one hand, empowering team leadership can increase employees' innovative self-efficacy. On the other hand, empowering team leadership can create an innovative atmosphere based on advantages for the organization. There are a lot of enterprise cases that can be proved. Such as Haier through the implementation of the platform + small micro organizational model to achieve empowering leadership change, giving each innovation and entrepreneurship small micro enough autonomy, greatly stimulating the work passion of employees and teams.

Secondly, for high-tech enterprises, how to increase employees' willingness to innovate, ability and self-confidence are very important. Enterprises should give employees the opportunity to exercise and improve themselves, thereby increasing their innovative self-efficacy. In addition, companies should be good at discovering each employee's expertise and interests and configure them for the most appropriate positions and project teams. Enterprises should regularly or irregularly carry out employee innovation ability training, broaden their innovative horizons, stimulate their innovative thinking and make employees believe that they can innovate.

Finally, to improve the innovation ability of high-tech enterprises and stimulate employees' innovation passion, enterprises should create a climate to encourage innovation and give employees certain independent decision-making power. On the one hand, creating a climate that encourages individual advantages and gives employees more job autonomy will help enhance their sense of ownership and belonging to the company, thereby stimulating the endogenous motivation of employees to innovate. On the other hand, creating an innovative atmosphere based on advantages will help encourage employees to actively express their ideas and fully demonstrate their professional expertise, to produce solutions that create value.

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 protocol was approved by an Institutional Review Board of Liaoning Technical University of China. All subjects read informed consent before participating this study and voluntarily made their decision to complete surveys.

Author contributions

With the cooperation of SW, JY, and TD this paper has got the convincing survey data and reach the current solution. All authors contributed to the article 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.

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Supervisors' social dominance orientation, nation-based exchange relationships, and team-level outcomes

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The prevalence of teams in contemporary organizations and the trend toward diversity in a workforce composed of members from multiple countries have drawn the attention of researchers on the consequences of diversity in workplaces. While there are potential benefits to diversity, relationship conflicts among team members may also result and affect team functioning. The aim of the present study was to explore how supervisors' social dominance orientation, a tendency to support the arbitrary dominance of specific social groups over others, may relate to relationship conflicts and reduced team commitment within teams. A two-wave study in a sample of 931 individuals from 108 workgroups was conducted to examine the relationship between supervisors' social dominance orientation and team functioning. Analyses indicated that supervisor social dominance orientation was associated with increased within-team differentiation of leader-member exchange (LMX) relationships based on team members' national origin. Such LMX differentiation (LMXD) was related to more within-team relationship conflict and in turn to reduced collective team commitment. The implications of these findings for research on supervisor social dominance orientation, within-team nationality diversity, and team functioning are discussed.

KEYWORDS

social dominance orientation, national diversity, leader-member exchange differentiation, relationship conflict, team commitment

Introduction

The business trend toward globalization and the increasing percentage of non-native employees have made workforces across the world more diverse in terms of nationalities (Rosenauer et al., 2016; Homan et al., 2020). Indeed, the recent increase in remote working after the pandemic (Kniffin et al., 2021), which facilitates the formation of multinational workgroups in a virtual setting, suggests that studying the effects of nationality diversity has more relevance than ever. Nationality diversity is a mixed blessing for organizations (van Knippenberg et al., 2004). On the one hand, different

beliefs, thinking styles, and ideas associated with nationality diversity may benefit diverse teams (Cox and Blake, 1991). On the other hand, teams with nationality diversity may suffer from some interpersonal problems such as relationship conflict (Ayub and Jehn, 2018)—interpersonal incompatibilities among group members which are often accompanied by tension and animosity among parties (Jehn et al., 1999). Researchers have extensively shown that relationship conflict is dysfunctional in teams (Jehn, 1995; De Dreu and Weingart, 2003; Somaraju et al., 2022). For instance, the meta-analytic study by De Dreu and Weingart (2003) reports a strong negative association between relationship conflict and team performance and member satisfaction. Also, Jehn (1995) has found a negative association between group members' perceived relationship conflict and group members' job satisfaction, liking of other group members, and their intent to remain in the group. Given these negative consequences, one would expect the team leaders to use practices that discourage relationship conflict in their teams. Yet, a close inspection of leaders' behavior in organizations reveals that leaders themselves are sometimes responsible for creating relationship conflict in their workgroups (Zhao et al., 2019).

The present research seeks to understand *which* leaders (i.e., supervisors) promote relationship conflict in nationally diverse teams (i.e., teams with immigrants and native-born employees, which represents an important form of diversity) and through *which mechanisms* they do so. This study first draws from social dominance theory (Sidanius and Pratto, 2012) to suggest that supervisors' social dominance orientation (SDO), i.e., the extent to which individuals desire and support the dominance of arbitrarily set dominant groups over subordinate groups (Pratto et al., 1994), leads them to differentiate among subordinates based on their national status (native-born vs. immigrant), a construct that is called nation-based leader-member exchange (LMX) differentiation (i.e., nation-based LMXD) in this study. According to LMX theory (Liden et al., 2006), supervisors build differential quality exchange relationships (ranging from low to high) with their subordinates. These exchange relationships have been shown to be differentiated within teams (Henderson et al., 2009). Such phenomenon, or LMXD, can be based on different factors (Chen et al., 2018; Han et al., 2021). Following this view, nation-based LMXD is defined as the tendency of supervisors to build higher quality LMX relationships with native-born subordinates compared to immigrant subordinates.

Second, drawing from faultline theory (Lau and Murnighan, 1998), this study further suggests that teams with higher levels of nation-based LMXD experience more relationship conflict. Faultlines are defined as "hypothetical dividing lines that may split a group into subgroups based on one or more attributes" (Lau and Murnighan, 1998, p. 328). Theory on faultlines posits that activated faultlines can create conflicting subgroups in diverse workgroups (Thatcher and Patel, 2011). Building on these core ideas, we argue that nation-based LMXD

would promote relationship conflict by activating a nationality faultline. This study finally hypothesizes a negative association between relationship conflict and collective team commitment, a focal determinant of team performance (Mathieu and Gilson, 2012; Mahembe and Engelbrecht, 2013). The aim of the study was specifically to examine the proposed hypotheses within a large sample of employees and teams using data collected at two points in time. Of importance, the endogenous variables of the study measured at Time 2 (i.e., nation-based LMXD, relationship conflict, and team commitment) were controlled for their baseline level at Time 1.

This study contributes to the extant literature in at least three ways. First, this study contributes to the workforce diversity literature by examining the team-level processes and outcomes associated with nationality diversity. Although researchers have shown that diverse teams suffer from relationship conflicts (Pelled, 1996; Ayub and Jehn, 2006), to our knowledge, less research attention has been given to the role of supervisors in creating relationship conflict in diverse teams. This study shows that supervisors' SDO, a specific individual difference variable related to how much supervisors endorse status differences among social groups, plays a critical role in developing nation-based LMXD, which ultimately promotes relationship conflict. Second, the present study contributes to the LMX literature, which has invested considerable effort in understanding the consequences of LMX differentiation. This study introduces nation-based LMXD as a novel and specific type of LMX differentiation that can emerge in diverse teams and documents its power to predict relationship conflict. Finally, this study contributes to enhance our understanding of the role of supervisor SDO and nation-based LMXD in affecting collective team commitment, thereby contributing to enlarge the array of determinants of team functioning in the modern workplace.

Theoretical framework and hypotheses

Nation-based leader-member exchange differentiation

Leader-member exchange theory (Graen and Uhl-Bien, 1995; Liden et al., 1997; Bauer and Erdogan, 2015), which has emerged as an important framework in the leadership literature, proposes that leaders build different types of exchange relationships with their subordinates (i.e., in-group and out-group exchanges; Dansereau et al., 1975) by treating some followers more favorably than others (Gerstner and Day, 1997). LMX differentiation (LMXD) is a concept that captures this differentiated treatment of subordinates by the leaders within teams (Maslyn and Uhl-Bien, 2005). As a result of LMXD, high LMX subordinates, compared to low LMX subordinates, would benefit from more advantages such as career progress

(Wakabayashi and Graen, 1984; Wakabayashi et al., 1990; Scandura and Schriesheim, 1994), assignment of challenging jobs (Graen and Cashman, 1975), greater influence within the organization (Sparrowe and Liden, 2005), and receipt of more resources such as information and time (Dansereau et al., 1975).

Scholars have identified many factors that may explain why LMX differentiation occurs. These factors fall into individual (e.g., leadership style)-, team (e.g., aggressive culture)-, and organization (e.g., organizational structure)-level categories (Henderson et al., 2009). Due to one or more of these reasons, empirical studies indicate that LMX differentiation is very common in work groups; indeed, over 90% of work groups experience it (Dansereau et al., 1975; Liden and Graen, 1980), and it influences individual- and group-level outcomes. Such ubiquitous differentiation among subordinates can be based on the different factors.

The basis of LMX differentiation—those factors that determine the formation of differential LMX relationships between supervisors and their subordinates within a group (Chen et al., 2018)—has important individual- and group-level effects. For instance, Chen et al. (2018) introduced two bases for LMXD: members' task performance and organizational citizenship behavior (OCB), and empirically showed how performance-based LMXD and OCB-based LMXD can alleviate the negative effects of LMX differentiation on group outcomes. Although LMX theorists have long theorized that for the sake of effectiveness and fairness, non-performance factors should not determine the quality of exchange relationships between a supervisor and his or her subordinates (Dansereau et al., 1975; Scandura, 1999), in reality, many non-performance factors may also influence LMX development such as liking, or demographic characteristics (Liden et al., 1993; Green et al., 1996; Randolph-Seng et al., 2016). Following this perspective, this study relies on the diversity literature and introduces national origin as a potential basis of LMXD in teams that are composed of native-born subordinates and foreign-born (i.e., immigrant) subordinates.

Immigrants, who are defined as people who are foreign-born but have the right to reside in their host country regardless of whether they have or do not have host country citizenship, are making a considerable share of the labor market and have attracted the attention of management scholars (Wrench, 2016). In 2020, immigrants accounted for more than 15% of the labor force of countries such as Germany and about 25% of the workforce in Australia, Canada, and New Zealand (Wrench, 2016). Much evidence indicates that immigrants experience unequal treatment in organizations (Foley et al., 2002; Bell et al., 2010; Enoksen, 2016; Villadsen and Wulff, 2018). This unequal treatment may be manifested in several ways. For example, immigrants may experience barriers to career advancement and be subject to jokes, negative comments, and stereotypes that demean their capabilities (Foley et al., 2002; Van Laer and Janssens, 2011; Ozturk and Berber, 2022).

This study draws from the above studies and suggest that immigrants may suffer from unequal treatment in terms of exchange relationships with their supervisors. The team-level construct of nation-based LMXD is proposed to reflect the extent to which team members perceive that the social exchange relationships between employees and supervisors are of a higher quality when employees are native-born (vs. immigrants). Thus, nation-based LMXD reflects whether LMX relationships are biased by the national origin of subordinates. In other words, the more the nation-based LMXD within a team, the more the distribution of LMX relationships would be based on national origin such that native-born subordinates would be favored over immigrants. In this manuscript, the focus is on perceived nation-based LMXD rather than on actual LMX configurations as LMX scholars have called for more subjective measures of LMX differentiation (Martin et al., 2018; Choi et al., 2020). This is because perceptions of the environment have typically more influence on job attitudes and behaviors compared to the objective reality (Kristof-Brown et al., 2005).

Acknowledging that the existence of diversity in a work team may not necessarily induce differential treatment (Lewis and Sherman, 2003; Sacco et al., 2003), one purpose of this study was to take a glimpse into the factors that may affect the emergence of nation-based LMXD in work teams composed of native-born and foreign-born employees. Specifically, the study focuses on supervisor SDO as a potential driver of nation-based LMXD as is discussed in the next section.

Supervisor's social dominance orientation and nation-based leader-member exchange differentiation

Social dominance theory (Pratto et al., 2006; Sidanius and Pratto, 2012) builds on sociological work on inequalities and social stratification (e.g., Lenski, 1984; Tilly, 1998) to examine the systems of group-based hierarchies in human societies. Within these hierarchies, those groups at the top (i.e., dominant groups) possess more social power and benefit from a disproportionate share of positive social value (e.g., wealth, high-status occupations, political power, better health care) while those at the bottom (i.e., subordinate groups) suffer from negative social value (e.g., substandard housing, underemployment, precarious work, and stigmatization) (Doane, 1997; Sidanius and Pratto, 2012). Beyond explaining how such hierarchies sustain over time, social dominance theory introduces an individual difference variable, namely SDO, which plays an important role in preserving these group-based hierarchies.

Social dominance orientation is a psychological component of social dominance theory that describes the tendency of an individual to believe in the legitimacy of predefined social

structures and act in favor of sustaining inequality among social groups (Pratto et al., 1994). High SDO individuals prefer intergroup relations to be ordered along a dominant-subordinate continuum while low SDO individuals prefer intergroup relations to be equal (Pratto et al., 1994). SDO predicts many forms of group-based oppression such as racism, ethnocentrism, classism, and sexism (Sidanius and Pratto, 2012). Individuals high in SDO seek to reinforce inequality between groups to maintain their access to resources, such as power and wealth (Pratto and Shih, 2000). On the contrary, individuals with low SDO attach importance to egalitarianism and humanitarianism (Duckitt, 2001). While most studies of SDO come from the social psychology literature, there have been a number of recent studies conducted in organizational contexts that highlight the importance of SDO in predicting organizational behavior. Umphress et al. (2007), for example, found that as SDO increases, members of high-status groups find diverse organizations less attractive. Other research has shown that SDO is positively related to interpersonal deviance and negatively related to interpersonal citizenship (Shao et al., 2011). SDO is also positively linked to discrimination in hiring decisions and performance evaluations (Umphress et al., 2008; Simmons et al., 2015) as well as to abusive supervision (Khan et al., 2018).

Building on these studies, this study argues that if high SDO individuals have the authority to draw a hierarchy, they would be motivated to translate into reality the hierarchy they find legitimate, namely, a hierarchy that provides privileges to members of dominant groups. The differentiation of LMX relationships within teams is a hierarchy building process because, compared to low LMX subordinates, high LMX subordinates enjoy more advantages such as being more influential (Sparrowe and Liden, 2005), having more power to influence the group's decisions (Scandura et al., 1986), and accessing more promotion opportunities (Wakabayashi and Graen, 1984). High LMX subordinates would thus benefit from more advantages than their low LMX counterparts, and supervisors may have a primary role in drawing this hierarchy. Supervisors may initiate high-quality exchange relationships with selected subordinates (Graen and Cashman, 1975) by offering their limited resources such as time and energy (Dansereau et al., 1975), and physical resources, interesting tasks, and valuable information (Graen and Cashman, 1975).

Extending the above argument to the context of teams composed of members from multiple nations, one may suspect that high SDO leaders, because they believe in the superiority of dominant social groups over subordinate social groups, will be likely to initiate higher quality exchange relationships with subordinates belonging to dominant groups and create a hierarchy of LMX relationships that brings benefits to the members of these groups. As in the hierarchy of social groups within host countries, immigrant groups are perceived to hold an inferior position compared to the dominant group

of native-born citizens (Bauder, 2003; Reitz and Banerjee, 2007), immigrants may experience lower quality exchange relationships with supervisors who are high on SDO, reflecting some mistreatment based on national origin by high SDO supervisors. In support of this view, an empirical study by Costello and Hodson (2011) indicated that high SDO individuals tend to engage in prejudice against immigrants and resist to help them. Based on the above discussion, the following hypothesis is proposed:

> **Hypothesis 1**: Supervisor SDO is positively associated with team level nation-based LMXD.

Nation-based leader-member exchange differentiation and relationship conflict within teams

Workgroup diversity refers to the differences in workgroup members' demographic attributes (e.g., ethnicity, gender, and age) or other characteristics (e.g., tenure, education, and professional background). These differences are associated with group members having different values, norms, beliefs, and worldviews that influence the way they define situations, see issues, and interact with others (see Alderfer, 1987; Ely and Thomas, 2001). As a result of such differences, diverse workgroups may be more creative (Cox and Blake, 1991). However, these groups may also experience more conflict depending on the nature of the differences across group members and the ability to manage these differences, and on the potential influence of factors from the larger environment in which they are embedded (Alderfer, 1987; Jehn, 1995; Pelled et al., 1999; Ayub and Jehn, 2018).

The difficulty to deal with the consequences of team composition diversity may also be amplified by faultlines. Faultlines are hypothetical lines of division that breakup a workgroup into relatively homogeneous subgroups based on the diversity attributes of group members (Lau and Murnighan, 1998). For instance, the national origin faultline may divide groups into immigrant and native-born subgroups. According to Lau and Murnighan (1998), activated faultlines in diverse groups exacerbate the impact of diversity and augment the likelihood that members perceive subgroups to exist and experience subgroup conflict. Activated faultlines divide workgroups into conflicting subgroups in which members define themselves as part of these subgroups rather than as part of the larger group. Faultlines generally exist when the group members perceive that subgroups emerge from the divides on demographic characteristics (e.g., age, gender, etc.) (Jehn and Bezrukova, 2010). The activation process for faultlines can be triggered by different factors including *differential treatment* of employees based on their demographic characteristics, for instance, when resources or punishments are differentially

distributed across different demographic groups (Chrobot-Mason et al., 2009).

Following the above logic, this study argues that nation-based LMXD contributes to the activation of a nationality faultline within work teams composed of native-born vs. foreign-born employees. This is because, by building nation-based LMX differentiation within the team, supervisors would differentially treat native-born and immigrant subordinates and thus would activate a nationality faultline, which in turn would increase the likelihood of emergence of within-team relationship conflict. Moreover, as it was previously argued that nation-based LMXD is namely driven by supervisor SDO, this study posits that supervisor SDO will indirectly relate to more within-team relationship conflict through increased nation-based LMXD. Thus, the following hypotheses are proposed.

Hypothesis 2: Team-level nation-based LMXD is positively associated with within-team relationship conflict.

Hypothesis 3: Team-level nation-based LMXD mediates a positive relationship between supervisor SDO and within-team relationship conflict.

Within-team relationship conflict and collective team commitment

It can be expected that the occurrence of more within-team relationship conflicts as induced by higher nation-based LMXD will then result in reduced collective team commitment. Following Klein et al. (2012, 2014) reconceptualization of employee commitment, commitment can be defined as "a volitional psychological bond reflecting dedication to and responsibility for a particular target" (Klein et al., 2012, p. 137). This proposed definition makes commitment amenable to application to any target of relevance in the workplace, with this approach having received consistent empirical support (Klein et al., 2014). From an empirical perspective, Klein et al.'s (2014) unidimensional, target-free measure (KUT) of commitment has been found to be strongly positively related to the measure of affective commitment developed by Meyer et al. (1993). From a conceptual perspective, (Meyer and Herscovitch, 2001, p. 301) have defined commitment as "a force that binds an individual to a course of action of relevance to one or more targets" and have suggested that in the case of affective commitment, the mindset that accompanies this force is the desire to pursue a course of action in favor of the target. Given the empirical closeness between the KUT and affective commitment, the previous commitment literature, which has largely examined the role of affective commitment in the workplace, remains a relevant source of reference, even when commitment is

measured through the KUT as is done in the present study (Vandenberghe, 2021).

Given this study's focus on supervisor SDO and within-team nation-based LMXD and relationship conflict, the relations between these constructs and team commitment or team members' attachment to their team (Gardner et al., 2011), which is a major outcome and indicator of team functioning (Mathieu et al., 2008), will be examined. At the team level, when members consistently perceive that relationship conflict exits among team members, they are unlikely to share a sense of membership in and attachment to the team as a whole. This is because teams with relationship conflicts suffer from destructive team processes including the lack of trust (Langfred, 2007) and cohesion (Jehn and Mannix, 2001). Indeed, relationship conflict surfaces as an increase in expression of negative emotions (Thiel et al., 2019). These negative emergent states accompanying the emergence of within-team relationship conflict are likely to jeopardize team members' collective commitment to their team. Although, to our knowledge, the team-level association between relationship conflict and team commitment has not been examined, researchers have consistently reported a negative association between relationship conflict and affective commitment at the individual level (Thomas et al., 2005; Lee et al., 2018). By extension, this study argues that within-team relationship conflict will be related to lower collective team commitment. Moreover, as it was previously argued that nation-based LMXD would relate to more within-team relationship conflict, the former is expected to be indirectly related to reduced collective team commitment through increased within-team nation-based LMXD. Thus, the following, remaining hypotheses are proposed.

Hypothesis 4: Within-team relationship conflict negatively relates to team-level commitment to the team.

Hypothesis 5: Within-team relationship conflict mediates a negative relationship between team-level nation-based LMXD and team-level commitment to the team.

Materials and methods

Sample and procedure

Data were collected at two points in time from employees in eight governmental organizations located in the Quebec province, Canada. The first wave of the data collection took place between September and November 2020 while the second wave was set between April and July 2021. Upon the agreement of the organizations' human resource management directors, prospective participants were contacted by email to participate in a multi-wave study of job attitudes. An

introductory message advised respondents that participation was voluntary, and responses would remain confidential. The criteria for participation were having (a) salaried employment and (b) an identifiable supervisor. Although the questionnaires could be completed in French or English, all respondents chose to complete the French version of the questionnaires. To match responses across measurement times, a unique code was assigned to each participant. At Time 1, employees completed demographic questions while at Time 2, they were surveyed about LMX (refer to control variables section). At Time 1 and Time 2, employees were surveyed about nation-based LMXD, relationship conflict, and team commitment, while supervisor SDO was self-reported by supervisors at Time 2. Data on the control variables of supervisor place of birth (Time 1) and team size (Time 1) were obtained from supervisors (refer to control variables section). Employee data were then aggregated at the team level and combined with supervisor SDO to conduct the analyses related to this research model (**Figure 1**). Time 1 employee data on nation-based LMXD, relationship conflict, and team commitment served as baseline controls when testing the hypotheses at the team level, which involved Time 2 data. This approach is an efficient way by which common method variance can be mitigated in data analyses (Maxwell and Cole, 2007).

