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Leader workaholism and employee work fatigue: The role of emotional exhaustion and family support

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Abstract: This study examined emotional exhaustion and family support in the relationship between leader workaholism and employee work fatigue. The participants were 408 employed adults (74% female, age range 25 to 27 years) across five industries: sales (31.65%), finance (25.32%), education (20.25%), public administration (12.66%), and technology (10.13%), from 79 work teams in China. Survey data were collected at three time points over a three-month period. The results from structural equation modeling indicated that leader workaholism was associated with higher employee work fatigue. Emotional exhaustion mediated the relationship, contributing to higher levels of employee fatigue. Furthermore, family support moderated the relationship between emotional exhaustion and work fatigue. These findings align with the conservation of resources theory and the social support buffering model, both of which propose that resources, such as family support, can help buffer the negative effects of stressors like workaholism. The implications of these findings highlight the significance of family support as a valuable resource in reducing work fatigue and emotional exhaustion among employees, particularly in environments where leader workaholism is prevalent.

Keywords: Workaholism; emotional exhaustion; family support; work fatigue

Introduction

In today's fast-paced work environment, the phenomenon of "workaholic leadership" has become increasingly prevalent due to high-intensity tasks and demanding workloads (She et al., 2024; Zeng and Liu, 2022). Many leaders work overtime with few days off, sacrificing essential family life and social activities (Mullens & Glorieux, 2024; Roberts, 2007; Suleiman et al., 2021). Workaholic leaders exhibit a compulsive and excessive dedication to their work (Mullens & Glorieux, 2024; Roberts, 2007; Suleiman et al., 2021). This workaholism is exacerbated by the global shift to hybrid work models and the rise of digitization, particularly following the COVID-19 pandemic (Spagnoli et al., 2020; Zapata et al., 2024). Employees may bear the brunt of their leaders' compulsive work demands, risking both work fatigue and emotional exhaustion as excessive demands blur the boundaries between work and personal life (e.g., Andersen et al., 2023; Balducci et al., 2021; Dong et al., 2022; Frone & Tidwell, 2015).

Leader workaholism on employee work fatigue

Workaholic leaders often demonstrate work addiction, cultivating an organizational culture that prioritizes long hours and constant engagement (Ng et al., 2007; Wang et al., 2024). The "996 work culture" (working from 9 a.m. to 9 p.m., six days a week) creates a significant risk of overwork for both leaders and employees (Chen et al., 2023); Employees may feel compelled to emulate these behaviors to align with. their leaders' expectations, leading to increased workloads and elevated stress levels (Wang et al., 2024; Wang et al., 2025). The cognitive aspect of workaholism, marked by obsessive thoughts about work, can spill over into employees' experiences (Huyghebaert et al., 2018). As a result, employees may struggle to disengage from work, even during personal time, which can contribute to feelings of fatigue and overwhelm (Allen & Finkelstein, 2014).

In summary, previous studies have established a clear link between leadership styles and employee well-being (Huyghebaert et al., 2018; Wang et al., 2024). Specifically, workaholic leadership has been associated with higher levels of employee stress and burnout (Chen et al., 2023; Wang et al., 2024).

Mediator of emotional exhaustion

A state of energy depletion resulting from prolonged and excessive stress was defined emotional exhaustion (Wright & Cropanzano, 1998). Workaholic leaders often demonstrate an extreme commitment to their work, which fosters a demanding environment that pressures employees to extend their work hours and intensify their dedication (Chang et al., 2023; Schaufeli et al., 2008). This pressure can elevate stress levels among employees, thereby increasing the likelihood of emotional exhaustion (Huyghebaert et al., 2018). Emotional exhaustion can then lead to work fatigue, which encompasses feelings of being overwhelmed and lacking the energy to perform tasks effectively (Grandey, 2000; Janssen et al., 2010). When employees experience emotional exhaustion, their capacity to engage with their work diminishes, contributing to increased fatigue and a decline in job performance (Clark et al., 2016; Clark et al., 2020). Additionally, the demands placed on employees by workaholic leaders can create an unsustainable work pace (Bakker & Demerouti, 2007). As employees struggle to meet these demands, they may

experience emotional exhaustion, which further exacerbates their feelings of work fatigue (Bakker & Demerouti, 2007).

Moreover, studies have shown that leader behaviors, particularly workaholism, are associated with increased employee stress and emotional exhaustion (e.g., Balducci et al., 2021; Clark et al., 2016). For example, workaholic leadership styles have been found to correlate with elevated levels of employee burnout (Chen et al., 2023; Wang et al., 2024). This evidence supports the idea that emotional exhaustion may mediate the relationship between leader workaholism and employee work fatigue.