Dropping those participants who failed the attention check item (Huang et al., 2015), 1,104 usable responses at Time 1 and 1,356 usable responses at Time 2 were received. The difference in sample size between Time 1 and Time 2 is due to new employees being recruited and added in the participating organizations between the two survey times. Matched data across time were available for 931 employees affiliated with 108 work teams. The average age of these employees was 48 years ($SD = 11.06$), their average organizational tenure was 9 years ($SD = 9.22$), 36% were male, and 25% were born outside of Canada. As 173 of the 1,104 Time 1, participants did not complete the Time 2 survey, an attrition analysis through logistic regression was conducted to determine whether there was a systematic attrition bias between Time 1 and Time 2. Specifically, a dichotomous variable reflecting Time 2 attrition (i.e., 0 = Time 1 respondents who completed the Time 2 survey vs. 1 = those who dropped out at Time 2) was regressed onto nation-based LMXD ($b = -0.07$, $SE = 0.11$, *ns*), relationship conflict ($b = 0.11$, $SE = 0.11$, *ns*), and team commitment ($b = -0.03$, $SE = 0.06$, *ns*) from Time 1. These non-significant results indicate there was no attrition bias among respondents between Time 1 and Time 2.

Measures

Social dominance orientation

Social dominance orientation was measured using Sidanius et al.'s (1996) 16-item scale. Based on an exploratory factor analysis of the items, which identified a single factor, the 9 items

with the highest loadings (>0.40) were retained. Sample items from the 9-item reduced scale are "To get ahead in life, it is sometimes necessary to step on other groups" and "No one group should dominate in society" (reverse coded). Responses were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale had an internal consistency of 0.92.

Nation-based leader-member exchange differentiation

The perception of nation-based LMXD was measured with six items adapted from Choi et al. (2020). These items, which measured perceptions of LMXD, were adapted by incorporating national origin as the basis for LMXD. The six items are "Native-born members have a better relationship with my manager than immigrants"; "My manager treats native-born members better than immigrants"; "My manager is more loyal to native-born members compared with immigrants"; "Relative to the immigrants in my workgroup, native-born members receive more support from my manager"; "My manager seems to like native-born members more than immigrants"; and "My manager respects native-born members more than immigrants." Responses were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale demonstrated high internal consistency at Time 1 ($\alpha = 0.96$) and Time 2 ($\alpha = 0.98$).

Relationship conflict

Perception of relationship conflict among team members was measured using a three-item measure developed by Jehn and Mannix (2001). A sample item is "How much relationship tension is there in your work group?" Responses were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale had high reliability at Time 1 ($\alpha = 0.92$) and Time 2 ($\alpha = 0.92$).

Team commitment

The four-item KUT scale developed by Klein et al. (2014) was used to measure team commitment. The four items referred to the work team as the target of commitment. A typical item was "To what extent do you care about your work team?" Responses were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). The alpha reliability was 0.93 at both Time 1 and Time 2.

Control variables

Following Spector and Brannick's (2011) recommendations to include control variables that may influence hypothesized relationships, several relevant variables were controlled for in testing hypotheses. First, the baseline (i.e., Time 1) levels of nation-based LMXD, relationship conflict, and team commitment were controlled for. Second, within-team differentiation on LMX relationships, as a potential predictor of relationship conflict and team commitment, was controlled

for. LMX was rated by the employees at Time 2 using the 12-item LMX-MDM scale from Liden and Maslyn (1998). A typical item is "I like my supervisor very much as a person" (α = 0.94). Consistent with previous studies conducted at the group level (e.g., Nishii and Mayer, 2009), the amount of LMX differentiation was assessed by calculating the within-team variance (measured by *SD*) on LMX scores. Furthermore, supervisor place of birth (1 = Canada; 2 = outside of Canada; Time 1) was controlled for as research suggests that it may influence LMX distribution in diverse teams (Pichler et al., 2019). Finally, team size (Time 1), as a potential predictor of relationship conflict and team commitment, was controlled for.

Research design and statistical analysis

As illustrated in **Figure 1**, this study used a team-level design to explore how supervisor SDO affected nation-based LMXD, which in turn was thought to influence team relational conflict and ultimately team goal commitment. As all these constructs were measured at the same time, we controlled for the baseline levels of the endogenous variables (i.e., nation-based LMXD, relationship conflict, and team commitment) to obtain a more robust assessment of the hypothesized relationships. This resulted in a complex design where all the paths among the constructs measured at Time 2 were estimated while controlling for the autoregressive effects of Time 1 nation-based LMXD, relationship conflict, and team commitment (**Figure 1**). This study employed Mplus 7.4 (Muthén and Muthén, 2012) for statistical analyses. First,

since this study involved team-level constructs (**Figure 1**), the appropriateness of aggregating individual responses to scale items to the team level was examined. Second, a series of multilevel confirmatory factor analyses (CFAs) were conducted to examine whether the focal constructs were distinguishable. Third, as the theoretical model controlled for Time 1 nation-based LMXD, relationship conflict, and team commitment, measurement invariance across time was tested to ensure that the constructs' meaning remained stable (Cole and Maxwell, 2003; Millsap, 2012). Next, the descriptive statistics for the variables of interest and the bivariate associations among them were obtained. The hypotheses were tested through two-stage multilevel structural equation modeling (MSEM; Heck and Thomas, 1999) using full information maximum likelihood (FIML) estimation *via* Mplus 7.4 (Muthén and Muthén, 2012). The indirect effects were examined using a bootstrapping approach (Preacher and Hayes, 2008) on the team-level model[1] and bias-corrected confidence intervals (CIs) obtained from 10,000 bootstrapped samples.

Results

Data aggregation at the team level

The opportunity to aggregate individual responses to nation-based LMXD, relationship conflict, and team

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1 The team level model is based on group-level averages of individual scores on the variables.
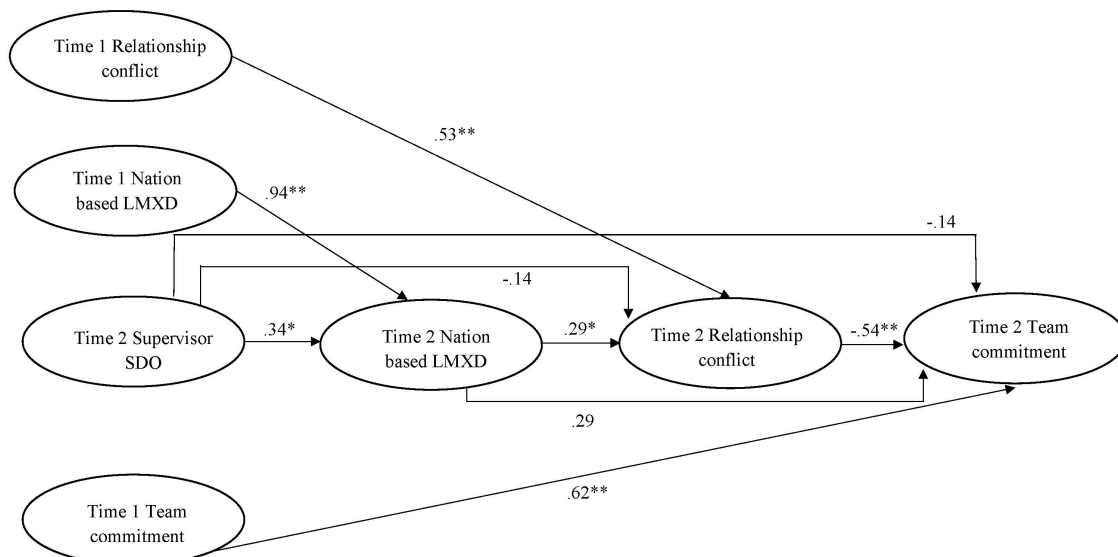

FIGURE 1
Structural equation modeling results for the hypothesized model. For the sake of clarity, control variables (team size, supervisor place of birth, and LMXD) are omitted. *p < 0.05; **p < 0.01.

commitment to the team level was examined by calculating within-team agreement through the interrater agreement index [$r_{wg(j)}$; James et al., 1984] and ICC(1) and ICC(2) intraclass correlations (LeBreton and Senter, 2008). The median values for $r_{wg(j)}$ were sizeable for nation-based LMXD (0.99), relationship conflict (0.76), and team commitment (0.82), indicating strong within-team agreement on these variables. Similarly, the ICC(1) values for nation-based LMXD (0.14), relationship conflict (0.24), and team commitment (0.08) indicated meaningful variance on scale scores across teams (LeBreton and Senter, 2008). Finally, the ICC(2) values for nation-based LMXD (0.57), relationship conflict (0.72), and team commitment (0.45) provided evidence of acceptable reliability of team-level scores on the variables of interest (LeBreton and Senter, 2008). These results suggest that individual data could be aggregated at the team level.

Confirmatory factor analyses

A series of multilevel confirmatory factor analyses (CFAs) was conducted in Mplus 7.4 (Muthén and Muthén, 2012). In terms of fit indices, the chi-square (χ^2) test, which is known as a test of exact fit, was used, as well as the comparative fit index (CFI), the Tucker–Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) as other fit indices. For the CFI and TLI, values exceeding 0.90 and 0.95 are considered as the indications of adequate and excellent fit, respectively, values below 0.06 for the RMSEA indicate excellent fit, and values below 0.08 for the SRMR indicate good fit (Hu and Bentler, 1999). First, a CFA model, in which nation-based LMXD, relationship conflict, and team commitment were treated as both within-team and between-team factors while supervisor SDO was treated as a between-team factor, was tested. The results of the CFA revealed that some SDO items had a factor loading below the conventional cutoff value (0.40). We dropped these items and used the remaining nine items for the SDO measure. The revised CFA model fitted the data well, [$\chi^2(818) = 1351.84$, $p < 0.001$, CFI = 0.98, TLI = 0.98, RMSEA = 0.02, SRMR$_{within}$ = 0.02, SRMR$_{between}$ = 0.17 (note that although the value for SRMR$_{between}$ was large, the general profile of the fit indices suggests good fit of the model (Hu and Bentler, 1999))]. This model yielded a better fit than three alternative, more parsimonious models: (a) a model in which nation-based LMXD and relationship conflict items loaded on a single factor at Time 1 and Time 2, $\Delta\chi^2(20) = 4333.35$, $p < 0.001$; (b) a model specifying all three parallel variables from Time 1 and Time 2 to merge into a single set of three factors, $\Delta\chi^2(27) = 5851.30$, $p < 0.001$; and (c) a one-factor model where all items loaded on a single factor, $\Delta\chi^2(35) = 14906.45$, $p < 0.001$. These results indicate that the study variables were discriminant.

Measurement invariance

To examine the measurement invariance over time of the three constructs measured at Time 1 and Time 2 (i.e., nation-based LMXD, relationship conflict, and team commitment), a sequential approach was adopted where increasingly stringent constraints were added to the CFA model (e.g., Vandenberg and Lance, 2000). The baseline model was a configural model (i.e., equality of factor structure), and the next models were weak, strong, and strict invariance models, reflecting a sequence of increasingly stringent equality constraints on factor loadings, thresholds, and uniquenesses, respectively. Robust maximum likelihood (MLR) was used to examine measurement invariance. The results are reported in Table 1. As can be seen, the $\Delta\chi^2$ values remained non-significant along the sequence of models with increasing constraints of equality (from configural invariance to strict invariance). These results support strict invariance among the constructs and stable psychometric properties across time (Byrne et al., 1989; Cheung and Lau, 2012).

Descriptive statistics and correlations

Descriptive statistics, correlations, and reliability coefficients are reported in Table 2. Supervisor SDO was positively related to Time 2 nation-based LMXD ($r = 0.29$, $p < 0.10$). Time 2 nation-based LMXD was positively related to Time 2 relationship conflict ($r = 0.30$, $p < 0.05$) while the latter was negatively related to Time 2 team commitment ($r = -0.66$, $p < 0.01$).

Hypothesis testing

The hypothesized model yielded a good fit to the data: $\chi^2(755) = 1483.14$, $p < 0.01$, CFI = 0.97, TLI = 0.97, RMSEA = 0.03, SRMR$_{within}$ = 0.06, SRMR$_{between}$ = 0.22. Hypothesis 1 predicted that the higher the supervisor's SDO, the higher the team's level of nation-based LMXD. As shown in Table 3, controlling for Time 1 nation-based LMXD, supervisor SDO was significantly positively related to Time 2 nation-based LMXD ($\beta = 0.34$, $SE = 0.18$, $p < 0.05$). Therefore, Hypothesis 1 is supported. Hypothesis 2 posited that teams higher on nation-based LMXD would experience more relationship conflict. As shown in Table 3, controlling for Time 1 relationship conflict, nation-based LMXD had a significant and positive association with Time 2 relationship conflict ($\beta = 0.29$, $SE = 0.14$, $p < 0.05$), thereby providing support to Hypothesis 2. Finally, Hypothesis 4 predicted that teams with more relationship conflict would display lower team commitment. As shown in Table 3, controlling for Time 1 team commitment, relationship conflict was significantly negatively related to Time 2 team commitment ($\beta = -0.54$, $SE = 0.14$, $p < 0.01$). Therefore, Hypothesis 4 is supported.

TABLE 1 Tests of measurement invariance across time.

Model	χ^2	df	CFI	TLI	RMSEA	$\Delta\chi^2$	Δdf
Configural invariant model	387.82*	268	0.99	0.98	0.02	-	-
Weak invariant model (loadings)	406.01***	278	0.99	0.98	0.02	18.19	10
Strong invariant model (loadings, thresholds)	423.26***	288	0.99	0.98	0.02	17.25	10
Strict invariant model (loadings, thresholds, uniquenesses)	449.67***	291	0.98	0.98	0.02	26.41	3

Full information maximum likelihood estimation was used. df, degrees of freedom; CFI, comparative fit index; TLI, Tucker–Lewis index; RMSEA, root mean square error of approximation.
$^*p < 0.05$; $^{***}p < 0.001$.

TABLE 2 Descriptive statistics and correlations among study variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9
Individual level											
1. Nation-based LMXD (T1)	1.25	0.95	(0.96)								
2. Nation-based LMXD (T2)	1.28	0.84	0.69**	(0.98)							
3. Team commitment (T1)	4.04	0.65	−0.17**	−0.12**	(0.93)						
4. Team commitment (T2)	4.05	0.62	−0.12**	−0.14**	0.63**	(0.93)					
5. Relationship conflict (T1)	2.32	1.17	0.26**	0.26**	−0.24**	−0.19**	(0.92)				
6. Relationship conflict (T2)	2.11	1.11	0.16**	0.28**	−0.16**	−0.24**	0.61**	(0.92)			
Team level											
1. Supervisor SDO (T2)	1.64	0.12	(0.92)								
2. Nation-based LMXD (T1)	1.22	0.12	−0.06								
3. Nation-based LMXD (T2)	1.30	0.19	0.29+	0.89**							
4. Team commitment (T1)	4.09	0.10	−0.04	−0.07	−0.07						
5. Team commitment (T2)	4.45	0.20	−0.03	−0.18	−0.19	0.56+					
6. Relationship conflict (T1)	2.33	0.72	0.00	0.00	0.00	0.00	−0.35				
7. Relationship conflict (T2)	2.10	0.67	−0.05	0.31*	0.30*	−0.02	−0.66**	0.59**			
8. LMXD (T2)	0.64	0.29	0.00	0.00	0.00	0.00	−0.59**	0.07*	0.40**		
9. Team size (T1)	9.11	4.77	0.00	0.00	0.00	0.00	0.01	0.11	0.08	0.26**	
10. Supervisor place of birth (T1)	1.11	0.31	0.00	0.00	0.01	0.00	−0.01	0.05	0.03	−0.01	0.03

T1, Time 1; T2, Time 2; LMXD, leader-member exchange differentiation; SDO, social dominance orientation; for supervisor place of birth: 1, Canada; 2, outside of Canada. Alpha reliabilities at the individual level (including for supervisor SDO) are listed within parentheses along the diagonal.
$+p < 0.10$; $^*p < 0.05$; $^{**}p < 0.01$.

TABLE 3 Structural equation model analysis for hypothesized model: Structural parameter estimates.

Variable	Nation-based LMXD (T2)		Relationship conflict (T2)		Team commitment (T2)	
	β	SE	β	SE	β	SE
Team size (T1)			−0.05	0.08	0.11	0.11
Supervisor place of birth (T1)	0.01	0.15	0.01	0.08	0.07	0.11
LMXD (T2)			0.32**	0.07	−0.40**	0.13
Supervisor SDO (T2)	0.34*	0.18	−0.14	0.09	−0.14	0.12
Nation-based LMXD (T1)	0.94**	0.20				
Nation-based LMXD (T2)			0.29*	0.14	0.29	0.18
Relationship Conflict (T1)			0.53**	0.06		
Relationship Conflict (T2)					−0.54**	0.14
Team commitment (T1)					0.62**	0.19
Team commitment (T2)						
R^2	0.96*	0.39	0.51**	0.08	0.91**	0.18

T1, Time 1; T2, Time 2; LMXD, leader-member exchange differentiation; SDO, social dominance orientation; for supervisor place of birth: 1, Canada; 2, outside of Canada.
$^*p < 0.05$; $^{**}p < 0.01$.

The bootstrapping method was employed to test the significance of the indirect relations in the model. **Table 4** presents the CIs for the hypothesized indirect relations, as well as the total effects. As can be seen from this table, the relationship between supervisor SDO and relationship conflict through nation-based LMXD was positive but non-significant (0.02, 95% CI [−0.03, 0.09]) as the bootstrap CI contained zero. Thus, Hypothesis 3 is not supported. Finally, Hypothesis 5 stated that nation-based LMXD would be indirectly related to team commitment through within-team relationship conflict. As shown in **Table 4**, the relationship between nation-based LMXD and team commitment through relationship conflict was significantly negative (−0.05, 95% CI [−0.12, −0.01]) as the CI did not include zero. Thus, Hypothesis 5 is supported.

Discussion

Implications for theory development

The findings of this study provide a number of new insights into the role of supervisors in shaping team functioning and outcomes among teams composed of members from multiple nations. Scholars have studied the role of leadership in diverse workgroups and have introduced leadership styles (e.g., transformational leadership; Wang et al., 2013), practices (e.g., inclusive leadership; Leroy et al., 2022), and competencies (e.g., communication competencies; Lu et al., 2021) that may help diverse teams harvest the benefits of diversity. However, this line of research has scarcely examined the potential negative role that supervisors may play in diverse teams. The present study looked at this negative role through the lens of supervisor SDO. Previous research has indicated that SDO positively relates to interpersonal deviance (Shao et al., 2011) and abusive supervision (Khan et al., 2018) and

is positively associated with discrimination in hiring decisions (Umphress et al., 2008; Simmons et al., 2015). This study extends this line of work by providing empirical evidence that within work teams including members from diverse nations, high SDO supervisors tend to engage in LMX relationships of a higher quality with native-born subordinates and LMX relationships of lower quality with foreign-born subordinates. This in turn was found to be associated with within-team relationship conflict. Moreover, within-team relationship conflict was associated with collective team commitment. Note, however, that the indirect relationship between supervisor SDO and within-team relationship conflict through nation-based LMXD was non-significant, which may be due to a lack of power or to the fact that baseline levels of the mediator and outcome variable were controlled for, hence making this test more stringent. Although the relation between supervisor SDO and nation-based LMXD was significant in the sample of this study, the sample provided a likely conservative test of the importance of supervisor SDO because of the low mean of SDO in the sample (i.e., 1.64/5). According to the research commissioned by Forbes Insights and conducted by Oxford Economics, which provides a unique ranking of employee diversity across fifty global economies, Canada is among the most diverse countries in the world. Canada's high score on the Migration Integration Policy Index (MIPEX) and low score on the Fragile States Index (FSI) also indicate that Canada has conceived of itself as one of the best immigrant-friendly countries. The low mean on supervisor SDO in the sample may reflect the fact that Canada has a diversified workforce where immigrants are relatively well-perceived and integrated (Fischer et al., 2012). Future research should examine the consequences of supervisors' SDO in contexts and countries where systemic inequality, competition, and resource-based threat are higher as these factors heighten the level of SDO among individuals (Cohrs and Stelzl, 2010).

Future research is also warranted to explore the potential moderators that can buffer the negative relation between supervisor SDO and team processes and outcomes. For example, it might be that policies and practices that discourage discriminatory behaviors among managers and facilitate the emergence of work climates that foster inclusion of immigrants may reduce the negative association between supervisor SDO and LMX faultlines and curb the salience of subgroups of employees based on their national origin. Following this view, high SDO supervisors would be more likely to engage in differential LMX relationships with subordinates based on their national origin when they are affiliated with organizations displaying less inclusive climates.

Furthermore, the present study is the first to examine the role of a non-performance basis for LMXD perceptions in work teams. A new approach to LMXD, labeled nation-based LMXD, was developed that captures the extent to which LMX relationships associated with the supervisor are driven

TABLE 4 Summary of mediation analyses using 10,000 bootstrap samples.

		95% CI	
	Estimate	**LB**	**UB**
Total effects			
SDO → Relationship conflict (Time 2)	−0.05	−0.16	0.08
Nation-based LMXD → Team commitment (Time 2)	0.06	−0.09	0.20
Specific indirect effects			
SDO → Nation-based LMXD → Relationship conflict (Time 2)	0.02	−0.03	0.09
Nation-based LMXD → Relationship conflict → Team commitment (Time 2)	−0.05*	−0.12	−0.01

CI, confidence interval; LB, lower bound; UB, upper bound. Estimates of total and indirect effects are based on the final structural equation model displayed in **Figure 1**.
*$p < 0.05$.

by a national origin faultline. The six-item scale, which was adapted from Choi et al. (2020), was found to be a reliable measure of nation-based LMXD that was independent from the dispersion of LMX relationships within teams (i.e., LMXD). It is also worth noting that the relation between nation-based LMXD and within-team relationship conflict was incremental to LMXD *per se.* This denotes the power of this variable in relating to important team outcomes. For further exploration in future research, it would be interesting to explore what other team-level outcomes might be affected by nation-based LMXD. Valuable outcomes for this work might be team cohesion and team performance. One may also speculate that nation-based LMXD may differentially influence subordinates from immigrant groups compared to native-born subordinates because native-born subordinates, who tend to receive better treatment owing to their status as members of a dominant social group, should feel more comfortable with nation-based LMXD. Future research may also consider subordinates' own level of SDO as this may also play an important role in reactions to nation-based LMXD. Low SDO subordinates, because they do not believe in the legitimacy of a hierarchy among social groups, may be more negatively influenced by exposure to nation-based LMXD than high SDO subordinates. Future research can thus explore the differential consequences of nation-based LMXD among subordinates with different levels of SDO.