Moderator of family support

Family support refers to the emotional and spiritual comfort provided by an individual's family (Atkin et al., 2022). As an important component of social support, family support plays a crucial role in alleviating stress and promoting mental health (Clark et al., 2020; Grzywacz & Marks, 2000). According to the social support buffering model (Aneshensel & Stone, 1982), family support can significantly reduce the negative effects of stressors. It acts as a protective factor against the harmful impacts of emotional exhaustion, helping employees become more resilient and less fatigued (Cohen & Wills, 1985). When employees experience emotional exhaustion, a supportive family environment can offer comfort and understanding, alleviating the intensity of the link with emotional exhaustion and work fatigue.

Second, employees with strong family support are often better equipped to cope with stress (Holahan & Moos, 1985). Family members help individuals reframe their experiences, offer emotional reassurance, and provide practical assistance (Grzywacz & Marks, 2000). Consequently, when faced with emotional exhaustion, these employees are more likely to manage their fatigue effectively, reducing the risk of it escalating into work fatigue (Grzywacz & Marks, 2000).

Finally, family support can help reduce overall stress levels (Holahan & Moos, 1985; Ganster et al., 1986), which aligns with the social support buffering model's claim that support networks can mitigate stress. When employees receive emotional and practical assistance from family members, it can alleviate the cumulative stress they experience (e.g., Liu et al., 2015; Pluut et al., 2018), making them less likely to suffer from work fatigue, even in the face of emotional exhaustion.

Theoretical basis

Our study integrates Conservation of Resources theory with the Social Support Buffering Model to offer a dual-lens perspective on how family support mitigates the negative effects of workaholic leadership. According to COR theory (Hobfoll, 1989, 2001), stress arises not only from acute resource loss but also from the cumulative depletion of resources without adequate recovery—a key mechanism that underscores the role of emotional exhaustion as a mediator (Hobfoll et al., 2018). Under this framework, when leaders exhibit excessive work focus (i.e., work addiction), they create a high-pressure environment that depletes employees' emotional and physical resources, ultimately increasing work fatigue (Huyghebaert et al., 2018). Moreover, workaholic leaders often establish behavioral norms through their own work habits (Spence & Robbins, 1992). Employees may feel compelled to emulate these behaviors to meet leader expectations or preserve a professional image (Bakker & Demerouti, 2007; Wang et al., 2024). Such modeling can intensify employees' workloads, further contributing to work fatigue (Chen et al., 2023). While COR theory emphasizes that stress stems from resource loss and that recovery requires resource replenishment (Hobfoll, 2001), the Social Support Buffering Model highlights that social support mitigates the impact of stressors by influencing cognitive appraisal and coping strategies (Cohen & Wills, 1985). In our integrated model, family support functions both as a resource reservoir (consistent with COR) and a psychological buffer (consistent with the Buffering Model). By examining how leaders' workaholic behaviors deplete employee resources and how family support alleviates these effects, we provide a comprehensive framework for understanding work-related stress dynamics.

Goals of the Study. This study examines the relationship between leader workaholism and employee work fatigue, and also analyzed the roles of emotional exhaustion and family support in this relationship. Figure 1 presents our theoretical model. Based on this model, we propose the following hypotheses for testing.

Hypothesis 1: *Leader workaholism is associated with higher employee work fatigue*

Hypothesis 2: *Employee emotional exhaustion mediates the relationship between leader workaholism and employee work fatigue.*

Hypothesis 3: *Family support moderates the emotional exhaustion and work fatigue relationship for lower employee work fatigue.*

Hypothesis 4: *Family support moderates the indirect effect of leader workaholism on employee work fatigue* via *emotional exhaustion for lower employee work fatigue.*

The findings contribute to the evidence on how family support can mitigate the effects of employee overwork among employees and the related phenomena of work stress. Moreover, these findings also offer relevant insights for the well-being of workers and the effectiveness of the organization through demand-driven leadership approaches.

Method

Participants and setting

Participants included 408 employees from 79 work teams (N = 79 leaders, one per team). These 79 teams were distributed across five industries: sales, finance, education, public administration, and technology. Among the employees, 74% were female (mean age = 26.18 years, SD = 0.39 years). Among the team leaders (N = 79), 43% were female, with the average age of 34.7 years (SD = 5.56), and 95% were married. For the team leaders, 77.2% of the people have a university degree or above, and the average tenure of each supervisor's position is 8.92 years (SD = 5.13). Among the employees, 82.8% held a college degree or higher, and the average weekly work hours were 44.87 h (SD = 8.23).