This study also contributes to the diversity literature by adding to the growing body of research that examines the downside of diversity (e.g., relationship conflict) in work teams. Scholars have often used insights from research on social categorization and intergroup relations to predict that differences between people elicit social categorization processes, which in turn disrupt group functioning and promote competition and conflict among employees. However, as van Knippenberg and Haslam (2003) argue, it is intergroup prejudice and bias that may disrupt group processes, not categorization *per se.* This study supports this view as, in *post-hoc* analyses, the magnitude of diversity indicators did not contribute significantly to group outcomes.[2] Yet, the findings indicated that one individual difference variable, namely, supervisor SDO, which is known to foster intergroup prejudice, was detrimental to team-level outcomes.

Practical implications

This study also has practical implications for work teams with members with diverse backgrounds. It underscores that

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2 For exploratory purposes, we checked whether ethnicity diversity, nation-based diversity, and religion diversity would affect the results associated with our model. We thus examined a model where these controls were included. As the effects of these variables were non-significant, we dropped them from the model.

paying attention to the characteristics of candidates for leadership positions in a diverse environment is important since the roots of relationship conflict may partly reside in supervisors' characteristics (i.e., SDO). An effective strategy to reduce interpersonal tensions in diverse groups would be to ensure that individuals in leadership positions do preferably display low levels of SDO. Indeed, top managers may more easily promote inclusive climates if they hold low levels of SDO, and this would pave the way to influencing employees' SDO itself. SDO develops from several factors, including socialization experiences, social context, and individual temperament (e.g., empathy, aggression) (Sidanius et al., 2004). For instance, SDO tends to be higher in dominant social groups (Sidanius and Pratto, 2012). As research suggests that transformational leadership promotes inclusive climates (Kearney and Gebert, 2009), organizations with diverse workgroups may be well-advised to appoint leaders with a transformational leadership style or to train them to develop transformational skills, so that employees' own SDO levels could decrease over time in such inclusive climate.

Strengths and limitations

As any study, this research has limitations. First, all measures were self-reported, making the findings susceptible to be affected by common method variance (Podsakoff et al., 2012). However, some features of the research design and data analyses provide some confidence in the robustness of the results. On the one hand, while within-team LMXD and relationship conflict and collective team commitment were assessed by subordinates, supervisor SDO was reported by supervisors themselves, so that the study was basically multi-source. Moreover, while examining the relation between supervisor SDO and nation-based LMXD, the dispersion of LMX relationships within teams was controlled for. Thus, the relation between supervisor SDO and nation-based LMXD was unique, independently from LMX relationships. On the other hand, this study controlled for the baseline (i.e., Time 1) levels of all endogenous variables (i.e., nation-based LMXD, within-team relationship conflict, and collective team commitment), thus considerably reducing any endogeneity related to the findings (Podsakoff et al., 2003) and lending confidence in their robustness. Second, despite the strengths of the design and analyses, one cannot conclude to causal relationships among the constructs. For example, it might be that team members with higher levels of team commitment perceive fewer relationships conflicts and ultimately less differentiation of LMX relationships based on the national origin as the members. Further research using fully cross-lagged designs is warranted to clarify temporal relationships among the constructs. Third, from a theoretical perspective, it would be worth exploring how other leadership

models such as servant leadership could influence the findings reported in the present study. For example, even though supervisor SDO was related to high LMX differentiation based on nationality diversity, this relation may be tempered if at the same time the supervisor adopts servant leadership practices that make employees feel supported (Hu et al., 2020). Future research could explore that possibility. Fourth, the data from this study were obtained from government agencies located in the Quebec province, Canada. Therefore, both the nature of jobs (civil servants) and language might limit the generalizability of the findings to other workplaces and countries. Finally, this study was based on a large sample of 931 employees pertaining to 108 teams and the analyses were conducted at the team level as justified by appropriate aggregation statistics. Therefore, the limitations regarding causal connections among the variables are counterbalanced by the fact that this study captured phenomena that reliably reflected team level processes.

Conclusion

The present study examined a model of the antecedent and outcome variables of differential LMX relationships among work teams composed of members from diverse national origins. Based on a sample of 108 work teams from eight Canadian organizations, this study indicates that supervisors' SDO relates positively to nation-based LMXD, which in turn relates to more within-team relationship conflict. In turn, relationship conflict relates to lower collective team commitment. As such, this study highlights how the social dominance beliefs of leaders can be associated with diverse malfunctions within teams where subordinates from diverse national origins work together in the pursuit of team goals. Given these findings, further attempts at exploring other leadership and work-related factors as antecedents of nation-based LMXD and how these factors may ultimately affect team functioning are warranted.

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 Comité d'éthique de la recherche (HEC Montréal). The patients/participants provided their written informed consent to participate in this study.

Author contributions

PS performed the statistical analyses and took the lead for writing the related sections. CV contributed to the acquisition of data. Both authors contributed to the design, revision, improvement of the manuscript, interpretation of the results, wrote the manuscript's theoretical introduction, methods, results, and discussion, 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.

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Work-to-family effects of inclusive leadership: The roles of work-to-family positive spillover and complementary values

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Drawing on work–family enrichment theory, we explore whether inclusive leadership leads to employees' work-to-family positive spillover, which further improves their family performance. We also focus on the moderating role of complementary values. A time-lagged study was conducted and the sample included 292 employees from two hotels. The results indicate that inclusive leadership triggers employees' work-to-family positive spillover, and then their family performance is enhanced. Moreover, employees' complementary values may strengthen the positive effect of inclusive leadership. We also provide theoretical and practical implications of the results.

KEYWORDS

inclusive leadership, work-to-family positive spillover, complementary values, family performance, work–family enrichment theory

Introduction

Inclusive leadership, defined as "leaders who exhibit openness, accessibility, and availability in their interactions with followers" (Carmeli et al., 2010, p. 250), has drawn increasing attention in recent years. Researchers have found that inclusive leadership is positively related to subordinates' affective organizational commitment and work engagement (Choi et al., 2015), psychological safety (Hirak et al., 2012; Javed et al., 2017; Wang and Shi, 2021), well-being (Choi et al., 2017), creativity (Carmeli et al., 2010; Javed et al., 2017, 2018), organizational citizenship behavior (Tran and Choi, 2019), and voicing behaviors (Yin, 2013; Jolly and Lee, 2021).

Despite the above research findings, studies on inclusive leadership are still in the early stage and more research attention is needed (e.g., Choi et al., 2017; Tran and Choi, 2019; Jolly and Lee, 2021; Wang and Shi, 2021). The current literature is mainly restricted to the influence of inclusive leadership in the work domain, leaving consequences in the family domain ignored. This omission is unfortunate, because family is the most important non-work domain and has significant impact on employees, including their work behaviors and well-being (Ford et al., 2007; Liu et al., 2013; Zhu et al., 2019; Ye et al., 2021). Moreover, owing to the increase of dual-career partners in the workforce, work role ambiguity/overload, and the blur of gender roles, organizations are presented with the challenge of

improving employees' work–family balance, and researchers are called for to pay more attention to work–family interface (Greenhaus and Allen, 2011; Michel et al., 2011; Liao et al., 2015; Cui and Li, 2021).

On the other hand, leaders are suggested to play a critical role in both employees' work and family domains (e.g., Litano et al., 2016; Li et al., 2017; Zhang et al., 2019). However, current research on the impact of leadership on employees' family life is still insufficient. A few studies focused on servant leadership (Zhang et al., 2012; Tang et al., 2016), ethical leadership (Liao et al., 2015; Zhang and Tu, 2018), authentic leadership (Zhou et al., 2019), and leader–member exchange (Liao et al., 2016), leaving inclusive leadership and other leadership styles under-examined. Researchers have thus also called for more studies to explore whether other leadership variables would exert effects on followers' family performance (Liao et al., 2015; Zhang and Tu, 2018).

Responding to these appeals, this study focuses on the relationship between inclusive leadership and followers' family performance, which indicates the degree to which individuals fulfill general responsibilities associated with the family (Carlson et al., 2010; Liao et al., 2016). Specifically, applying work–family enrichment theory, we further examine whether inclusive leadership leads to employees' work-to-family positive spillover (WFPS), which might enhance their family performance in turn. Work–family enrichment theory suggests that resources gained from the work domain can be transferred to the family domain and therefore help employees enrich their family lives by meeting the requirements and expectations better in their families (Greenhaus and Powell, 2006; Tang et al., 2016). Inclusive leaders are open, accessible, and available to their subordinates; they usually initiate open communication to invite input from followers (Hollander, 2009; Wang and Shi, 2021). It is possible that employees are likely to transfer the initiation of open communication to their families, and show concerns for family members' thoughts and interests. Accordingly, subordinates can generate WFPS, which refers to the process whereby positive moods and energy from work facilitate individuals' roles in the family sphere (Grzywacz and Marks, 2000; Mennino et al., 2005). With the generation of WFPS, employees might benefit from the positive affect, skills, behaviors, and values transferred from the work domain, and thus their family performance can be improved resultantly. Therefore, this research aims to investigate whether inclusive leadership triggers employees' WFPS, which further improves their family performance.

In addition, this research also sheds light on the boundary condition under which the impact of inclusive leadership can be strengthened or weakened. As suggested by the contingency perspective of leadership, the impact of leadership should be examined in consideration of the context in which it exits (Howell and Dorfman, 1981; Yukl, 2006). However, insufficient research has paid attention to the contextual factors that tune the impacts inclusive leaders exert on followers, with only two exceptions that work unit performance (Hirak et al., 2012) and leader-member exchange (Wang and Shi, 2021) were found to moderate the relationship between inclusive leadership and employee psychological safety. In this research, we focus on the moderating role of complementary values. Complementary values depict the degree to which the work values of an individual's organization aligns with that of his/her family and community values (Duffy et al., 2017). When the level of complementary values is high, the work values are highly consistent with those of their families and communities, thus the affect, skills, behaviors, and values from employees' work domain might be transferred to the family sphere more easily and smoothly. As a result, the positive impact of inclusive leadership on WFPS might be further enhanced. Hence, this research also aims to provide a comprehensive framework for understanding how inclusive leadership affects followers' WFPS by examining the moderating role of complementary values.

To examine the above hypotheses, we conducted a questionnaire survey in two hotels located in Northern China. We choose this sample for two reasons. On the one hand, the service industry is increasingly vital in both developed and emerging countries (Liu et al., 2016). Taking China for an example, over 46.3% of the total employed population work in the service industry (Editoral Board of the China Commerce Yearbook, 2019). On the other hand, the service industry is characterized by long and irregular working hours, excessive workload, and difficulty in work-life balance (Lawson et al., 2013; Lee et al., 2016). In addition, Chinese people are suggested to possess high levels of familyism and place great emphasis on family life (Au and Kwan, 2009). Thus it is especially meaningful to conduct research on the work-family interface with a sample of hotels in China, which might facilitate organizations in the service industry tackle the challenges of helping employees balance work and family life (Zhang et al., 2019; Jolly and Lee, 2021).

The present research intends to contribute to the literature in several ways. First, it responds to the appeal for more attention to the topic of inclusive leadership and extends its consequences to the family domain for the first time. Specifically, to the best of our knowledge, we are among the first to examine the relationship between inclusive leadership and followers' family performance. Second, the present study explores whether inclusive leadership triggers employees' WFPS, which further affects their family performance. The examination of the linkage between inclusive leadership and WFPS is meaningful. In addition, the investigation of WFPS as the mediator provides a new theoretical perspective to understanding the process of inclusive leadership. Third, this research addresses a new moderator, i.e., complementary values, to help us have a better understanding of the boundary conditions of inclusive leadership. The theoretical model for this study is shown in Figure 1.

FIGURE 1
Conceptual model of this research.
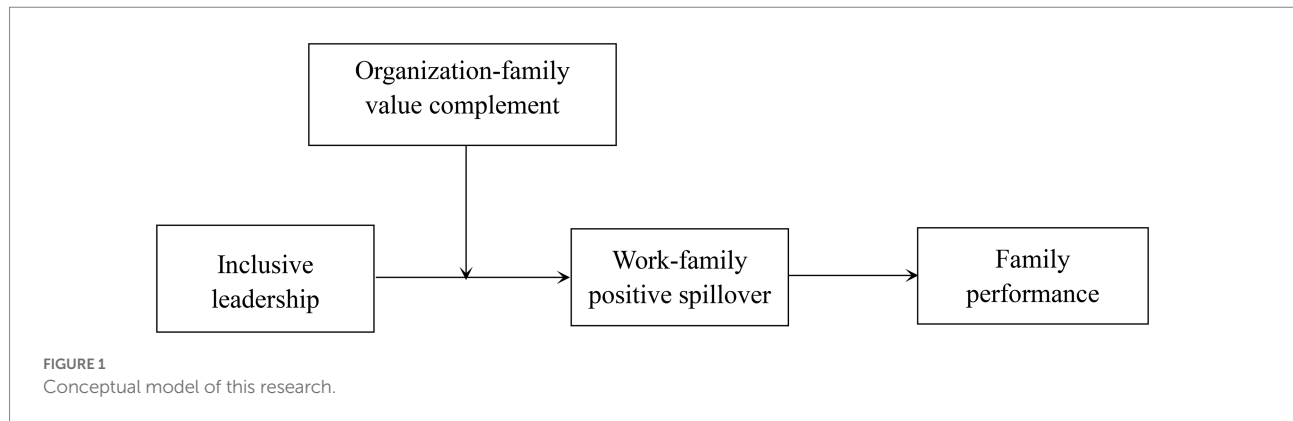
Theory and hypotheses development

Inclusive leadership

Nembhard and Edmondson (2006) were among the first to coin the concept of leader inclusiveness, which refers to leader behaviors that invite and appreciate inputs from subordinates, leading to the beliefs that "their voices are genuinely valued" (p. 948). Hollander (2009) further suggested inclusive leadership as a type of relational leadership in which the core is cultivating high quality relationships with followers by paying attention to their needs and interests and being available to them. Afterwards, Carmeli et al. (2010) developed the construct of inclusive leadership and defined it as "leaders who exhibit openness, accessibility, and availability in their interactions with followers" (p. 250).

In the present research, we adopt the definition from Carmeli et al. (2010), which comprises of three dimensions, i.e., openness, availability, and accessibility. Specifically, openness indicates the degree to which leaders demonstrate openness by deeds such as inviting followers to contribute in decision making, valuing followers' different opinions and perspectives, and facilitating the generation of new ideas and methods to solve problems (Carmeli et al., 2010; Hirak et al., 2012; Tran and Choi, 2019). Availability refers to the degree that followers perceive their leaders as available to them both physically and psychologically, and are willing to provide timely assistance to them whenever they encounter difficulties and problems (Nembhard and Edmondson, 2006; Hirak et al., 2012; Choi et al., 2017). Accessibility means that a leader builds a close relationship with his or her followers by exhibiting behaviors such as acknowledging followers' contributions, sharing visions with them, and concerning about their expectations, interests and feelings (Carmeli et al., 2010; Choi et al., 2015).

As we have discussed before, the construct of inclusive leadership has drawn increasing attention recently, providing evidence that it can have notable impacts on followers' attitudes, behaviors and psychological well-being (e.g., Choi et al., 2015; Javed et al., 2018; Tran and Choi, 2019). However, the research on

inclusive leadership is still in its infancy and more empirical evidence is needed (Tran and Choi, 2019; Jolly and Lee, 2021; Wang and Shi, 2021). Thus, we respond to the call by extending the consequences of inclusive leadership to the family domain. Especially, we focus on the effects of inclusive leadership on followers' family performance by examining the mediating role of WFPS and the moderating role of complementary values.

Inclusive leadership, WFPS, and family performance

WFPS is defined as "the transfer of positively valenced affect, skills, behaviors, and values from the work domain to the family domain, thus having beneficial effects on the family domain" (Hanson et al., 2006, p. 251). For instance, the positive affect created in the workplace can be transferred in the family, the values and skills gained in the work domain can be applied in the family, and the behaviors one learned in the workplace can also be initiated in the family life (Hanson et al., 2006; Masuda et al., 2012; Tang et al., 2016). WFPS is distinct from work-family enrichment (WFE), which is also a construct focusing on positive work–family interface (Carlson et al., 2006; Hanson et al., 2006). WFPS occurs when employees transfer the gains from the work domain to the family domain, while WFE occurs when the gains transferred from work result in a higher quality of life at home (Wayne, 2009; Masuda et al., 2012). In this research, we hypothesize that the benefits (e.g., positive affect, values, skills, and behaviors) generated by inclusive leadership can be transferred to followers' family domain, leading to the generation of WFPS, which further improve their family performance.

According to work-family enrichment theory, the positive impact of leadership on employees' family life can be exerted through two paths, i.e., the instrumental path and the affective route (Greenhaus and Powell, 2006; Zhang and Tu, 2018). Herein we suggest that WFPS from inclusive leadership is generated through these two paths. *Via* the instrumental path, the perspectives, values, and knowledge that employees learned from their inclusive leaders can be transferred into their family domain,

leading to the generation of WFPS. As discussed before, inclusive leaders exhibit openness, availability, and accessibility towards followers, and initiate behaviors to make them feel being valued (Carmeli et al., 2010; Randel et al., 2018; Tran and Choi, 2019). Employees observe their inclusive leaders' behaviors in the workplace, and perceive the favor from inclusive leaders. When employees return back home, they are possible to recall and imitate inclusive leaders' behaviors in the family life. Followers might thus initiate openness, availability, and accessibility towards family members.

As for the second path, i.e., the affective route, inclusive leadership could promote the positive affect within the followers (Choi et al., 2015; Tran and Choi, 2019), which, in turn, generates their positive affect in the family domain, leading to the generation of WFPS. As suggested by work-family enrichment theory, the positive affect produced by psychological resources (e.g., psychological safety and self-esteem) at work is associated with an outward focus of attention, which further leads to warm and caring interactions at home (Greenhaus and Powell, 2006). To the extent that inclusive leaders' behaviors often signal benevolence by showing genuine concern and caring to employees (Burke et al., 2007), they tend to perceive sense of belonging and being valued (Randel et al., 2018). Thus employees' experiences with inclusive leaders are usually positive (e.g., Yin, 2013; Tran and Choi, 2019). These experiences improve employees' affective states (Ramamoorthy et al., 2005; Choi et al., 2017), which can help them accommodate family roles better (Carlson et al., 2006). As such, employees might extend the positive feelings generated from inclusive leaders to their family life, leading to positive emotional states at home and caring interaction towards family members. Thus, WFPS is produced *via* the affective route as well.

To summarize, the positive spillover effects of inclusive leadership to followers' family life can be generated from both the instrumental path and the affective route. The instrumental benefits of behavior-base resources (e.g., values and habits) and affective benefits of increased positive emotional states (e.g., positive feelings and psychological well-being) generated from inclusive leadership can both be transferred from the work domain to the family domain. Hence, we hypothesize the following:

Hypothesis 1: Inclusive leadership is positively related to WFPS.

Work–family enrichment theory asserts that resources acquired at work can be transferred to the family domain and thus help employees meet their families' requirements and expectations and enrich their family lives (Greenhaus and Powell, 2006; Wayne, 2009). It demonstrates the important role of psychological and skill resources in understanding how and why work experiences can enhance employees' personal lives (Greenhaus and Powell, 2006; Masuda et al., 2012).

WFPS indicates the successful transfer of valuable affect, skills and behaviors from the work domain to the family domain

(Hanson et al., 2006). According to work–family enrichment theory, WFPS can facilitate individuals dealing with personal and practical issues at home, thus their family performance can be improved (Greenhaus and Powell, 2006). That is, with the generation of WFPS from inclusive leadership, employees' family performance might be enhanced by stimulated motivation, improved ability and skills, and persistence, etc. (Greenhaus and Powell, 2006; Liao et al., 2015).

Specially, on the one hand, with the ability and skills achieved from WFPS (Wayne, 2009), employees might have a good understanding of family members' needs and expectations, and they are capable of fulfilling family requirements and responsibilities better. On the other hand, with higher WFPS, employees usually have a good mood (Hammer et al., 2005), thereby they are likely to devote more persistence to meet the needs of family members and complete family tasks, hence followers' family performance is enhanced. Similarly, previous research has suggested that a positive mood can improve individuals' performance and rewards by enhancing their cognitive functioning, task and interpersonal activity and persistence (Edwards and Rothbard, 2000; Greenhaus and Powell, 2006).

Based on the above arguments, we hypothesize that:

Hypothesis 2: WFPS is positively related to employees' family performance.

We have discussed that followers tend to gain a series of psychological resources from inclusive leadership and transfer the positive values and perspectives they have experienced at work to home. These resources from work could spill over to followers' family domain and contribute to their family life, producing WFPS (Hanson et al., 2006). As a result, the followers' family performance can be improved. Taken together, inclusive leadership is positively related to followers' WFPS, which in turn enhances their family performance. Hence we hypothesize that:

Hypothesis 3: WFPS mediates the relationship between inclusive leadership and employees' family performance.

The moderating effect of complementary values

As suggested by the contingency theory of leadership, the extent to which leadership influences followers is heavily dependent on the context where it occurs (Howell and Dorfman, 1981; Yukl, 2006). A potential context of inclusive leadership is the alignment between organizational values and family values. Responding to the call of examination on the boundary role of work-family value alignment (Li et al., 2017), we suggest that complementary values might play a moderating role in the relationship between inclusive leadership and WFPS. Complementary values, or organizational values that

complement family and social values (Duffy et al., 2017), indicate the degree to which the work values of an individual's organization aligns with his/her family and community values (Duffy et al., 2017). When the degree of complementary values is high, employees perceive a high correspondence between values of the organization and those adopted in their families (Duffy et al., 2017). If the level of complementary values is low, employees might find that things valued in the organizations are not appreciated in their family or community (Duffy et al., 2017).

To the extent that the values employees perceive at work are complementary with the values in their family, they are prone to extend the values from work to family. As leaders are usually considered as representatives of organizations, their behaviors are deemed to be reflections of the organizational values (Lord and Brown, 2001; Driscoll and McKee, 2007). Accordingly, when employees perceive the values of "appreciating the uniqueness of individuals" from inclusive leaders in the organization (Holvino et al., 2004; Randel et al., 2018), and they believe that such value is in consistence with those in their family, they are more willing to transfer the values they have learned from leaders to their family domain, leading to a higher level of WFPS. On the contrary, if the level of complementary values is low, employees might find that things valued in the organizations are not appreciated in their family (Duffy et al., 2017). In this situation, those positive experiences from work are less likely to be extended to their family, suppressing the enhancement of WFPS. Based on the above arguments, we hypothesize the following:

> *Hypothesis 4*: Complementary values moderate the relationship between inclusive leadership and WFPS such that the higher the level of complementary values, the stronger the relationship between inclusive leadership and WFPS.

Materials and methods

Sample and procedures

We conducted this study in two hotels in northern China. The human resource departments of these two hotels aided in the data collection process. The human resource managers introduced the purpose of the study and the procedures arranged to collect data. The voluntary and anonymous nature of the participation was also highlighted. Then each participant was distributed a questionnaire and a return envelope. Participants could return the sealed questionnaire to a box in the human resource department.

To reduce the risk of common method bias (Podsakoff et al., 2003), we have designed a time-lagged survey at three time points to collect the data. Each participant was coded to match their responses at three time waves. In the first wave of survey, we randomly selected 600 frontline employees from the name lists provided by the hotel's human resource departments. These

employees were required to report their demographic information (gender, age, education, and job tenure with immediate supervisor) and their perception of inclusive leadership. In the second wave of survey, which was conducted 2 months later, we invited these employees to participate in this study again and rate their WFPS and complementary values. After another 2 months, in the third wave of survey, the employees rated their family performance.

At Time 1, 453 usable questionnaires were received, generating a response rate of 75.50%. At Time 2, we gathered 382 completed questionnaires (84.32% response rate). In the final wave, 292 completed questionnaires were received, with a response rate of 76.44%. Accordingly, the final sample consisted 292 employees. The demographic information of these employees is summarized as follows. The employees' average age was 35.65 years old (SD = 10.56), and the average job tenure with their immediate supervisor was 2.65 years (SD = 2.09). Among the participants, 83.11% held a degree of high school or below, and 51.35% of them were female.

Measures

Inclusive leadership

We assessed inclusive leadership with the 9-item measure from Carmeli et al. (2010). Each item used a 5-point Likert scale. The response options of the measure ranged from 1, "strongly disagree," to 5, "strongly agree." "My manager is an ongoing 'presence' in this team—someone who is readily available." is a sample item. The second-order factor model indicated a good fit ($\chi^2(24) = 83.38$, CFI = 0.97, TLI = 0.95, RMSEA = 0.09). The Cronbach's alphas were 0.88, 0.86, and 0.88 for the three dimensions, respectively, and 0.93 for the construct.

Work-to-family positive spillover

Work-to-family positive spillover was measured by the 11-item scale developed by Hanson et al. (2006). Each item used a 5-point Likert scale. The response options of the measure ranged from 1, "strongly disagree," to 5, "strongly agree." Sample items are "When things are going well at work, my outlook regarding my family life is improved.," and "Being in a positive mood at work helps me to be in a positive mood at home." The second-order factor model indicated a good fit ($\chi^2(41) = 159.29$, CFI = 0.95, TLI = 0.94, RMSEA = 0.09). The Cronbach's alphas were 85, 0.92, and 0.87 for the three dimensions, respectively, and 0.94 for the construct.

Complementary values

We evaluated complementary values by the scale developed by Duffy et al. (2017). Each item used a 5-point Likert scale. The response options of the measure ranged from 1, "strongly disagree," to 5, "strongly agree." "The values of my organization match my family values." is a sample item. The Cronbach's alpha of this construct was 0.90.

Family performance

Family performance was evaluated with the 5-item measure developed by Carlson et al. (2010). Each item used a 5-point Likert scale. The response options of the measure ranged from 1, "strongly disagree," to 5, "strongly agree." A sample item is "I can fulfill all the family responsibilities." The Cronbach's alpha of this construct was 0.87.

Control variables

We have included employees' demographic information, including age, gender, job tenure with the immediate supervisor, education level, and number of kids as control variables. As these variables have been suggested to affect employee family performance (Liao et al., 2016; Zhou et al., 2019), we intended to exclude their potential impacts on our results by controlling them. Moreover, we also created two dummy variables to control the differences between the two hotels we surveyed.

Results

Construct validity of measurement

Utilizing AMOS 17.0, confirmatory factor analyses were conducted to assess the discriminant and convergent validity of the core constructs in our theoretical model. Table 1 presents results of the confirmatory factor analyses, demonstrating that the four-factor model generated a good fit ($\chi^2(59) = 78.96$, TLI = 0.98, CFI = 0.99, and RMSEA = 0.03). Thus the factors' discriminant validity was supported. Moreover, the factor loadings of all of the items in the four-factor model were significant (greater than 0.55), supporting the convergent validity of the four constructs.

Descriptive statistics and correlations

Table 2 shows the means, standard deviations, and zero-order Pearson correlations for all key variables in this study. As presented in Table 2, inclusive leadership had a positive correlation with WFPS ($r = 0.22$, $p < 0.01$), and WFPS had a positive correlation with employee family performance ($r = 0.51$, $p < 0.01$). Thus our hypotheses were initially supported.

Hypotheses testing

As shown in Table 3, with employee demographics and hotel differences as control variables, inclusive leadership had a positive effect on WFPS ($\beta = 0.19$, $p < 0.01$, Model 2), supporting Hypothesis 1. Moreover, WFPS had a significant positive impact on employee family performance ($\beta = 0.51$, $p < 0.01$, Model 7), supporting Hypothesis 2.

Hypothesis 3 predicted that WFPS mediates the relationship between inclusive leadership and followers' family performance. In support of Hypothesis 3, the results indicated that WFPS had a significant positive impact on employee family performance ($\beta = 0.51$, $p < 0.01$, Model 8), whereas the influence of inclusive leadership on family performance was not significant ($\beta = 0.07$, n.s., Model 8). We calculated the confidence interval of the indirect influence of inclusive leadership on employee family performance through WFPS. The result indicated a significantly positive indirect effect (estimate = 0.07, S.E. = 0.09, 95% CI = [0.032, 0.153]). Hence, Hypothesis 3 was supported.

To examine Hypothesis 4, an interaction between inclusive leadership and complementary values was generated with standardized values (Aiken et al., 1991). The path analysis results (Table 3) showed that the interaction between inclusive leadership and complementary values had a positive relationship with WFPS ($\beta = 0.13$, $p < 0.01$, Model 4), supporting Hypothesis 4. To have a better understanding of the moderating effect, we plotted the interaction following Aiken et al.'s (1991) procedures. As presented in Figure 2, the positive influence of inclusive leadership on WFPS was significant for employees with a high level of complementary values ($\beta = 0.33$, $p < 0.01$) but nonsignificant for employees with low complementary values ($\beta = 0.07$, n.s.). Therefore, Hypothesis 4 was supported further.

Discussion

By conducting a time-lagged study, we investigated when and why inclusive leadership improves followers' family performance. Applying work-family enrichment theory, we tested that inclusive leadership triggered employees' work-to-family positive spillover, which further improved their family performance. Moreover, we also found that complementary values reinforced the positive impact of inclusive leadership on WFPS.

TABLE 1 Confirmatory factor analysis.

Model	χ^2	df	TLI	CFI	RMR	RMSEA
Four factors (baseline model)	78.96	59	0.98	0.99	0.03	0.03
Three factors (combine inclusive leadership and organization-family value complement)	593.66	62	0.70	0.76	0.12	0.17
Three factors (combine work-family positive spillover and family performance)	472.94	62	0.76	0.81	0.06	0.15
One factor (combine all items into one factor)	1367.59	66	0.30	0.41	0.15	0.26

$N = 292$. CFI = comparative fit index, TLI = Tucker-Lewis Index, RMSEA = root mean square error of approximation.
All variables were packaged into three parcels.

TABLE 2 Means, standard deviations, correlations, and reliabilities.

Variables	Means	SD	1	2	3	4	5	6	7	8	9	10	11
1. Employee gender	1.51	0.50	1										
2. Employee age	35.64	10.54	−0.09	1									
3. Employee education	1.20	0.49	−0.09	−0.16**	1								
4. Employee tenure	2.65	2.11	−0.21**	0.12*	0.11	1							
5. Number of kids	1.1	0.95	0.13*	0.13*	−0.10	0.13*	1						
6. Hotel 1	0.58	0.49	−0.02	−0.06	−0.05	0.23**	0.10	1					
7. Hotel 2	0.42	0.49	0.02	0.06	0.05	−0.23**	−0.10	−1.00**	1				
8. Inclusive leadership	4.03	0.82	−0.14*	0.11	−0.01	−0.01	0.07	−0.06	0.06	1			
9. Organization-family value complement	3.42	0.88	0.06	0.04	0.09	−0.05	0.09	0.08	−0.08	0.21**	1		
10. Work-family positive spillover	4.01	0.69	−0.03	0.20**	−0.04	0.00	0.13*	−0.15*	0.15*	0.22**	0.17**	1	
11. Family performance	3.56	0.75	0.03	0.06	−0.03	−0.15*	0.09	−0.01	0.01	0.18**	0.27**	0.51**	1

$N = 292$. Gender was coded as "1" for male and "2" for female; Education was coded as "1" for high school degree or below, "2" for junior college degree, "3" for bachelor degree, and "4" for graduate degree or higher;
*$p < 0.05$ and **$p < 0.01$ (two-tailed).

Theoretical implications

This study contributes to the literature in the following ways. First, it advances the literature on inclusive leadership by extending its consequences into followers' family life. As the research on inclusive leadership is still in its infancy (e.g., Carmeli et al., 2010; Choi et al., 2017), there has been scant attention toward how inclusive leadership affect followers' family life. Previous research is mainly restricted to work outcomes, such as creativity (Carmeli et al., 2010; Choi et al., 2015; Javed et al., 2017) and organizational citizenship behavior (Tran and Choi, 2019). Hence our study helps fill this research gap in the area of inclusive leadership. Moreover, although leaders are suggested to "play a particularly important role in helping individuals balance their work and family demands" (Kailasapathy et al., 2014, p. 2682), the focus of leadership research mainly remains on followers' work domain, leaving the cross-domain effects of leadership on followers' family life understudied (Li et al., 2017; Zhang and Tu, 2018). Thus this research also contributes to the leadership literature by shifting concerns from the work domain to followers' family domain.

Second, this study depicts the influencing mechanism of inclusive leadership on employees' family performance by adopting the work–family enrichment theory. Previous research has mainly explained the impact of inclusive leadership on followers from the social exchange perspective (e.g., Choi et al., 2015; Javed et al., 2017, 2018; Tran and Choi, 2019). This research departs from the previous literature of inclusive leadership by applying a new theoretical perspective, i.e., the work-family enrichment theory. Drawing on this theory, we find that inclusive leadership is positively related to followers' WFPS, which further leads to their improved family performance. This finding reveals a new mediating mechanism that transfers the positive impact of inclusive leadership on followers' family life. To the best of our knowledge, this research is among the first to investigate WFPS as a critical intervening mechanism that underlies the relationship between inclusive leadership and family outcomes.

Third, this research investigated the moderating role of complementary values, which adds more empirical evidence on the boundary conditions that influence the degree to which inclusive leaders impact followers. Given the fact that current research findings about the boundary conditions under which inclusive leaders can exert effects on followers are still limited and insufficient (Wang and Shi, 2021), it is meaningful to examine a new moderator, i.e., complementary values. The identification of this new moderator enriches our understanding about how inclusive leaders can exacerbate its positive effects on followers, responding to the call for more examination of comprehensive moderators in the research of inclusive leadership (Wang and Shi, 2021).
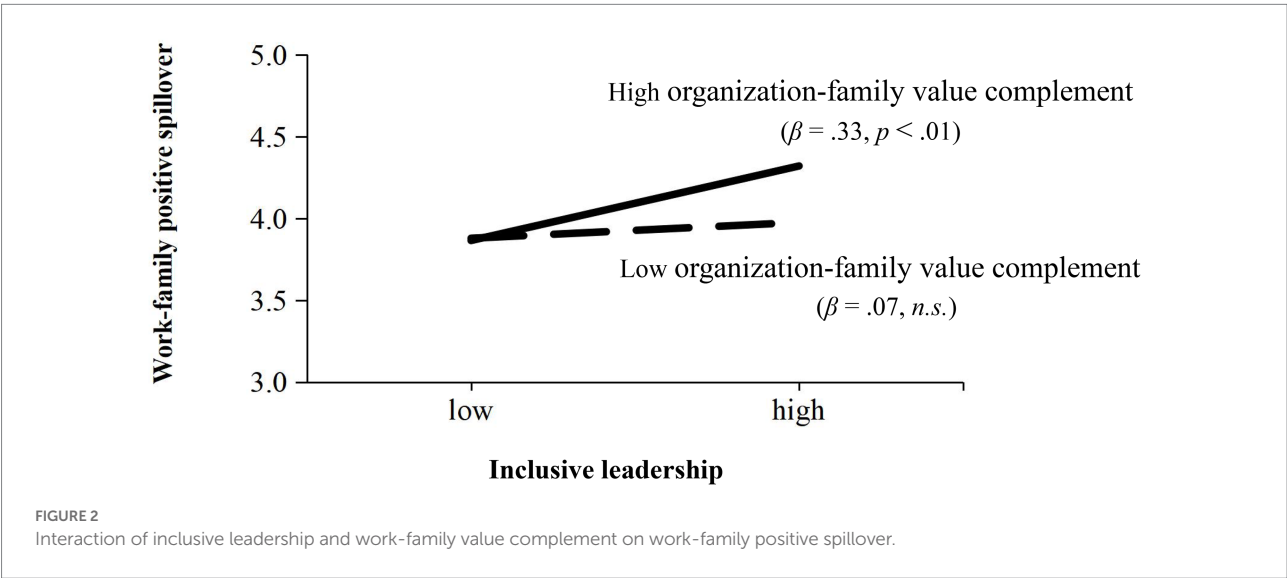
Practical implications

The research findings from this study can delineate notable implications for organizations. Given the fact that family is the most important non-work domain for employees, and family life impacts work-related outcomes significantly (Liu et al., 2013; Xin et al., 2018),

TABLE 3 Hierarchal analysis results.

	Work-family positive spillover				Family performance			
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M7**	**M8**
Control variables								
Employee gender	−0.03	−0.01	−0.02	−0.01	−0.00	0.02	0.01	0.02
Employee age	0.17**	0.15*	0.15*	0.15*	0.07	0.05	−0.02	−0.03
Employee education	−0.01	−0.01	−0.03	−0.04	0.02	0.02	0.02	0.02
Employee tenure	−0.02	−0.01	0.01	0.01	−0.20**	−0.18**	−0.19**	−0.18**
Number of kids	0.12*	0.11*	0.09	0.07	0.11	0.09	0.04	0.04
Hotel 1	−0.13*	−0.13*	−0.14*	−0.14*	−0.04	0.04	0.10	0.11
Independent variable								
Inclusive leadership		0.19**	0.16**	0.20**		0.17**		0.07
Mediator								
Work-family positive spillover							0.51**	0.51**
Moderator								
Organization-family value complement			0.14*	0.12				
Interaction								
Inclusive leadership × organization-family value complement				0.13*				
R^2	0.07	0.10	0.12	0.13	0.04	0.07	0.29	0.30
ΔR^2	0.07	0.03	0.02	0.01	0.04	0.03	0.25	0.23
F	3.10**	4.12**	4.32**	4.34**	1.96	2.75**	15.03**	13.58**
ΔF	3.10**	9.60**	5.28*	4.07*	1.96	7.21**	89.17**	83.15**

$N = 292$. $*p < 0.05$ and $**p < 0.01$ (two-tailed).

FIGURE 2
Interaction of inclusive leadership and work-family value complement on work-family positive spillover.

it is important to improve employees' family lives. Our research findings suggest that inclusive leaders lead to followers' WFPS, which further benefits their family performance. Therefore it is urgent for organizations to encourage leaders to adopt the inclusive model of behaviors. Organizations might provide training programs for leaders, and encourage them to be open, available, and accessible to followers (Carmeli et al., 2010). For instance, leaders can be trained to initiate behaviors including inviting followers to participate in decision making, providing timely assistance to them when they have difficulties, building close relationships with them, and showing

concerns about followers' expectations and feelings (Carmeli et al., 2010; Hirak et al., 2012; Choi et al., 2015; Tran and Choi, 2019).

Moreover, as shown by our research findings, complementary values strengthen the positive linkage between inclusive leadership and WFPS. Therefore, organizations should pay more attention to the complementary values, i.e., the high alignment between values adopted in the organization and employees' families. With the existence of complementary values, the positive effects of inclusive leadership can be transferred into WFPS more easily. Organizations can take measures to enhance the level of employees' complementary values. For instance, training programs can be provided to enhance employees' understanding about core values adopted in the organization, and further improve the chance of alignment between work values and family/community values.

Limitations and future directions

Notwithstanding the importance of its findings, this research has several limitations. First, we collected data at two time points. Specially, the data about inclusive leadership and complementary values were collected at Time 1, while that about WFPS and family performance were at Time 2 and Time 3, respectively. However, the study might still potentially be susceptible to common method bias. Moreover, due to resource constraints, the data of family performance was self-reported by followers rather than their family members. Although some of the previous research on family performance also adopted the same data source (e.g., Liu et al., 2016; Li et al., 2021), it might still cause concerns. For instance, as family performance rated by followers themselves might be higher than that rated by their family members, the impact of inclusive leadership *via* WFPS might be inflated. Moreover, due to the limitation of survey research, we cannot confirm the causal relationship in this study. Therefore, we encourage future research to apply other methods, such as collecting data about family performance from followers' family members and using experiments to improve the research design.

Moreover, this study was conducted in China, where individuals usually attach high importance to families and the level of family involvement is high (Greenhaus and Powell, 2006; Au and Kwan, 2009). With this characteristic, Chinese people might make a better use of work-generated resources in their family lives, and thus benefiting more from these emotional and instrumental resources generated in the workplace than their western counterparts (Greenhaus and Powell, 2006; Tang et al., 2016). As a result, the issue of generalizability of our research findings is raised. Cross-cultural research is needed to validate whether inclusive leadership can facilitate followers' family performance *via* the generation of WFPS in non-Chinese contexts.

In addition, our research examined an important perspective for understanding how inclusive leadership impacts followers'

family performance by illuminating the role of WFPS, but we do not necessarily rule out the possibility of other mediating mechanisms. Future research could also extend our work and explore other mechanisms that underlie the relationship between inclusive leadership and followers' family outcomes. For instance, future research could develop a measurement of inclusive behavior at home, and examine whether it play a mediating role in the relationship between inclusive leadership and followers' family outcomes. Similarly, Liao et al. (2016) have suggested that ethical leadership mediated the relationship between ethical leadership at the workplace and life satisfaction.

Moreover, as there is little research focusing on the antecedents of inclusive leadership, it is urgent for researchers to examine organizational factor and individual characteristics that might spur the emergence of inclusive leadership.

Conclusion

Drawing on work-family enrichment theory, this research demonstrates that inclusive leadership leads to employees' increased WFPS, which further improves their family performance. Moreover, the direct impact of inclusive leadership on WFPS can be attenuated by followers' complementary values. These research findings provide solid evidence for the positive effects of inclusive leadership and urge future research to focus on this filed more and investigate its pivotal impact.

Data availability statement

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

Author contributions

HZ was in charge of designing the theoretical model, collecting data, and writing the manuscript. AC processed the data and revised the manuscript. All authors contributed to the article 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.

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Is authentic leadership always good for employers? A perspective of time management

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Introduction

Authentic leadership refers to leaders who use self-awareness, relationship transparency, internalized ethics, and balanced handling to guide employees (Walumbwa et al., 2008; Wen et al., 2021; Huang et al., 2022). However, an overly authentic environment can lead employees to optimize their limited resources to decide which activities to invest in because they don't have to worry about negative outcomes in a sincere environment, which past surveys have overlooked. In fact, past surveys have almost adopted a positive lens to investigate the impact of authentic leadership on positive employee behavior (Cao et al., 2020; Marques-Quinteiro et al., 2021) and the softening effect on negative employee behavior (Jang and Kim, 2021; Monzani et al., 2021), but these surveys have ignored the possible negative outcomes of authentic leadership. In response to these literature streams, the current research proposes a new stream that authentic leadership will reduce employees' investment in social capital activities through the mediating role of organizational embeddedness, and that relationship is moderated by organizational inclusion. In fact, from a time management perspective (Claessens et al., 2007), employees do deep calculations to reduce their investment in work because the likelihood of being fired in an authentic, ethical, and inclusive environment is low. That is, employees with high organizational embeddedness mean that these employees have high job security and low job mobility (Mitchell et al., 2001), and these employees no longer need to invest excessive resources to maintain their jobs, which may reduce investment in social capital activities. Social capital activities refer to those employees investing resources to develop relationships with external experts and internal colleagues to achieve career success (Coleman, 1990; Xie et al., 2021; Yu et al., 2021). Also, in an organization's highly inclusive environment, employees don't worry about negative outcomes because the organization tolerates employee behaviors. Organizational inclusion means senior leadership's commitment to promoting inclusion, employees' ability to influence organizational decisions, and fair/equitable treatment by management (Sabharwal, 2014).

FIGURE 1
Research model of this research.
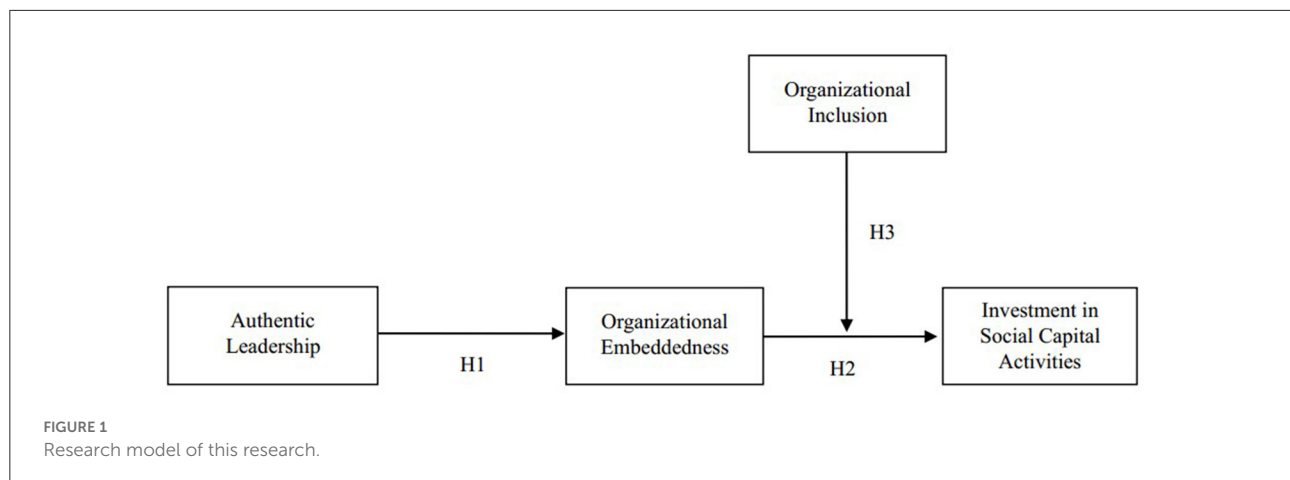
Taken together, the current research plans to build a new stream of authentic leadership literature to explain why it can negatively affect investment in social capital activities through the mediating role of organizational embeddedness, and that relationship is moderated by organizational inclusion. The negative impact of authentic leadership is significant because it may worsen employee career development and organizational performance.

Literature reviewing

The current research constructs a novel moderated mediation model of organizational embeddedness to describe the effects of authentic leadership on organizational embeddedness and investment in social capital activities, and the relationship is moderated by organizational inclusion (Figure 1).

Authentic leadership and organizational embeddedness

Organizational embeddedness represents an employee's decision to remain in the organization, and past researchers (Mitchell et al., 2001) proposed three dimensions of organizational embeddedness, including employee-organizational bond, fit, and commitment. The current research argues that authentic leadership increases the organizational embeddedness of employees. In fact, authentic leaders use relationship transparency, internalized ethical perspective, and a balanced approach to manage their followers, so the process of authentic leadership can shape an ethical environment that allows those followers to develop stronger bonds with their colleagues. Furthermore, leaders can communicate organizational values to subordinates (Huang et al., 2022),

and leaders can guide subordinates' self-values to align with organizational values, which will increase fit and commitment between employees and their organizations.

Proposition 1: Authentic Leadership positively affects organizational embeddedness.

Organizational embeddedness and investment in social capital activities

Employees with a high level of organizational embeddedness represent two things. The first is that these employees have a higher fit with the organization, so these employees are less likely to find new jobs, which can reduce the incentive for these employees to invest in social capital activities, such as building relationships with outside experts. The second is that these employees are highly connected to the organization, so the likelihood of these employees being fired should be low, which reduces the incentive for these employees to invest in social capital activities, such as building relationships with internal colleagues. In fact, these employees invest a lot of time and energy in maintaining relationships with external experts and internal colleagues, but their resources are limited. Based on a time management perspective (Claessens et al., 2007), these employees should account for these limited resources to reduce work resource allocation because the likelihood of being fired or finding a new job is low.

Proposition 2: Organizational embeddedness negatively affects investment in social capital Activities.

The moderating role of organizational inclusion

As above-mentioned, employees may reduce their investment in jobs (e.g., social capital activities), because

they no longer worry about losing their jobs in a status of high-level organizational embeddedness. In fact, organizational inclusion may boost the relationship between organizational embeddedness and investment in social capital activities, because employees can feel safer reducing more investment in social capital activities in a more inclusive environment. That is to say, employees in the status of a higher level of organizational inclusion may reduce more investment in social capital activities than employees in the status of a lower level of organizational inclusion.

As noted above, employees may invest less in their jobs (e.g., social capital activities) because they no longer fear losing their jobs in a state of high levels of organizational embeddedness. In fact, organizational inclusion may deteriorate the relationship between organizational embeddedness and investment in social capital activities, as employees can invest less in social capital activities in a more inclusive environment. That is, employees who perceive more organizationally inclusive are likely to reduce their investment in social capital activities more than those who perceive less organizationally inclusive.

Proposition 3: Organizational inclusion will negatively moderate the relationship between organizational embeddedness and investment in social capital activities.

Discussion

The current research adopts a time management perspective (Claessens et al., 2007) to reveal the negative impact of authentic leadership on investment in social capital activities, and that relationship is moderated by organizational inclusion. In fact, previous surveys have always examined the positive impact of authentic leadership on employee behaviors, but few studies have demonstrated the negative impact on employee behaviors. Thus, the current study opens up a new milestone in authentic leadership.

Based on the perspective of time management (Claessens et al., 2007), the current research draws on the literature on leadership, organizational embeddedness, and organizational inclusion to initiate an investment mechanism for social capital activities, which has interdisciplinary contributions.

Building on the research model of the current research, the current research shows that there are multiple management strategies that firms can employ to mitigate the negative impact of authentic leadership on investment in social capital activities, such as job rotation, as it reduces the negative impact of organizational embeddedness.

Finally, it is possible that other activities may also strive staff to rationalize their working time, so future research should deeply scrutiny other key activities. For example, human capital activities may be one of the other activities that may also strive staff rationalize their working time, because human capital activities also consume staff many resources to realize knowledge skills (Wang et al., 2019; Hu and Yao, 2021; Shen et al., 2021), such as the education training and obtaining an advanced degree.

Author contributions

C-JL: conceptualization and writing—original draft. SH: project administration, supervision, and writing—revised draft. T-WC and S-CL: literature collection, idea generation, and writing, review and editing—revised draft. All authors contributed to the article and approved the submitted version.

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.

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The implications of inefficient markets for executive pay comparison: The case of China and Poland

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Although there is a large volume of literature on executive compensation, few of these studies have focused on executive pay comparisons and even fewer on the antecedents of executive pay comparisons. This paper fills this gap in executive pay comparison literature by beginning with executive pay comparison behaviors, and then the elements that influence executive pay comparison behaviors are discussed. A questionnaire survey found that executive pay comparison behaviors exist in both China and Poland. Furthermore, the findings show that the factors influencing executive pay comparison behaviors are different in the two countries. In China, there is a significant relationship between executive pay comparison behaviors and the dysfunctional agent market, herd mentality. And in Poland, there is a significant relationship between executive pay comparison behaviors and the ineffectiveness of government intervention, herd mentality. The implications of the study are also discussed.

Introduction

Executive compensation has been rising rapidly worldwide in recent years. Relevant research institutions in the United States have found that in 2016, there were eight listed companies whose CEO compensation exceeded the US $ 30 million[1] (Market Watch, 2017). The stricter government regulation, the higher executive compensation (Murphy and Jensen, 2018). The compensation of the new Air France president reached 4.25 million EUR[2] (China Aviation Daily, 2018), which may mark a new peak. Similarly, in China, the "Government Pay Restrained Policy" has been implemented for 3 years, but executive compensation has risen without falling[3] (CBN, 2019).

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1 http://www. marketwatch. com/story/ceo-average-pay-climbed-more-than-1-million-in-2016-2017-04-12
2 http://www.chinaaviationdaily.com/news/70/70183.html
3 https://www.yicai.com/news/100156198.html

The principal–agency theory assumes that agents tend to pursue their interests and that principals, therefore, need to incentivize agents, with pay contracts being one of the primary means of incentivization (Murphy, 1986; Jensen and Meckling, 2019). However, individual perceptions of pay incentives are more social than traditional agency theory (Gartenberg and Wulf, 2017), and agents do not "see things the same way" as their principals. They define their capabilities and values by comparison (Festinger, 1954). Pay is often used as a benchmark for comparison (Kacperczyk and Balachandran, 2018), which may lead to a higher overall pay level.

To a certain extent, an excessive rise in executive compensation can lead to a growing pay gap between executives and ordinary workers or executives, ultimately causing employee discontent, social inequalities, and potential social instability (Gartenberg and Wulf, 2020). Therefore, executive compensation needs to be controlled. The European Countries (Finland, Romania, Germany, Portuguese, and Poland) enacted draft legislation in 2017 to propose new capital requirements, as well as a variety of transparent and open measures to supervise the rapid growth of executive compensation, to stop anomalous bank bonuses, and thus to promote the healthy development of the banking industry and avoid potential financial crises. Most of the larger banks operating in Poland pursued a conservative policy of setting their executive compensation structures (Sturesson, 2015) so that they could select a beneficial structure. The Chinese government has also taken measures to regulate executive compensation. Still, unfortunately, these actions did not achieve the expected results[4] (China.com, 2017), and recently, "pay restriction orders" have been reissued for state-owned financial enterprises[5] (China Ministry of Finance, 2022). In the financial industry, there is no specific standard for the compensation of bank executives in China, and many banks, under the guise of marketization, have been increasing their executive compensation, with other enterprises moving closer to them year by year. This shows that enterprises in China (especially in the financial industry) have a severe comparison to executive compensation. Moreover, in a monopoly industry, the evaluation of executives is based on their performance and the use of "global benchmarks" (Cabral et al., 2016; Keller and Olney, 2021) to increase their compensation within a monopoly environment. Therefore, to some extent, executive compensation is not entirely determined by traditionally assessable factors (performance, ownership, etc.). Without specific criteria, executives tend to compare their compensation with peers in the same group and thus increase their compensation (De Vaan et al., 2019).

This paper analyzes the factors influencing executive pay comparison behaviors in China and Poland. The two countries were chosen for comparison for three main reasons: first, Poland is one of the largest and most dynamic economies in the CEE region in terms of recent GDP, population, and interconnectedness with Western Europe (Sahakiants and Festing, 2019). China is the second largest economy in the world, and it is clear that both countries play an important role in their respective regions and the world. Second, Poland was one of the first Communist countries to start the transition from a centrally planned economy to a market economy (Lipton, 1990; Hegarty and Tihanyi, 1999). By the end of 1989, Poland's centrally planned system collapsed, and the Central and Eastern European economies were all in weak shape. This led to Poland's transition (Bienkowski, 2002) from a centrally planned economy to a market economy (Brewster and Bennett, 2010), the separation of economy from politics (Kostera, 1995), and the privatization of state enterprise (Baltowski and Mickiewicz, 2000). Both China and Poland are former planned economies and currently emerging market economies. Therefore, they have some historical and external environment comparability. Finally, the Polish market is relatively more open, most banks are under the control of foreigners (Slomka-Golebiowska and Urbanek, 2016), while state-owned enterprises still monopolize many Chinese industries. Thus, a comparison can be made of the degree of marketization of executive pay comparison behaviors in the two countries.

This paper intends to further investigate executive pay comparison behaviors. Data on executives of Polish and Chinese companies will be collected through field research to analyze the differences in executive pay comparison behaviors between the two countries and the factors influencing the pay comparison behaviors of executives in both countries.

Literature review

Existing studies on executive compensation mainly focus on three aspects: the concept and composition of compensation (Murphy, 1999; Edmans et al., 2017), the comparison of executive compensation across countries and institutional environments (see Herdan and Szczepanska, 2011; Sánchez-Marín et al., 2022), and the factors affecting executive compensation, including performance (Jensen and Murphy, 1990; Elsayed et al., 2018), size (Herdan and Szczepanska, 2011; Iatridis, 2018), internal control (see cook et al., 2019; Lozano-Reina and Sánchez-Marín, 2020), ownership structure (Shan and Walter, 2016; Sánchez-Marín et al., 2022), the institutional environment (Sahakiants and Festing, 2019; Scherer, 2020), and executives' personal factors (Humphery-Jenner et al., 2016; Conyon et al., 2019).

Scholars have recently begun exploring different influencing factors, such as Confucian culture (Jin et al., 2022). As can be seen, newer research is starting to focus progressively on the impact of culture on executive compensation. Indeed, traditionally, Chinese people believe in "not having a problem with scarcity but having a problem with unevenness." In reality, some people have a "red eye" and like to compare, especially enjoy comparing themselves with people who are better than them, and scholars have found that employees compare themselves to their managers and peers (Gartenberg and Wulf, 2017; Cullen and Perez-Truglia, 2022),

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these compare need to work through a medium, a benchmark (De Vaan et al., 2019), and compensation is a benchmark often used for comparison (Obloj and Zeng, 2017; Kacperczyk and Balachandran, 2018).

People will care about their absolute and relative compensation (e.g., Frank, 1984), and social comparison influences pay level and the sensitivity of pay for performance (Gartenberg and Wulf, 2017). In addition, increased competition leads to greater pay for performance sensitivity among the higher-paid managers within firms, while it leads to greater overpayment among others (Gartenberg and Wulf, 2020). Therefore, pay comparison widely exists in executives of a similar status. Generally, people tend to choose better or more professional people than themselves for comparison and to engage in "upward comparisons" (Burnell et al., 2019). If high-income earners' capital and energy investments are lower than or equal to the executives, the executives will choose passive responses and compare. Executives may adjust their labor by shortening the labor time and reducing labor intensity to "make up" the gap, resulting in low economic efficiency (Li and Liu, 1986; Cullen and Perez-Truglia, 2022). Therefore, the phenomenon of executive pay comparison behaviors should be taken seriously, and the antecedents of executive pay comparison behaviors should be explored in depth to curb executive pay comparison behaviors at the source.

However, most of the studies, data, and information on executive pay comparison behaviors come from the United States (Gartenberg and Wulf, 2017, 2020; Cullen and Perez-Truglia, 2022). In China, scholars explained the apparent phenomenon of executive pay comparison behaviors (Ge and Gao, 2013; Luo et al., 2016; Luo and Zeng, 2018) and the negative impact (Luo et al., 2016; Luo and Zeng, 2018). Research on executive compensation in Poland is sparse. Using "executive compensation" as a keyword, Google returns approximately 2,200,000 results. When using "Poland executive compensation" as a search keyword, only about ten thousand results were acquired, Among the results obtained, Poland is often a part of the CEE countries, and an example that explains one phenomenon, occupying a small space, and the literature on the specialized study of executive compensation is <10, and there are no studies on executive pay comparison behaviors in Poland. Therefore, it is of some theoretical and practical importance to explore executive pay comparison behaviors and factors influencing executive pay comparison behaviors in both China and Poland.

To explore executive pay comparison behaviors and factors to affect executive pay comparison behaviors, this study introduces social comparison theory (Festinger, 1954), and social information processing theory (Salancik and Pfeffer, 1978). This study suggests that executive comparison behaviors will influence executive compensation based on social comparison theory and social information processing theory. According to social information processing theory, individuals, as adaptive organisms, adapt attitudes, behavior, and beliefs to their social context. This leads to the situation that one can learn most about individual behavior by studying the informational and social environment within which

that behavior occurs and to which it adapts (Salancik and Pfeffer, 1978: 226). Whereas according to social comparison theory, Festinger (1954) offered some insights into processes of informational social influence in his theory of social comparison. Social comparison is a deliberate act of the individual, an individual always uses similar others for comparison (Festinger, 1954), and compensation is the benchmark often used for comparison (Kacperczyk and Balachandran, 2018). Therefore, individuals make social comparisons based on information about individuals' compensation, and the greater the individual herd mentality, the more serious the pay comparison. Additionally, the social environment in which people live provides information that influences their attitudes and behaviors. People process the social information around them to better understand their work environment, and in turn, this information-processing process shapes their subsequent attitudes and behaviors (Salancik and Pfeffer, 1978). Agent market, monopoly, and ineffectiveness government intervention belong to the social environment. Accordingly, Executives will understand their situation through these surrounding social environments, and this information process will shape their subsequent attitudes and behaviors (executive pay comparison behaviors).

Dysfunctional agent market and executive pay comparison behaviors

Social information processing theory proposes that organizations use the market to evaluate personnel, force employees to market-test their worth, can develop a less friendly disposition towards the organization and their work. Some individuals may avoid looking at the external market because if they realize by comparison that there are alternatives in the market, it will make them less satisfied with the current situation and, in turn, affect their work attitudes and behavior (Salancik and Pfeffer, 1978). Thus, markets can impact individuals' work attitudes and behaviors.

As the complexity of enterprises has increased, the demand for management capacity has also increased, especially in family businesses. Many successors are the family's offspring (Schlömer-Laufen and Rauch, 2020). Sometimes, a family may want to appoint non-family managers to take over the business when their offspring is low on idiosyncrasy (Zaudtke and Ammerman, 1997). However, some families also reduce the appropriate risk of engaging nonfamily managers by handing over their business to long-serving employees who have proven their trustworthiness (Lee et al., 2003).

Similar to studies on incentive contracting based on the principal-agency theory (Garen, 1994; Sánchez-Marín et al., 2022), Lee et al. (2003) state that, based on transaction costs, an incompleteness of contracts and the hazards of opportunism in engaging agents have also been found. There are competing labor markets with outside agents available to take over the business. Therefore, competitive compensation exists for the agent. Once

they are recruited, the competitive labor situation will transform into one of small numbers of bargaining (Williamson, 1979) between the agent and the family business. With coordination costs and risks continuing to rise, as well as their personal preferences, companies tend to train and select the "puppet" type of professional managers because they can use this strategy to decrease the risks that an excellent manager may take but also to retain absolute power. Moreover, the consensus has been that misaligned incentives, a lack of transparency, and moral hazards caused by implicit guarantees have recently led to market failures in the broader environment of the financial markets (Min, 2014). Stimulated by this environment, agents often choose to start their own businesses; the executives' long-term accumulation of social resources (connections to people and capital) also enhances their ability to do that (Li, 2003). This has resulted in a reduced supply of professional managers, meaning that the agent supply does not equal the demand in this market. So agent compensation depends not on a normal market but on a dysfunctional market.

Jensen et al. (2004) indicate that most company compensation relies on "external market standards" to determine the structure and level of executive compensation. When a manager's supply decreases, this raises the standard of compensation provides motivation to increase the level of executive compensation, and prompts executive compensation to be close to the benchmark. Managers compare themselves to others whose compensation is higher than theirs, thus increasing their compensation. Take the banking industry as an example in Poland, all banks are controlled by a single, easily-identifiable, large shareholder, and most are under foreigners' control, so local executives are supervised by foreigners (Slomka-Golebiowska and Urbanek, 2016). This makes some executives feel the owner lacks trust, so they cannot work wholeheartedly. While in China, there is a lack of a manager market (Chen and Fang, 2020). Although most companies expect to hire professional managers (Li, 2003), due to the deep-rooted influence of Chinese traditional culture, usually the offspring are appointed to be the managers (Schlömer-Laufen and Rauch, 2020). Experienced managers will only be recommended when the offspring's are unwilling to inherit their father's career. But there may be distrust between the professional managers and the owners. The problem of the principal-agent relationship still exists. To some extent, the Chinese manager market is malfunctioning. Thus, we propose the following hypothesis:

H1: Dysfunctional agent market will be positively related to executive pay comparison behaviors.

Monopoly and executive pay comparison behaviors

Salancik and Pfeffer (1978) stated that satisfaction with the intrinsic aspects of the job decreases when external pay and benefits are more prominent. In other words, when individuals perceive that executives in the same industry are better paid than they are, their attitudes and behaviors change.

Some scholars (Frydman and Saks, 2010; Sabanci and Elvira, 2020) have found that executive compensation varies greatly among different industries and that industry characteristics significantly affect the level and structure of executive compensation. In industries with a high degree of monopoly, corporate executives can apply pressure more easily on the board of directors to develop a compensation contract that will benefit them through internal control (Main et al., 1995). Meanwhile, executives have a relatively larger power than others in many countries, and thus they can use this to control the behaviors of the boards of directors (Bebchuk et al., 2002). In China, this is obvious in monopolized industries, which are the "status industries" (tobacco, petroleum, and petrochemical). In Poland, the reform of the economy retained control over the goods and services field, such as public utilities, public transportation, and goods produced in highly concentrated sectors, such as coal, where monopolistic practices might be expected (Lipton, 1990), in addition to the fact that all banks are controlled by a single, easily identifiable, large shareholder (Slomka-Golebiowska and Urbanek, 2016). As the degree of monopoly increases, an executive's power will be much larger, and executives can self-price their compensation in this environment; with contractions in benefits, they will compare their compensation to other higher benchmarks. The executive compensation baseline is also raised, and corporate executives will compare their compensation with this baseline. This benchmark compensation concept can also explain the dramatic growth of US corporate executive compensation (Pittinsky and DiPrete, 2013) and the reasons for the outrageous executive compensation in China and some European countries. Therefore, we propose the following hypothesis:

H2: Monopoly will be positively related to executive pay comparison behaviors.

Ineffectiveness government intervention and executive pay comparison behaviors

Salancik and Pfeffer (1978) argued that some literature on the salience of information and field studies of intrinsic and extrinsic reasons support their arguments. That is, one's own behavioral choices are attributed to extrinsic reasons, such as government intervention.

Mantzavinos stated (2001:11), "the exploration of individual behavior within its social setting, human behavior is influenced by culture and institutions." As such, human actions are often influenced by institutions. Therefore, it is necessary to consider the social environment, especially institutions and government, when analyzing the behaviors of individuals (Mantzavinos, 2001). To prevent executives from abusing their power and increasing their

compensation, corporate shareholders have taken many measures, such as introducing strategic investors, establishing a remuneration committee, hiring outside directors, etc., (Conyon, 2006; Kanapathippillai et al., 2019). However, company power is still highly concentrated in the hands of the executives. Moreover, the power of corporate executives and the personal benefits they can obtain are positively correlated. With growing power, executives will get used to manipulating earnings to enhance performance-related pay (Basu et al., 2007). In this case, the market (invisible hand) fails to adjust compensation to the position, and the only party that can limit and control executive pay is the government. The government can use the "visible hand" (legal, economic, and administrative measures) to intervene. However, in China, the government has not effectively regulated executive compensation among listed companies (Huang and Xi, 2009; Chen et al., 2010). This phenomenon also exists in the United States and European countries (Murphy and Jensen, 2018), as government workers always use their power to "free ride" (benefit from other people's efforts). Given the ineffectiveness of the government, executives in state-owned companies with no control will compare themselves to other people whose higher compensation is then increased. In Poland, before 2012, there were no specific laws on the level and structure of executive compensation in the financial sector institutions. The only issue subject to regulation was the transparency of executive compensation in listed companies (Slomka-Golebiowska and Urbanek, 2016), while many listed companies in Poland do not publish information on directors' remuneration (Herdan and Szczepanska, 2011). So the government intervention was ineffective. In China, the government has been attaching great importance to executive compensation chaos and adopted a "Pay Restrained Policy" to regulate the compensation of executives. However, the expected results were not achieved. The payment of corporate executives remained high and even continued to rise (the annual report of listed companies in 2016 shows that behind the "Pay Restrained Policy," the chairman of many listed state-owned enterprises no longer receives compensation from listed companies, while the average annual compensation of a state-owned enterprise chairman who is still receiving compensation shows an upward trend, so to some extent, the intervention of Chinese government is also ineffective. Thus, we propose the following assumption:

H3: The ineffectiveness of government intervention will be positively related to executive pay comparison behaviors.

Herd mentality and executive pay comparison behaviors

According to social comparison theory (Festinger, 1954), in the absence of objective criteria, each individual uses others as a yardstick for comparison to self-evaluate. Specifically, firstly, people are driven to evaluate their own opinions and abilities; secondly, non-social means are to some extent inapplicable, so people evaluate their own opinions and abilities by comparing themselves with others; finally, individuals choose to compare themselves to others who are similar to them, and these comparisons are an important cause of their psychological change.

Herd mentality is an alignment of individuals' thoughts and/ or behaviors in a group that emerges without purposeful coordination by a central authority or leading figure and instead through local interactions among agents (Kameda and Hastie, 2015; Loxton et al., 2020). The herd mentality can cause irrational psychology and behaviors (Loxton et al., 2020). With an inefficient market, the market cannot naturally regulate. When some corporate executives earn high compensation, others will be psychologically imbalanced, and they will not take experience, competence, and performance into consideration, thus leading to blind comparisons: first, they will compare to developed countries; second, they will compare to similar companies; third, they will compare to other companies in their region (Liu et al., 2014). This phenomenon is particularly evident in state-owned enterprises because the market does not select executives in state-owned enterprises but appointed by the government directly (Xinhua, 2018)[6], and this selection process may also lead to many problems. They enjoy national privileges and benefits (from both the government and the company), so they may use information about government people unsuitable for a company. Executives at the same level and industry pursue the same treatment and compensation. When corporate executives begin to make blind comparisons because of the herd mentality or because they have a sense of comparison, this will make the executive pay generally higher than the market equilibrium and thus lead to the so-called astronomical rises in compensation. Since herd mentality is a psychology that affects everyone, individuals communicate with others in their environment once it happens. These acts of communication lead to shared mental models, which may result in executive pay comparison. Herd mentality is the nature of humans, and social comparisons are ubiquitous (Campbell et al., 2017), so it is the same in China and Poland. Therefore, we propose the following hypothesis:

H4: The herd mentality will be positively related to executive pay comparison behaviors.

Materials and methods

Procedure and participants

The sample for this study is drawn from China and Poland, including EMBA students in universities and corporate executives

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6 https://baijiahao.baidu.com/s?id=1611864999401186808&wfr=spider&for=pc

(an executive is defined as a company executive manager, assistant manager, chief financial officer, secretary of the board of directors of listed companies or other equivalent position), the research method was mainly through face-to-face guidance, while a small amount was by mail. We designed a preliminary scale questionnaire based on existing literature and expert opinions to verify the above assumptions. First, we selected 30 persons to do the pretest (these results were not included in the final survey sample) in China and Poland (collected mainly in Poland, while Eastern European countries all conclude). During the formal research phase, we distributed 260 questionnaires in China, the final number of valid responses was 161, corresponding to an effective rate of 61.92%. A total of 237 questionnaires were distributed in Poland, the final number of valid responses was 118, most of the uncollected questionnaires were distributed by email, and the effective rate was 49.79%.

Reliability and validity analysis

Based on the pretest feedback, SPSS24.0 was used for conducting the reliability and validity analysis. The results are as follows: in China, the Cronbach's coefficients of each of the factors (Cronbach's) are close to 0.8, with an average of 0.812, which indicates that the entire scale is well reliable. In Poland, the Cronbach's coefficients of each of the factors (Cronbach's) are close to 0.8, with an average of 0.817, indicating that the full scale is well reliable. In China, we did the KMO and Bartlett test of sphericity value analysis for the executive pay comparison behaviors factors scale. The results showed that the KMO value (=0.702) was greater than 0.7 and that the Bartlett (Bartlett) test of sphericity was significant ($p = 0.000$). We then extracted two factors whose characteristic values are greater than one: monopoly and herd mentality. Their cumulative variance explained rate was 65.97%. This indicates that the validity of the entire scale is good. In Poland, we did the KMO and the Bartlett test of sphericity value analysis for the executive pay comparison behaviors factors scale. The results show that the KMO value (=0.714) is greater than 0.7 and that the Bartlett (Bartlett) test of sphericity was significant ($p = 0.000$). We then extracted two factors whose characteristic values are greater than one: the dysfunctional agent market and herd mentality, whose cumulative variance explained rate was 76.389%. This indicates that the validity of the entire scale is good. The last revision was made to the questionnaire to make it more in line with the expression habits of the executives so that they could find it easier to understand and fill it in.

Measures

To ensure the accuracy of the empirical analysis, this research scale refers to authoritative journal literature. Three PhDs in the field were invited to translate and back-translate the scales, and two experts in the field were invited to investigate the scales and

adapt them as appropriate. Five-point Likert scale was used to measure all variables.

Pay comparison behaviors

The eight items were set based on Festinger (1954) and Li and Liu (1986). Example items are, "Found your income returns are lower than your peers or colleagues, you would choose to jump ship to other companies willing to give you a higher return." The Cronbach's α for this scale was 0.809 (China) and 0.784 (Poland).

Dysfunctional agent market

The three items were set mainly based on Li (2003) view on the mismatch between the demand and supply of managers. Typical statements in the scale include "For your company's executives, the situations in which jobs can not match with personal competence appears." The Cronbach's α for this scale was 0.814 (China) and 0.821 (Poland).

Monopoly

The three items were set based on the expressions of market monopoly manifested in the Anti-Unfair Competition Law. Typical statements in the scale include "in your opinion, the situation of some natural monopoly (water, electricity, gas, etc.) and having monopolistic status' industries' (tobacco, petroleum, petrochemical) monopolistic behavior (forced transaction, overcharging) of your company's industries is?" The Cronbach's α for this scale was 0.850 (China) and 0.799 (Poland).

Government intervention

The three items were set based on three primary forms of government intervention. Specific questions are developed to describe the phenomenon by legal, economic, and administrative means. Typical statements in the scale include "The effect which government takes legal and economic instruments (such as policy development, adjusting tax rates, subsidies, etc.) on your company is?" The Cronbach's α for this scale was 0.803 (China) and 0.831 (Poland).

Herd mentality

The four items were set based on Corneoa and Jeanne (1997) analysis of the manifestations of herding. Specific questions are established in various ways and from several domains to measure whether corporate executives "follow the herd." Typical statements in the scale include "If many people are buying one thing, you will go to buy." The Cronbach's α for this scale was 0.782 (China) and 0.850 (Poland).

Control variables

Because individual differences in experience and professional affiliation may affect an employees' attitudes toward his or her work (Bunderson and Thompson, 2009), we controlled for the following variables: age ($1 = 20$–30; $2 = 31$–40; $3 = 41$–50; $4 = $ more

than 50) and tenure (1 = less than 1 year; 2 = 1–3 years; 3 = 3–5 years; 4 = 5–8 years; 5 = more than 8 years).

Basic statistical characteristics

In this paper, we conduct a comparative statistical analysis (Table 1) between China and Poland of the basic characteristics in the sample questionnaire, and the results are as follows:

First, after comparing the primary data between China and Poland, we can conclude that the two countries are similar, with most corporate executives from both countries regarding domestic counterparts as pay comparison objects, accounting for 72.7 and 54.5%, respectively. However, it is worth mentioning that the number of respondents who do not compare their pay with others is larger in Poland than in China, accounting for 20 and 8.1%, respectively, indicating that executive pay comparison behaviors are more prevalent in China. Second, regarding the age of executives, Polish executives are younger compared to China. No Polish respondents were older than 50 years, which is different from China. Finally, regarding the years of executives' service, Polish executives have served for a shorter term, while Chinese executives have mostly served more than 5 years. On the one hand, this indicates that Chinese executives may be more loyal than their Polish counterparts; on the other hand, this may also mean that it takes Chinese employees longer to reach an executive position.

Statistical results

Correlation analysis

Using SPSS24.0 software to conduct the Pearson correlation analysis, we obtain the following findings: in China (Table 2), executive pay comparison behaviors positively correlate with herd

mentality ($r = 0.185$, $p < 0.05$); however, there is no relationship between executive pay comparison behaviors and ineffectiveness government intervention, monopoly, or herd mentality. In Poland (Table 2), executive pay comparison and monopoly are positively correlated ($r = 0.332$, $p < 0.05$), and it is also significantly positively correlated with herd mentality ($r = 0.297$, $p < 0.05$). At the same time, there is no correlation between executive pay comparison behaviors and other influencing factors.

Regression analysis

We used SPSS 24.0 to do a linear regression analysis to reveal the relationship between various factors and executive comparative pay, and we obtained the following results for China (Table 3). First, there is a significant relationship between executive pay comparison behaviors and dysfunctional agent market, herd mentality. At the same time, there is no relationship between executive pay comparison behaviors and the other two factors.

The same linear regression analysis as in China was conducted for the Polish sample (Table 3). We obtained the following results: there is a significant relationship between executive pay comparison behaviors and ineffectiveness of government intervention, herd mentality. There is no relationship between executive pay comparison behaviors and the other two factors.

Discussion

Through comparative research of the two countries, the following conclusions can be reached:

First, executive pay comparison behaviors exist in both China and Poland, but the number of respondents who do not compare their pay with others is higher in Poland than in China. Second,

TABLE 1 Basic characteristics of the sample.

	Items	Sample distribution					Total (%)
China	Comparison Targets	Abroad	Domestic	Within the company	Other	Do not compare	
		11.8%	72.7%	5%	2.5%	8.1%	100
	Age	20–30	31–40	41–50	More than 50		
		6.8%	52.2%	38.5%	2.5%		100
	Duration	Below 1 year	1–3	3–5	5–8	More than 8	
		2%	17.4%	25.5%	14.9%	41%	100
Poland	Comparison Targets	Abroad	Domestic	The company	Other	Do not compare	
		9.1%	54.5%	10.9%	5.45%	20%	100
	Age	20–30	31–40	41–50	More than 50		
		27.3%	61.8%	10.9%	0.0%		100
	Duration	Below 1 year	1–3	3–5	5–8	More than 8 years	
		10.9%	23.6%	23.6%	20%	21.8%	100

TABLE 2 Correlation analysis result between the relevant variables.

	Variable	M	SD	1	2	3	4	5	6	7
China	1. Executive pay comparison behaviors	17.155	2.919	1	−0.151	−0.142	0.021	0.185*	0.155	0.082
	2. Dysfunctional agent market	9.335	2.318	−0.151	1	0.173	−0.013	0.053	0.33	−0.091
	3. Monopoly	7.491	1.647	−0.142	0.173	1	0.060	−0.026	0.13	−0.053
	4. Ineffectiveness of government intervention	9.665	2.670	0.021	−0.013	0.060	1	0.027	−0.099	0.31
	5. Herd mentality	11.360	2.002	0.185*	0.053	−0.026	0.027	1	0.074	−0.073
	6. Age	2.367	1.237	0.155	0.13	−0.099	0.074	−0.22	1	0.086
	7. Tenure	3.789	0.649	0.082	−0.091	−0.053	0.13	−0.073	0.086	1
Poland	1. Executive pay comparison behaviors	21.582	3.457	1	0.219	0.033	0.332*	0.297*	0.136	0.435
	2. Dysfunctional agent market	8.382	2.805	0.219	1	0.023	0.109	−0.211	0.084	0.311
	3. Monopoly	11.636	2.460	0.033	0.023	1	0.073	−0.211	0.234	0.087
	4. Ineffectiveness of government intervention	10.146	2.013	0.332**	0.109	0.073	1	0.340	−0.149	0.111
	5. Herd mentality	11.346	2.977	0.297**	−0.211	−0.211	0.340	1	−0.185	−0.214
	6. Age	1.836	0.601	0.136	0.084	0.234	−0.149	−0.185	1	0.738
	7. Tenure	3.182	1.321	0.435	0.311	0.087	0.111	−0.214	0.738	1

*p<0.05, **p<0.01.

TABLE 3 The relationship between executive pay comparison behaviors and various affecting factors: OLS regression results.

		Executive pay comparison behaviors (China)		Executive pay comparison behaviors (Poland)
Ineffectiveness of government intervention	Sig	0.923	Sig	0.013
	Number of samples	161	Number of samples	118
Dysfunctional agent market	Sig	0.048	Sig	0.552
	Number of samples	161	Number of samples	118
Monopoly	Sig	0.216	Sig	0.638
	Number of samples	161	Number of samples	118
Herd mentality	Sig	0.018	Sig	0.028
	Number of samples	161	Number of samples	118
Age	Sig	0.074	Sig	0.263
	Number of samples	161	Number of samples	118
Tenure	Sig	0.694	Sig	0.272
	Number of samples	161	Number of samples	118

the dysfunctional manager agent market is one reason for executive pay comparison behaviors in China, whereas this is not apparent in Poland. China has a strong family culture but lacks a stable external labor market (Kim and Gao, 2013). Indeed, Li (2003) studied family firms in economically developed areas of eastern coastal China and found that agency market failures were widespread. However, in today's complex economy and highly competitive society, when the agent's market is dysfunctional, professional managers face greater market competition outside the organization and less room for career development within the organization, they will focus more on their career development than on pay comparison. Thus, the results show a negative relationship between the dysfunctional agent market and executive pay comparison behaviors. Third, herd mentality is a common factor that causes executive pay comparison behaviors in the two countries. Herd literature suggests that people tend to discount their beliefs and imitate others when making adoption decisions (Sun, 2013), and the herd mentality can result in anxiety and irrational behaviors (Sherman et al., 2021). So it is not difficult to explain that herd mentality is the same factor that causes executive pay comparison behaviors in the two countries. Fourth, ineffective government intervention is one factor that causes executive pay comparison behaviors in Poland, whereas this is not apparent in China.

In summary, the market is the main reason for the differences between the two countries. China and Poland used to be planned economies and are now emerging market economies. While they may face similar situations, their different degrees of marketization can also lead to different outcomes.

Theoretical contributions

This study makes the following theoretical contributions: (1) The introduction of executive comparison into examining executive compensation issues has enriched and improved the theoretical analysis of executive compensation. Previous research on the influence of executives' personal effects on compensation has focused on the influence of executives' wealth (Becke, 2006) and personal experience (Conyon et al., 2019), ignoring the influence of executives' psychological effects on compensation. Additionally, recent research has found that employees compare themselves to their managers and peers (Gartenberg and Wulf, 2017; Cullen and Perez-Truglia, 2022). According to social comparison theory, People evaluate themselves by comparing themselves with others (Festinger, 1954), and tend to choose people who are better or more professional than themselves to engage in "upward comparisons" (Burnell et al., 2019). The executive pay comparison behaviors discussed in this study, which is a comparison between executives and individuals of the same person in the unit, complements existing research. (2) The questionnaire survey from two countries (China and Poland) are significant in revealing executive pay comparison behaviors. While existing domestic and international studies on executive pay comparison behaviors are almost always focused on individual countries (Luo et al., 2016; Luo and Zeng, 2018; Gartenberg and Wulf, 2020). This study compares executive pay comparison behaviors in Poland and China, which is the first attempt to make a cross-cultural comparison, advancing the study of multicultural contexts in this field. (3) The first time that the factors influencing executive pay comparison behaviors are analyzed and explored. Existing research on executive pay comparison behaviors mainly encompasses the impact of comparison behaviors on compensation (Liu et al., 2014; Gartenberg and Wulf, 2017) and an exploration of the consequences of pay comparison (Luo et al., 2016; Luo and Zeng, 2018; Cullen and Perez-Truglia, 2022), this study focuses on the antecedents of executive pay comparison behaviors, making the study of executive pay comparison behaviors more complete.

Practical implications

In recent years, the management of executive compensation in many state-owned enterprises and listed companies, whether in China or Poland, has seriously gone out of control and excessive compensation has occurred (Liu et al., 2014; Słomka-Gołębiowska, 2016), largely due to the existence of a blind comparison in executive compensation and the lack of effective regulatory countermeasures by the relevant state departments. Curbing the blind rise in executive compensation and maintaining the fairness and stability of the executive compensation market is a pressing issue in the current social economy. The findings of this paper provide new ideas to address this issue.

First, we must eliminate herd mentality to eliminate executive pay comparison behaviors from their roots. This study found that herd mentality positively correlates with executive pay comparison behaviors in China and Poland. That is to say, the stronger the herd mentality, the more executive pay comparison behaviors the executives will get. Asch (1956) confirmed that the main reason for the emergence of herd mentality is mainly due to two aspects: to make most people believe they are initially driven by the desire to be correct and to make a good impression on others. The process of herd mentality that is produced mainly includes three steps: compliance (the start of herd mentality), identity (an individual voluntarily accepts the views, information, or group norms that are consistent with others), and internalization (the final stage of herd mentality). A person may herd depending on the type of person and the group members; generally, people who lack self-confidence and have higher requirements are more accessible to herd. While the higher prestige of group members allows individuals to find a sense of belonging, it can also increase the possibility of individual herding. Therefore, we should restrain the herd mentality at the beginning. In terms of individuals, managers of corporate executives should have some understanding of the character of the executives so that they can take measures to weaken their tendency to make negative comparisons. The formation of small groups used for negative comparisons should be controlled in terms of groups. In terms of the environment, we should cultivate moral rules that are characterized primarily by the fact that they require a kind of behavior that is contrary to the interests of individuals. Typical examples of such ethical rules are "keep promises," "do not cheat," "respect other people's property," and "tell the truth." (Mantzavinos, 2001). We should also celebrate high values in the whole society, promote maverick types of personalities, scorn and combat behavior called "going with the flow." Second, to increase government intervention, the government should play a role that is not just empty. This paper shows a positive correlation between executive pay comparison behaviors and the ineffectiveness of government intervention in Poland, while it is not apparent in China. The function that government intervention can play cannot be ignored: market failures need the "visible hand" of government intervention to supervise companies' behavior in a political, economic, and legal way. Murphy and Jensen (2018) argue that the reality is that executive pay is already heavily regulated but that these regulations have had little effect. Part of the problem is that regulation is inherently focused on a relatively narrow aspect of compensation, leaving companies plenty of scopes to circumvent regulation by changing other, less regulated parts of their compensation. Therefore, Interventions should strengthen the general supervision and discipline of executives. Externally, it should mainly enhance the supervision of the public, media, and public opinion; internally, it should provide top-down vertical and horizontal restraints among peers for corporate executives.

Limitations and future research

Although our study has several strengths, such as using two countries for comparative analysis and collecting data in three languages to avoid possible linguistic misunderstandings, our study still has several limitations that should be acknowledged. Firstly, executive pay comparison behaviors are a unique management issue. There is not yet sufficient authoritative literature worldwide to draw on, nor are there established scales that can be used directly. Although we have developed scales concerning the authoritative literature, the results are slightly less representative due to the difficulty of obtaining a large sample of executives. We encourage future research to expand the sample as much as possible to make the scales more broadly representative. Secondly, we used a questionnaire to collect data to test our hypotheses. However, future research may consider other research methods, including qualitative methods, laboratory studies, and other diverse methods to explore issues related to executive pay comparison behaviors. Third, this study focus on the antecedents of executive pay comparison behaviors, it complements existing studies that focus only on the consequences of executive pay comparison behaviors (Luo et al., 2016; Luo and Zeng, 2018; Cullen and Perez-Truglia, 2022), it does not address the outcomes of executive pay comparison behaviors and falls slightly short in completeness, and we encourage future studies to address a more comprehensive and systematic exploration of "antecedents - executive pay comparison behaviors– consequences." In addition, It would also be interesting to experiment with executive pay comparison behaviors as a moderating variable.

Data availability statement

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

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Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

Author contributions

YL and HL conceived and designed the work, YL collected, analyzed, interpreted the data, and drafted the article. YL and HL are responsible for the modifications. All authors contributed to the article and approved the submitted version.

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.

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Can proactively confessing obtain your embrace? Exploring for leader's pro-social rule-breaking consequences based on a self-verification perspective

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Introduction: The effect of leader pro-social rule breaking on employees is a critical albeit underexplored topic within the domain of study on the consequences of pro-social rule breaking in organizations. This study attempts to make up for the gap by exploring the relationship between leader pro-social rule breaking and employee voice. Drawing on the theory of self-verification, we theorize that leaders who perform pro-social rule breaking will seek feedback from their subordinates, while employees being sought will be triggered to voice upwardly, the extent to which intensity of voice is moderated by the moral courage of employees.

Methods: A total of 283 dyads data of supervisor−subordinate from Shanghai, China, in a three-wave time-lagged survey provided support for our hypotheses.

Results: The results show that leader pro-social rule breaking is positively related to leader feedback-seeking, which is positively related to employee upward voice and mediates the relationship between the two. Moreover, the positive relationship between leader pro-social rule breaking and leader feedback-seeking as well as the indirect effect of leader pro-social rule breaking on employee upward voice via leader feedback-seeking was weakened when moral courage is high.

Discussion: The present study promotes the theoretical research on the positive results of leader pro-social rule breaking and also suggests that feedback-seeking would be an effective way for leaders to motivate employees' upward voice.

KEYWORDS

leader pro-social rule breaking, feedback-seeking, upward voice, moral courage, self-verification

1. Introduction

Organizational formal rules regulate organizational members' behaviors, they are expected to follow numerous organizational rules to maintain the steady operation of the organization (Derfler-Rozin et al., 2016), but as the saying goes, great leaders not only create rules but also break them, because they often break rules for the sake of promoting the welfare of the organization or its stakeholders, which is defined as pro-social rule breaking (PSRB) (Morrison, 2006). For example, the department manager permits the employees in financial difficulties to get their salary in advance, or the office director allows the employees to make copies directly without the consent of the secretary in order to save time. In a survey conducted by Kaufman (2013), more than 80% of participants reported engaging in pro-social rule breaking. These prevail behaviors in all kinds of organizations have also captivated scholars' attention (Ferreira et al., 2017; Shum et al., 2019; Janssen and Eberl, 2021; Liu et al., 2022).

Historically, researchers focused on exploring the antecedents of pro-social rule breaking (Morrison, 2006; Dahling et al., 2012; Baskin et al., 2016; Wang F. et al., 2021; Khattak et al., 2022; Yang et al., 2022), while very few studies have been done on its outcomes, especially the effects of leaders' pro-social rule breaking on employee behavior. For exceptions, Chen et al. (2019) identified that leader pro-social rule breaking can cause employees pro-social rule breaking, and Li et al. (2019) proved that leader pro-social rule breaking would enhance the leadership identity of employees with high psychological maturity. In fact, leaders' pro-social rule breaking might have a greater impact on the subordinates because the leaders tend to be more powerful than their followers by virtue of their superior hierarchical positions (Aguilera and Vadera, 2008; He et al., 2022); therefore, the consequences of the behaviors are more difficult to estimate (Bryant et al., 2010). Thus, as an extra-role behavior with pro-social motivation, we expect that leader pro-social rule breaking will affect the employees' extra-role behavior; however, it is regrettable that the existing research is still insufficient in this regard.

Employee voice—defined as upward-directed, discretionary, verbal behavior by a member intended to benefit an organization (Detert and Burris, 2007)—is a most representative extra-role behavior (Grant and Mayer, 2009; Long et al., 2015) and plays an important role in advancing the reformation and improving organizational effectiveness (Hsiung, 2012; Liang et al., 2012; Satterstrom et al., 2020), meanwhile serving as an effective source resolving information vacuum around the leader arisen from the difficulties in retrieving useful information accompanied with the promotion of leader's position (Detert and Treviño, 2010; McDowall et al., 2010; Ashford et al., 2018). A large number of studies have shown that leadership factors are also important reasons for employees' voice behavior

(Chen and Hou, 2016; Liu et al., 2017; Randel et al., 2018; Tan et al., 2020). Pro-social rule breaking and voice are both extra-role behaviors with characteristics of pro-social and risky (Grant and Mayer, 2009; Burris, 2012; Vardaman et al., 2014). Will the risk-taking behavior of a leader for the benefit of the whole or others serve as an example to employees and convey the signal that the organization allows radical behavior and shows trust while seeking understanding of subordinates so as to encourage employees to speak up? This study intends to shed light on this interesting problem.

The leader who performed pro-social rule breaking for the organization or/and the employee wishes that subordinates could understand and even support the pro-social rule breaking, though he knows that his behavior has against the rules. In addition, employees would weigh the risk of the upward voice to decide whether to implement it or not (Ashford et al., 1998; Liu et al., 2017). Based on self-verification theory, managers as a focal individual will present themselves accurately by adopting certain interaction strategies so that others understand them as they understand themselves (Swann, 1983) and thus accept the selfless motivation behind their violations. In this case, the leader taking the initiative to seek feedback from subordinates may be an effective way to open information communication channels and solve the dilemma of both sides. Hence, we expect to reveal how leader feedback-seeking play the role in the relationship between leader pro-social rule breaking and employee upward voice.

Pro-social rule breaking is both a pro-social action and rule-breaking behavior (Shum et al., 2019), an ambidextrous feature of which may trap subordinates in a moral dilemma because the essence of pro-social rule breaking is a 'moral behavior' but with violation constituents. Whereas moral courage, conceptualized as an individual's ability to engage in altruistic behavior based on self-principles and being regardless of threats to oneself (May et al., 2003), is an important measure of an individual's ability to deal with a moral dilemma (Hannah and Avolio, 2010). Accordingly, we predict that moral courage could play a crucial role in whether the employee would engage in a risky upward voice when in a moral dilemma.

To sum up, the main purpose of this study is to investigate the cross-level mechanism and boundary conditions of leader pro-social rule breaking on employee upward voice, and to explore the mediating effect of leader feedback-seeking from the perspective of self-verification. Furthermore, we wish to promote research on the positive consequences of leader pro-social rule breaking and provide feasible suggestions for improving the effectiveness of management.

This study stands to make main contributions as follows. First, different from previous studies, we focus on the positive effects that leader pro-social rule breaking may have an impact on the organization by investigating the relationship between leader pro-social rule breaking and voice, which is a

positive behavior. It is arbitrary to affirm that pro-social rule breaking prevailing in modern organizations is harmful to the organization because of its conflict with existing rules. Our research could help people to identify its positive consequences and view such behavior rationally. Second, we identify feedback-seeking as the mediator in explaining why leader pro-social rule breaking affects employee upward voice from the perspective of self-verification. Part of the reason for the sparse research on positive outcomes of leader pro-social rule breaking is the neglect that the leaders themselves may take actions to influence the results after pro-social rule breaking instead of just being bystanders. Different from the traditional cognitive perspective, the study of behavior variables serving as the transmission mechanism between other variables is emerging (Mesdaghinia et al., 2019; Moin et al., 2020; Zhang et al., 2020). We contribute to the literature on pro-social rule-breaking outcomes by offering a new lens on how leaders influence the people around them through positive actions in a given situation (e.g., after performing pro-social rule breaking) to get the results he wants. Third, we investigate the moderating effect of employee moral courage on the relationship between leader behavior and employee voice. Since upward voice is risky moral behavior, moral courage, as an individual's moral characteristic, will also be an important influencing factor for employees' decision-making of ethical conduct, which is the promotion of the research on the boundary of the role of leader behavior on employee behavior. Last, Ashford et al. (2016) urged researchers to increase our knowledge about feedback-seeking by answering the theoretical questions about 'What are the dynamics of leaders seeking feedback from subordinates?' and 'What are the individual and collective outcomes of downward feedback-seeking?', and we more thoughtfully respond to these two questions in this study based on the research of Ashford et al. (2018) and Sherf and Morrison (2020).

2. Theory and hypotheses

2.1. Leader pro-social rule breaking and feedback-seeking to employee

The risks and uncertain consequences of pro-social rule breaking drive the performer to collect more confirmatory information to increase the sense of prediction and control over the environment. Despite the implicit pro-social motives aimed at the interest of coworkers or the organization, pro-social rule-breaking performers may be subject to negative consequences, such as sanctions and even losing their jobs as it is definitely a kind of violation behavior (Berry et al., 2007; Janssen and Eberl, 2021). However, it is impossible for the actor to grasp all the influencing factors and pro-social rule-breaking consequences are still difficult to predict accurately and control completely (Bryant et al., 2010). The conflict between concerns about the

negative consequences of violating organizational rules and the belief that the motivation and direct results of the behavior are beneficial to organizations or others results in a dissonance of self-cognition. People like to feel that their social world is knowable and controllable (Swann, 1983; Booth et al., 2020). According to self-verification theory, individuals will constantly seek feedback consistent with their self-conceptions to gain a sense of control and prediction of the external environment, thereby maintaining and strengthening their original self-conceptions. Such predictability and manageability may not only enable people to achieve their goals but also bring them psychological comfort and reduce anxiety (Swann et al., 2003). Although pro-social rule breaking increases the perception of the uncontrollability of the leader, the implementation of the behavior indicates that the self-conception of 'violation due to goodwill is right' is still in a dominant position in his values. Consequently, leaders want to seek positive feedback outside, through which leaders could obtain supportive information that is consistent with their self-conceptions, and gain the understanding and identification of people around them so as to confirm the correctness and coherence of their beliefs and reduce anxiety about unpredictability.

Furthermore, the purpose of feedback-seeking is not only to obtain desirable information but also to influence the views of feedback sources so as to acquire confirmatory feedback (De Stobbeleir et al., 2011). Because of people's bounded rationality, employees may not catch the implicit motivation behind the explicit rule-breaking behavior, which is primary to help the organization or its stakeholders, thus giving rise to employees' negative cognition such as injustice perception or psychological contract breaking (Bryant et al., 2010). Nevertheless, leader feedback-seeking can positively impact the feedback sources (Ashford et al., 2018). According to self-verification theory, by adopting certain interaction strategies, people may insure that the appraisals of the interaction partners will validate their self-conceptions. Leaders who engaged in pro-social rule breaking actively communicate with subordinates by feedback-seeking, and through this interaction strategy, they clarify their own motivation for violating the rules and ask for subordinates' opinions, so as to influence their cognition of pro-social rule breaking. In addition, the leaders' inquiry may have significant symbolism as it signals the seeker's conscientiousness, openness, and interest in improving his or her work (Ashford and Tsui, 1991), which is conducive to forming a more positive evaluation in the eyes of subordinates (Ashford and Northcraft, 1992; Chun et al., 2018). Therefore, leader feedback-seeking can reduce employees' cognitive conflicts with leaders, thereby increasing justice perceptions and leadership identity.

Data from several studies offer clear evidence that people gravitate toward relationships that provide them with self-confirmatory feedback (Burke and Stets, 1999; Swann et al., 2000; Katz and Joiner, 2002; Kraus and Chen, 2009; Cable and Kay, 2012), but the leader's supervisor is not, in most

cases, a "Mr. Right" who affirms the leader's pro-social rule breaking. Based on instrumental motivation, soliciting feedback from superiors is seemly more helpful for seekers to improve personal performance (Morrison, 1993; Lam et al., 2017; Lee and Kim, 2021) and achieve goals. However, the leader's superiors are more likely to be the rule makers and enforcers, so they are more likely to give negative appraisals to leaders who engage in pro-social rule breaking (Dahling et al., 2012). In public contexts, individuals must weigh the instrumental or ego benefits of feedback against potential image costs (Ashford et al., 2003). Compared with the instrumental benefits, people are more sensitive to image costs (Ashford and Northcraft, 1992). Out of a motive of self-protection, the more individuals regard feedback as potential threats to their self-worth and self-image, the less likely they are to engage in feedback-seeking (Ashford and Northcraft, 1992). Fedor et al. (1990) also argued that perceived image costs in seeking feedback from one's superior were negatively correlated with the intentions of upward feedback-seeking. In addition, under the cultural background of Chinese high power distance (Bao and Liao, 2019), it is considered to be offensive to the authority of the leader when managers rashly solicit feedback from senior leaders (Luque and Sommer, 2000).

Conversely, it is more relaxed and easier to achieve self-verification for leaders in seeking feedback from subordinates. Based on self-verification theory, as one of the main strategies for developing an opportunity structure for self-verification, people tend to seek out people and situations that will offer support for their self-conceptions. People may self-verify by interacting with the 'right' people in the 'right' situations, perhaps the most straightforward way to accomplish this is to seek out certain people and avoid others (Swann, 1983). On the one hand, subordinates tend to remain silent or express their opinions euphemistically even if the leader exposes the shortcomings or mistakes in front of them. People are reluctant to criticize those in higher positions (Morrison and Milliken, 2000) because the supervisors control the appraisals, promotions, and rewards of employees (Ashford et al., 2016), which make them dare not oppose their superiors recklessly. On the other hand, due to the authority of the leader and people's subconscious that 'the leader can always find the correct answer' (Fondas, 1997), employees are more likely to accept various behaviors of the leader, and even subordinates believe that the rules are problematical when the leader maliciously violates the rules. Furthermore, employees who experience feedback-seeking from leaders feel that they are valued and recognized, and in return, they support the leader even more. At last, previous studies have also pointed out that the accessibility of feedback sources will reduce the cost of feedback-seeking perceived by seekers, thereby stimulating their feedback-seeking behavior (Fedor et al., 1992; Morrison and Vancouver, 2000). Compared with the

superior of the leader, the subordinates of the leader are obviously more accessible. Therefore, we propose the hypothesis that:

> Hypothesis 1: Leader pro-social rule breaking is positively related to leader feedback-seeking.

2.2. Leader feedback-seeking and employee upward voice

Many organizations have fallen into a paradox: employees are unwilling to speak out, especially to their leaders, even if they know the truth about the internal problems of the organization (Morrison and Milliken, 2000; Detert and Treviño, 2010; Wang, 2011), on the contrary, they choose to remain silent or even murmur to each other behind the leaders, which makes it impossible for leaders to know how others evaluate their work (Detert and Treviño, 2010). As a most representative extra-role behavior (Grant and Mayer, 2009), employee voice, which is a hot topic in organizational behavior research (Burris et al., 2013), is of great significance to the discovery and resolution of organizational problems and the long-term healthy development of the organization (Crant, 2000; Edakkat Subhakaran et al., 2020). Voice is a challenging extra-role behavior, which means that voice behavior will have two different results, benefits and risks (Burris, 2012). Employees also have a trade-off on the issue of whether to voice or not, especially upward voice with higher risks. The leader feedback-seeking might promote employee voice from the following two aspects.

First of all, leader feedback-seeking will improve employees' self-confidence and perception of their own importance and enhance employees' evaluation of their own competence and value, so as to promote employee positive actions. In addition to the goal function, leader behavior also has important symbolic value (Pfeffer, 1977; Podolny et al., 2004). Therefore, the leader feedback-seeking from subordinates conveys the organization's attention and acceptance of the employees' opinions; furtherly, employees may generalize a more general sense of being invited to contribute and input from the behavior of leader feedback-seeking (Ashford et al., 2018). These employees being sought perceive that they have an influence on others, and therefore, believe that their voices can be adopted and implemented, which will increase their initiative to voice. The efficacy of voice directly affects whether employees perform voice behavior or not (Morrison, 2011). That is, when employees think that voices are useless, they are more inclined to remain silent (Detert and Treviño, 2010), on the contrary, employees who have experienced leaders seeking feedback perceived the leader's attention to them and their influence in the organization tend to contribute the information and ideas to the organization,

and then actively engage in the voice that is beneficial to the organization (Liang et al., 2012).

Second, the leader feedback-seeking develops the impression that the leader is willing to listen to the opinions of subordinates, which creates a safe and trusting atmosphere that reduces their worries and helps them to speak freely. Leader pro-social rule breaking is an essential signal to subordinates that rule could be broken in the organization's or its stakeholders' interest. After breaking the rules, the leader seeking feedback from subordinates further implies that such 'rule breaking' can be discussed, which undoubtedly demonstrates the openness of managers and the relaxed and safe communication atmosphere. When employees have the intention of voice, they will consider whether the external environment, such as the openness of leaders, the similar behavior of colleagues, corporate culture, and so on, is suitable for voice implementation (Morrison et al., 2015). Moreover, extant studies have shown that managerial openness has a significant positive relation to employee voice (Detert and Burris, 2007). In particular, managers who seek feedback on negative behaviors such as violations are seen as attentive to and caring for the opinions of their constituents, rather than an image management strategy (Ashford and Tsui, 1991; Ashford and Northcraft, 1992; Ashford et al., 2003). Leader feedback-seeking includes actions displaying interactional justice, such as listening to subordinates' concerns, demonstrating respect for their perspective, and caring about what they think the leader should do (Wang, 2011). Listening to the voices of subordinates means approving them, and Liu et al. (2010) argued that the supervisor's personal identification with employees can directly promote the employees' expression of ideas toward the supervisor rather than colleagues. Therefore, we propose:

> Hypothesis 2: Leader feedback-seeking behavior is positively related to employee upward voice.

Given the two hypotheses (i.e., Hypotheses 1 and 2), we further propose the following hypothesis.

> Hypothesis 3: Leader feedback-seeking mediates the relationship between leader pro-social rule breaking and employee upward voice.
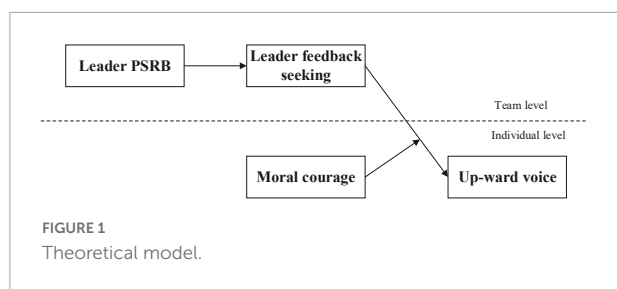
2.3. The moderating effect of moral courage

When employees face leaders' soliciting feedback, whether they choose to speak or remain silent depends not only on their judgment on ethical issues but also on if they have enough moral courage (Hannah et al., 2011). Moral courage is a state

of persisting in moral principles and transforming them into moral behaviors (May et al., 2014), it also has a stable tendency to adhere to moral actions even if they know there are risks associated with those actions when facing moral dilemmas (Hannah et al., 2011).

When facing moral problems and needing to make moral behavior decisions, morally courageous individuals with stable moral self-conceptions will use their inner moral principles to guide behavior and maintain a sense of coherence and confirmation, while voice is just a kind of moral behavior consistent with individual moral self-conceptions. Regardless of whether the leader adopts communication behaviors such as feedback-seeking to exert influence on them, morally courageous employees make habitual judgments regarding their own actions based on internal moral principles and social norms (Kidder, 2005; May et al., 2014), less affected by external situational factors (such as leader behavior). Studies have also shown that moral courage can lower the need for contextual support (Nübold et al., 2013), and its promotion effect on pro-social behaviors and ethical behaviors does not decrease with the change of situation (Hannah et al., 2011). In the face of the moral dilemma brought by a leader pro-social rule breaking, implementing risky upward voice behavior can make others perceive the employee's moral courage and form consistent views and feedback on the person, which further strengthens the voicer's moral self-conceptions. Accordingly, high moral courage weakens the effect of leader feedback-seeking the upward voice, namely employee moral courage substitutes for leadership influence.

Conversely, employees with low moral courage usually choose how to deal with the problem according to the clues from the people around them, especially the leaders, because they lack robust moral belief and coherence of behavior in handling ethical issues. Therefore, individuals with low moral courage are a very important dimension of moral effectiveness (Hannah and Avolio, 2010) and often seek guidance from others (such as leaders) (Taylor and Pattie, 2014). Therefore, certain situational factors (such as leader feedback-seeking behavior) may make up for the lack of moral courage so as to influence positive behaviors such as employee voice (Nübold et al., 2013). Moreover, when the leader actively interacts with employees of low moral courage, his or her humility and honesty shown in the communication process weakens the subordinates' worries about the risk of voice and enhances their perception of psychological safety. In addition, in the process of feedback-seeking, the pro-social aspect of pro-social rule breaking conveyed by the leader will become an example of employees' behavior and, to a certain extent, stimulate employees' moral consciousness, thus promoting employees to engage in more voice behavior. On the contrary, when the leadership influence is weak, employees with low moral courage in dual negative internal and external situations often choose

FIGURE 1
Theoretical model.

to be silent. In summary, we propose the following moderating effects of moral courage.

> Hypothesis 4: Employee moral courage moderates the positive effect of leader feedback-seeking behavior on employee upward voice, such that this relationship is stronger when employee moral courage is low as opposed to high.

Combining the aforementioned hypotheses, we propose the following hypothesis:

> Hypothesis 5: Employee moral courage moderates the indirect effect of leader pro-social rule breaking on employee upward voice through leader feedback-seeking, such that this indirect effect is stronger when moral courage is low as opposed to high.

Based on the aforementioned analyses, we provide a graphical depiction of the proposed models in **Figure 1**.

3. Materials and methods

3.1. Sample and procedure

We tested our hypotheses with data collected from two enterprises in Shanghai, China, through a questionnaire survey. The survey was divided into three periods in total. The leader's pro-social rule breaking and the employee's moral courage were measured in May 2021, the leader's feedback-seeking was measured after a month interval, and finally, the supervisor evaluated the voice of the subordinates in July 2021. Prior permission from HR departments was sought, and they also assisted us in survey distribution.

To reduce common method variance and illusionary correlations, we collected data in three waves from May to July 2021. In the first stage (Time 1), the managers/supervisors were asked to rate their pro-social rule breaking and provided information in relation to their demographics such as age, gender, and the employees rated their moral courage and provided information in relation to their demographic. We invited participants to fill out the questionnaires in

some meeting rooms divided among every 50 people. To perform dyadic matching between employees and their corresponding managers/supervisors, all respondents were asked to indicate their leader or subordinates in the hotels where they work. We explained the purpose of the research, emphasizing that the research is only for scientific study purposes. Questionnaire number and personnel code were issued in a one-to-one correspondence way to ensure the authenticity, confidentiality, and accuracy of the questionnaire survey. One month later (Time 2), the managers/supervisors who responded in phase 1 were asked to rate their feedback-seeking online. Another month later (Time 3), those managers/supervisors who responded in both of the previous two rounds were asked to rate their followers' voice.

A total of 400 staff questionnaires and 113 manager questionnaires were distributed. After eliminating the invalid questionnaires, the final sample of 283 employees with 100 managers was retained for data analysis. According to Cochran's (1977) formula, when we measured with a five-point Likert scale under the given alpha level of 0.05 and a 0.03 margin of error (for continuous variables, a 3% margin of error is acceptable (Krejcie and Morgan, 1970), the minimum sample size which is needed in the study is 119. In addition, according to the suggestion of Krejcie and Morgan (1970), an independent variable needs at least 10 samples to obtain a relatively robust estimate. In this study, there are four variables with 27 items, so the minimum sample size required is 270. It can be seen that the 283 samples obtained in the survey fully meet the aforementioned two standards. Of those participants, the average age was 29.859 years (SD = 3.956); 65.7% were women (SD = 0.475); the participants were well educated with 81.6% completing at least a bachelor's degree (SD = 0.689); the average salary was 9183.746 (SD = 3874.331), and they averaged 21.580 months of staying with their immediate superiors at the company (SD = 18.402).

3.2. Measures

All measurements were reported on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Since the survey was performed in China, all the English measurements were translated into Chinese following the back-translation procedure (Brislin, 1970). The reliability of all the scales was estimated by Cronbach's alpha.

Pro-social rule breaking. Leaders rated their own pro-social rule breaking by using the 11-item pro-social rule-breaking scale developed by Dahling et al. (2012). A sample item includes 'I violate organizational policies to save the company time and money'.

Feedback-seeking. Leaders assessed their feedback-seeking behaviors with the three-item scale adapted from Ashford and Tsui (1991). A sample item includes "After violating the

TABLE 1 Means, standard deviations, and correlations.

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Education	3.852	0.689									
2. Salary	9183.746	3874.331	0.231**								
3. Gender[a]	1.657	0.475	−0.113	−0.219**							
4. Age	29.859	3.956	0.098	0.105	−0.143*						
5. Tenure	21.580	18.402	0.068	−0.004	0.099	0.145*					
6. Leader PSRB	2.999	0.799	−0.062	−0.051	0.005	−0.083	−0.087	(0.935)			
7. Feedback-seeking	3.279	0.865	0.060	0.028	−0.028	0.034	0.107	0.357**	(0.913)		
8. Moral courage	3.401	0.927	0.012	−0.020	0.035	0.028	0.129*	−0.038	−0.028	(0.817)	
9. Voice	3.574	0.751	−0.071	−0.113	0.011	0.037	−0.037	0.249**	0.293**	0.046	(0.894)

N = 283. Cronbach's alpha in bracket. LPSRB, leader pro-social rule-breaking.
[a]For gender, 1 = male, 2 = female.
*p < 0.05, **p < 0.01.

TABLE 2 Confirmatory factory analysis results.

Models	χ^2	χ^2/df	TLI	CFI	RMSEA	SRMR	$\Delta\chi^2$
Four-factor model	237.081	1.624	0.961	0.967	0.047	0.042	
Three-factor model[a]	615.307	4.130	0.804	0.829	0.105	0.099	378.226
Three-factor model[b]	620.388	4.164	0.802	0.827	0.106	0.100	383.307
Two-factor model[c]	1137.849	7.535	0.590	0.638	0.152	0.134	900.768
Two-factor model[d]	1170.138	7.749	0.577	0.626	0.154	0.130	933.057
One-factor model[e]	1689.068	11.112	0.366	0.437	0.189	0.153	1451.987

CFI, comparative fit index; TLI, tucker lewis index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; df, degrees of freedom; LPSRB, leader pro-social rule breaking; LFS, leader feedback-seeking; MC, moral courage; UV, upward voice.
Model[a] with three factors: (1) LPSRB + MC, (2) LFS, and (3) UV.
Model[b] with three factors: (1) LFS + MC, (2) LPSRB, and (3) UV.
Model[c] with two factors: (1) LPSRB + MC + UV and (2) LFS.
Model[d] with two factors: (1) LPSRB + MC + LFS and (2) UV.
Model[e] with one factor: All items combined with one factor.

company's regulations for some reason, I will directly ask my colleagues for their opinions."

Moral courage. Using the four-item scale developed by May et al. (2014), employees rated their own moral courage. A sample item includes "I would stand up for a just or rightful cause, even if the cause is unpopular and it would mean criticizing important others."

Employee voice. The supervisor assessed each subordinate's voice behavior by using the nine-item voice toward the supervisor scale developed by Duan et al. (2017b), which reflects the Chinese view of employee upward voice. A sample item includes "He/she will advance a proposal to the boss for possible problems in the work."

Control variables. A previous study has shown that gender influences employees' voice behavior, with a possibility that women are less likely to upward voice than men (Tangirala et al., 2013). Similarly, prior studies have also documented that employees' age and tenure with their leader may impact employees' capability and comfort level with upward voice (Ng and Feldman, 2008; Duan et al., 2017a). In addition, socio-demographic variables such as education level (Hatipoglu and Inelmen, 2018) and salary (Duan et al., 2021) can influence the

triggering and evaluation of voice. Hence, gender, age, tenure, education level, and salary were taken as control variables in this study.

3.3. Analysis strategy

In our study, Mplus 7.4 was used to perform all analyses. We adopted Harman's single-factor test to investigate the common method variance. We conducted a CFA to assess the distinctiveness of all conceptualizations. We surveyed multiple employees nested within a supervisor, so our data were multilevel, and we used cross-level regression analysis to examine the interrelationships between variables. Further, we utilized to conduct cross-level regression analysis to test the mediating effect of feedback-seeking in the relationship between leader pro-social rule breaking and employee upward voice. Moreover, we implemented the moderated mediation model test method of Preacher and Selig (2012), the confidence intervals (CIs) of the high and low standard deviation groups reporting indirect effects were calculated using Monte–Carlo parameter sampling to estimate the 95% CIs and determine their significance.

TABLE 3 Convergent validity.

Variable	Item	Factor loading	AVE	CR
Pro-social rule breaking	1. I break organizational rules or policies to do my job more efficiently	0.72	0.59	0.94
	2. I violate organizational policies to save the company time and money	0.67		
	3. I ignore organizational rules to "cut the red tape" and be a more effective worker	0.81		
	4. When organizational rules interfere with my job duties, I break those rules	0.83		
	5. I disobey company regulations that result in inefficiency for the organization	0.79		
	6. I break organizational rules if my co-workers need help with their duties	0.83		
	7. When another employee needs my help, I disobey organizational policies to help him/her	0.81		
	8. I assist other employees with their work by breaking organizational rules	0.74		
	9. I help out other employees, even if it means disregarding organizational policies	0.74		
	10. I break rules that stand in the way of good customer service	0.74		
	11. I give good service to clients or customers by ignoring organizational policies that interfere with my job	0.79		
Feedback-seeking	1. After violating the company's regulations for some reason, I will directly ask my colleagues for their opinions	0.90	0.78	0.91
	2. I will directly ask my colleagues, "how am I doing?"	0.91		
	3. I will directly ask for an informal appraisal from my colleagues	0.84		
Moral courage	1. I would stand up for a just or rightful cause, even if the cause is unpopular and it would mean criticizing important others	0.77	0.64	0.88
	2. I will defend someone who is being taunted or talked about unfairly, even if the victim is only an acquaintance	0.83		
	3. I would only consider joining a just or rightful cause if it is popular with my friends and supported by important others	0.84		
	4. I would prefer to remain in the background even if a friend is being taunted or talked about unfairly	0.77		
Employee voice	1. This person develops and makes recommendations to the supervisor concerning issues that affect our organization	0.73	0.53	0.91
	2. This person speaks up and influences the supervisor regarding issues that affect the organization	0.69		
	3. This person communicates his or her opinions about work issues to the supervisor even if his or her opinion is different, and the supervisor disagrees with him or her	0.73		
	4. This person speaks to the supervisor with new ideas for projects or changes in procedures	0.78		
	5. This person gives constructive suggestions to the supervisor to improve the supervisor's work	0.70		
	6. This person points out to his or her supervisor to eliminate redundant or unnecessary procedures	0.77		
	7. If his or her supervisor made mistakes in his or her work, this person would point them out and help the supervisor correct them	0.72		
	8. This person tries to persuade his or her supervisor to change organizational rules or policies that are non-productive or counterproductive	0.71		
	9. This person suggests his or her supervisor to introduce new structures, technologies, or approaches to improve efficiency	0.72		

TABLE 4 Correlation and the square roots of AVEs.

	Pro-social rule breaking	Feedback-seeking	Moral courage	Employee voice
Pro-social rule breaking	0.77			
Feedback-seeking	0.357	0.88		
Moral courage	−0.038	−0.028	0.80	
Employee voice	0.249	0.293	0.046	0.73

TABLE 5 The results of cross-level analysis.

Outcome variables	Employee voice			
	Model 1		Model 2	
Individual level	γ	SE	γ	SE
Intercept	2.354**	0.622	3.577**	0.052
Education	−0.039	0.055	0.016	0.058
Salary	−0.023	0.014	−0.024	0.018
Gender	0.003	0.097	−0.036	0.102
Age	0.016	0.012	0.023	0.012
Tenure	−0.002	0.002	−0.001	0.003
Moral courage			0.014	0.057
Team level				
Leader PSRB	0.146	0.075	0.155*	0.077
Leader feedback-seeking	0.214**	0.061	0.205**	0.062
Interaction			−0.207**	0.069
Pseudo R^2	18.7%			

Pseudo R^2 indicates the degree to which the variance of dependent variable is explained after the research model variable enters the regression equation. See the previous explanation for calculation (Snijders and Bosker, 1994).
*$p < 0.05$; **$p < 0.01$.

TABLE 6 The result of indirect effect and moderated mediation.

Group statistics	γ	SE	95% confidence interval	
			Lower limit	Upper limit
Indirect effects	0.078	0.036	0.009	0.148
Conditional indirect effect				
High moral courage (+1 SD)	−0.036	0.017	−0.069	−0.004
Low moral courage (−1 SD)	0.042	0.028	−0.013	0.097
DIFF	−0.078	0.040	−0.156	−0.001

High and low refer to one standard deviation above and below the mean value of moral courage. γ and SE refer to the unstandardized parameter estimates and their corresponding standard errors, respectively.

4. Results

4.1. Descriptive statistics and correlations

Table 1 shows the means, standard deviations, and correlations among our studied variables. An examination of the zero-order correlations provides initial support for our hypotheses. As expected, it can be seen that leader's pro-social rule breaking was significantly positively correlated with feedback-seeking ($r = 0.357$, $p < 0.01$), which provides

preliminary support for hypothesis 1. Leader feedback-seeking was significantly positively correlated with employee voice ($r = 0.293$, $p < 0.01$), which provides preliminary support for hypothesis 2.

4.2. Confirmatory factor analysis

We carried out a confirmatory factor analysis to verify the discriminant validity of the scales of the major variables. As the number of measurement items oversteps the suggested parameters about sample size ratio with evaluation, we

conducted the item parceling of pro-social rule breaking based on previous research (Rogers and Schmitt, 2004). The packing strategy adopted the high and high load strategy. The final results of the Confirmatory Factor Analysis in **Table 2** showed that the best-fitting alternative model was the four-factor model (χ^2 = 237.081, df = 146, CFI = 0.967, RMSEA = 0.047, TLI = 0.961, SRMR = 0.042). Given the result, we concluded that the scales were measuring distinctive constructs.

4.3. Reliability and validity

Following the suggestion of Podsakoff et al. (2003), this study performed Harman's one-factor test to verify the risk of common method variance. The result of Harman's one-factor test indicates the fixed single factor explains 20.008% of the covariance of the variables, which means that there was no significant common method variance in our measures.

The reliability of the multi-item scale for each dimension was assessed by using Cronbach's alpha coefficient. The results in **Table 1** showed that Cronbach's alpha values of all of the constructs ranged from 0.817 to 0.935, exceeding the recommended minimum standard of 0.70 (Fornell and Larcker, 1981). In addition, the results in **Table 3** showed that the composite reliability (CR) is higher than 0.7. Therefore, the reliability of the measurement in this study was acceptable.

In addition, we computed the average variance extracted (AVE) for all variables. Discriminant validity was established by ensuring AVEs of any two variables, which were higher than the square of their correlations (Fornell and Larcker, 1981; Wang Z. et al., 2021). In other words, the square root of AVEs of the variable is greater than the correlation coefficient between the variable and other variables, thus confirming the discriminant validity. The results in **Table 4** showed that this rule was not violated as the inter-construct correlation coefficients ranged from 0.028 to 0.357, whereas the minimum square root of the AVEs is 0.73, indicating acceptable discriminant validity.

The results in **Table 3** showed that all the items loaded significantly onto their correspondent constructs with the factor loading range from 0.67 to 0.91, and the average variance extracted (AVE) is higher than 0.5, indicating acceptable convergent validity.

4.4. Tests of hypotheses

Snijders and Bosker's (1994) formulas were used to calculate pseudo-R^2 for the effect sizes in predicting outcomes. Before testing the cross-level hypothesis, we examined whether there was significant systematic within- and between-workgroup variance in supervisor-rated voice behavior. We used the intraclass correlation coefficient (ICC1) defined as

between-person variance divided by total variance (Klein and Kozlowski, 2000). The estimated ICC (1) is 0.33 for supervisor-rated voice behavior, implying that around 33% of variances of upward voice were attributable to supervisor-level factors.

Hypothesis 1 proposed that leader's pro-social rule breaking would be positively related to leader feedback-seeking. A cross-level regression analysis revealed that pro-social rule breaking significantly predicted feedback-seeking (γ = 0.367, p < 0.01). Therefore, Hypothesis 1 was supported. Furthermore, we tested Hypothesis 2, where we expected to find a positive effect of feedback-seeking on employee upward voice. Model 1 of **Table 5** showed a significant positive correlation between leader feedback-seeking and employee upward voice (γ = 0.214, p < 0.01).

Hypothesis 3 proposed that leader feedback-seeking would mediate the relationship between leader pro-social rule breaking and employee upward voice. As shown in **Table 6**, multilevel path analyses revealed that the estimated average indirect effect of leader pro-social rule breaking on employee upward voice was 0.078; the 95% confidence interval was [0.009, 0.148], which did not contain zero, suggesting that the indirect effect is significant. Thus, hypothesis 3 was supported.

Hypothesis 4 predicted that moral courage would moderate the relationship between leader feedback-seeking and employee upward voice. The cross-level interactional effect of moral courage and leader feedback-seeking on employee upward voice was significant (γ = −0.207, p < 0.01). To facilitate the interpretation of the cross-level interaction, we plotted the interaction using Aiken et al. (1991) procedure, computing slopes one SD below and above the mean of the moderator. As shown in **Figure 2**, the average slope between leader feedback-seeking and employee upward voice was stronger with a lower (one SD below the mean) level of moral courage and weaker with a higher (one SD above the mean). Given these results, hypothesis 4 was supported.

Hypothesis 5 proposed that the mediated relationship between leader pro-social rule breaking and employee's upward voice through leader feedback-seeking is moderated by moral courage, in such a way that the mediated relationship is stronger when moral courage is lower. To test Hypothesis 5, we calculated the indirect effect of leader pro-social rule breaking on employee upward voice at lower (one SD below the mean) and higher (one SD above the mean) levels of the moderator, moral courage. The test results are shown in **Table 6**. As **Table 6** indicated, when the moral courage is low, the indirect effect is insignificant (γ = 0.042, 95% confidence interval [−0.013, 0.097], including 0); correspondingly, when the moral courage is high, the indirect effect is significant (γ = −0.036, 95% confidence interval [−0.069, −0.004], excluding 0). The difference between the two levels reached a significant level, with 95% confidence interval [−0.156, −0.001], excluding 0. Therefore, hypothesis 5 obtains support from the observation data.

FIGURE 2
The moderating role of moral courage on leader feedback-seeking and employee voice.
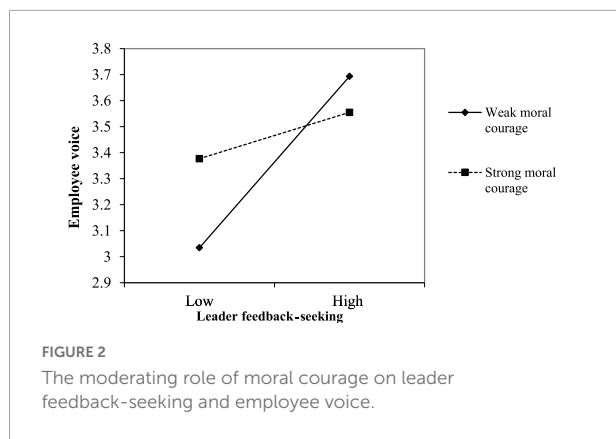
5. Discussion

Through the three-stage investigation, we found that leaders who performed pro-social rule breaking tended to seek feedback from subordinates rather than superiors for the purpose of self-verification, and the leaders' seeking behaviors have a positive impact that encourages subordinates' voice behavior in the communication process. Therefore, from the perspective of pro-social rule-breaking performers' active actions affecting pro-social rule-breaking consequences, this study reveals the internal mechanism between leader pro-social rule breaking and employee upward voice and identifies the positive relationship between the two, thus promoting the research of pro-social rule breaking consequences. In addition, our study also showed that moral courage could moderate the influence of leader feedback-seeking on employee voice behavior. According to the interaction plot, interestingly, this is a weakened effect, that is, the influence of leadership on the voice behavior of employees with high moral courage is weakened, indicating that morally courageous employees are firm in their moral beliefs and rely less on external factors but more on their inner beliefs in moral behavior decision-making. Our findings suggest that moral courage plays a very important boundary effect in promoting employees' voice behavior. Similar previous studies have also confirmed that as an extra-role behavior that takes certain risks, personal moral factors play a significant role in its occurrence (Xu et al., 2017; Bhatti et al., 2020). Therefore, this study further clarified the antecedent mechanism of voice behavior from a moral perspective. Additionally, the present findings provide a basis for managers to conduct targeted management according to the characteristics of employees, which in turn improves the effectiveness of management.

5.1. Theoretical implications

We contribute to the positive outcomes of leader pro-social rule-breaking literature by highlighting how leader pro-social

rule breaking can positively affect employee voice. Although some researchers examined the impact of leader pro-social rule breaking on employee cognition or behavior, they primarily focused on the negative side while neglecting the positive effect of the pro-social side of leader pro-social rule breaking. Investigation of positive outcomes is of particular importance for leader pro-social rule-breaking literature because leaders sometimes challenge and break rules not because they are disloyal but because they have enough enthusiasm to dissent against practices that they think as stagnant, ineffective, or even dangerous to the people around them (Dahling and Gutworth, 2017). The theoretical arguments underpinning the pro-social rule breaking reveal the ambidextrous nature (Shum et al., 2019), but ours is the first study to articulate how leader pro-social rule breaking is connected to employee voice (a positive factor) and to provide evidence in support of this conjecture. Dahling et al. (2012) suggested that pro-social rule breaking has the potential to yield a variety of desirable outcomes, such as enhanced efficiency. Therefore, Zhu et al. (2018) called for more studies to be needed on how pro-social rule-breaking affects individual-level outcomes. Our finding of the positive relationship between leader pro-social rule breaking and employee voice makes up for the gap in this research domain and echoes the appeal of the aforementioned scholars to strengthen the research on pro-social rule-breaking consequences.

We indicate the mediating role of leader feedback-seeking between leader pro-social rule breaking and employee voice by introducing the self-verification theory. Our studies provide a new lens about how the leader's pro-social rule breaking impacts employee behavior in contrast to the existing research that primarily focused on the theoretical perspective of social learning, social identity, and bounded rationality (Bryant et al., 2010; Chen et al., 2019; Li et al., 2019). All these studies are based on the perspective of the pro-social rule breaking's observer or recipient, which ignores the subjective initiative of the pro-social rule-breaking performer. Consequently, it is important to demonstrate in current research from the perspective of the self-verification that pro-social rule-breaking performer as one with subjective initiative will take further steps (i.e., feedback-seeking) to control the situations, which break the limitation of the existing concepts and methods that the actor can only accept the results passively. We, therefore, make an important extension to the literature on pro-social rule-breaking outcomes, meanwhile casting a light on the new foci of what strategies the actor will adopt to deal with the potential consequences of pro-social rule breaking.

In view of the similarity that pro-social rule breaking and voice are both moral behaviors with taking risks, this study proposes the moderating effect of moral courage on the relationship between leadership feedback-seeking and employee upward voice behavior. The results show that employees with high moral courage guide their social information processing

methods and behaviors according to strong moral self-conceptions (Swann, 1983; Swann et al., 2003; Kidder, 2005; May et al., 2014), less dependent on situational factors such as leadership behavior. As such, we add to the literature by explaining why moral factors like high moral courage can weaken the influence of leaders feedback-seeking behavior on employees' voice behavior.

In addition, our results have propelled the literature on feedback-seeking. We not only follow the recommendation by Ashford and Cummings (1983) to introduce a self-verification perspective that may further explain the motivation of feedback seeker but also answer the question of what are the dynamics of leaders seeking feedback from subordinates. In addition, we provide a reference on what are the individual and collective outcomes of downward feedback-seeking (Ashford et al., 2016), that is, leader feedback-seeking to subordinates can stimulate employees to engage in positive extra-role behaviors (such as voice) that benefit coworkers and the organization, which provides a new train of thought to study the outcomes of feedback-seeking. Thus, based on previous studies (Ashford et al., 2018; Chun et al., 2018; Coutifaris and Grant, 2021; Sherf et al., 2021), we have continued to deepen the study of downward feedback-seeking.

5.2. Practical implications

Our study suggests several implications for human resource development in organizations.

First, the results of our study may help to better understand the positive influence of leader pro-social rule breaking on employee voice and can give important hints on what leaders could perform to make followers better understand leader pro-social rule breaking. Because employees cannot fully grasp the essence of leader behavior usually, it is necessary for leaders to adopt active communication actions with employees, such as feedback-seeking, so as to accurately exchange information with employees. The manager who has implemented pro-social rule breaking can communicate his ideas and behavior motivation with his subordinates frankly and sincerely instead of relying on just employees' own guesses, then he or she will be more likely to gain understanding and support from the subordinates and establish an authentic and *pro bono* publico moral image in the hearts of the employees, further motivating the staff to act in a pro-organization manner.

Second, a leader's downward feedback-seeking might be beneficial for improving the effectiveness of management, especially, in situations where the leader's behavior impact is unpredictable. Managers who implement pro-social rule breaking should take active action that fully masters the information so as to identify the consequences of the behavior

and prepare proper countermeasures for possible negative results. On the one hand, through active feedback-seeking, managers can get to know the employees' views around them and identify their negative opinions so as to take targeted remedial measures; on the other hand, through mutual communication among the process of leader feedback-seeking, subordinates can clearly understand the pro-social motivation in the leader pro-social rule breaking and will not be trapped in the dilemma of how to judge the leader's behavior.

Finally, given our study, it might maximize the utility of management for managers to devote limited time and energy to the management of employees with low moral courage. It is helpful to understand the characteristics of followers that may affect leadership effectiveness (Nübold et al., 2013), so leaders should shift more resources of time and energy to employees with low moral courage, who lack the belief of adhering to moral principles and thus were easily affected by the surrounding information and other people's behaviors. Feasible positive management actions include guiding their work, giving more encouragement, and talking with them frequently. Therefore, the behavior of leaders could make management more targeted and efficient which will greatly impact the performance of such employees.

5.3. Limitations and future research

Our research has some limitations that should be acknowledged.

First, our method is restricted in some respects. Our three-wave time-lagged data still cannot verify causality certainly for all variables in our model. Future research should consequently replicate our conclusions with a more rigorous longitudinal research method or experimental method.

Second, our investigation is based on the Chinese context. Compared with western countries, there is a higher power distance in the Chinese organizations, which impede mutual communication between subordinates and their supervisors and then leads to alienated relations. Future research should explore whether the consequences when adding cultural factors such as power distance and collectivism are consistent or inconsistent with ours. We also encourage future research to examine the effect of our conclusions in other industries or cultures.

Third, our study did not explore whether pro-social rule-breaking performers will seek feedback from their superiors on this particular behavior, but we speculate that this research may lead to very interesting conclusions. We encourage future research to further investigate the issue of whether leaders who perform pro-social rule-breaking seek feedback from their supervisors and the possible consequences.

6. Conclusion

Constructive deviance may provide many benefits to organizations (Dahling and Gutworth, 2017). However, the research on the relationship between leader pro-social rule breaking and positive outcomes is still in its infancy, especially lacking empirical research. The extant literature on the results of leader pro-social rule breaking always set the actor as a passive recipient of the consequences of their own behavior. While from the perspective of self-verification, this study expounds in detail that the leaders who implement pro-social rule breaking should give full play to their subjective initiative, strengthen the verification of self-conceptions by seeking feedback, and then stimulate the hospitality employees' upward voice. Our findings expand the perspective of pro-social rule-breaking research and hope to spark further research on pro-social rule breaking in the hospitality industry.

Data availability statement

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

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

Author contributions

FW, HW, PY, YL, MZ, and AD designed the study and revised the draft. YL and MZ collected the data. FW and AD drafted the theory and results. HW and PY drafted the methods. All authors contributed to the article and approved the submitted version.

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.

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