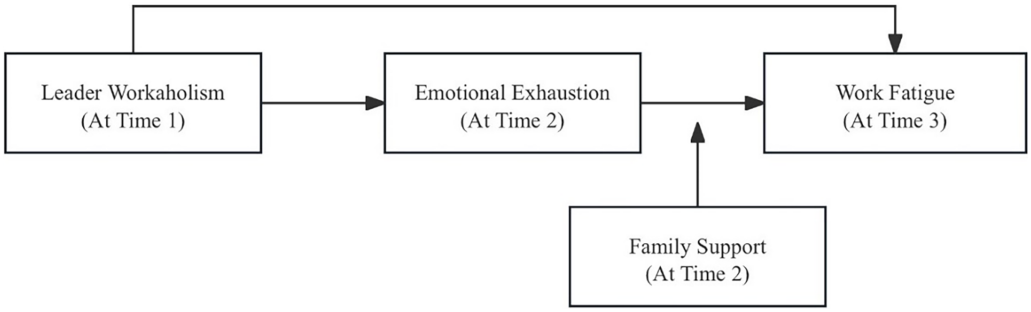

Figure 1. Emotional exhaustion, family support and work fatigue = rated by employee; Workaholism = rated by leaders

Measures

The measurement method adopted by this research institute (as described below) was adapted from the English version. The translation process involved the use of the back-translation procedure proposed by Brislin (1986) for the translation of the survey items. All measurement indicators were scored using a five-point Likert scale.

Workaholism. At Time 1, leaders reported their workaholism using the 10-item scale developed by Schaufeli et al. (2009). A sample item is, "It is important to me to work hard even when I do not enjoy what I am doing." The Cronbach's alpha was 0.93.

Emotional exhaustion. At Time 2, employees self-assessed their emotional exhaustion using the 3-item measure from Boswell et al. (2004), this scale was based on the Maslach Burnout Inventory (Maslach & Jackson, 1986). A sample item is, "I feel burned out from my work." The Cronbach's alpha was 0.75.

Family support. At Time 2, the employees used a scale developed by Zimet et al. (1988) which consisted of 4 items to self-assess the level of family support they perceived. A sample item is, "My family really tries to help me." The Cronbach's alpha was 0.87.

Work fatigue. At Time 3, employees self-assessed their work fatigue using the 18-item scale from Frone and Tidwell (2015). Sample items include, "Do you feel physically tired after work?", "Do you feel mentally tired after work?", and "I feel very depressed after work." The Cronbach's alpha was 0.92.

Control variables. Our study has imposed a limit on employees' weekly working hours that working hours are related to work fatigue (e.g., Yang & Lu, 2023). In addition, we controlled for age, gender, education level, and team size, as prior studies have demonstrated that these variables influence work fatigue (e.g., Chu et al., 2022; Frone et al., 2018; Wang et al., 2024).

Procedure

All participants provided informed consent. Each participant was assigned a unique identification code to ensure confidentiality. Committee of Yiwu Industrial and Commercial College approved the study (ID: ZP2025-01-002). Permission was granted by the participating organizations. Data were collected through WeChat.

Data analysis

We employed the Mplus 8.4 version and combined the bootstrap sampling method (Cheung et al., 2021) to apply the structural equation model (SEM) to test the proposed hypotheses. Each independent variable was represented by the average score of its associated measurement items (Raykov & Marcoulides, 2011). To assess the hypothesized mediating effect and moderating mediating effect, we conducted 10,000 iterations of Monte Carlo simulation in Mplus software to generate a 95% confidence interval (CI).

Common method deviation test

To assess potential multicollinearity bias, we conducted a Harman single-factor test, and the results showed that the variance explained by the first factor was 29.53%, which was below the 40% threshold. Furthermore, as shown in Table 1, the fit indices of the confirmatory factor analysis of the single-factor model did not reach the standard values ($\chi^2 = 2597.53$, $df = 353$, $RMSEA = 0.16$, $SRMR = 0.11$, $CFI = 0.71$, $TLI = 0.65$). Therefore, the variables in this study do not exhibit significant common method bias.

Confirmatory factor analysis

As Table 1, the proposed four-factor model exhibits excellent fit indices (χ^2/df = 3.16, CFI = 0.96, TLI = 0.95, RMSEA = 0.05, SRMR = 0.05, with all factor loadings exceeding 0.70). Based on these results, we conclude that all study variables are sufficiently distinguishable. These findings validate the chosen model and lay a strong foundation for subsequent analysis.

Results

Descriptive statistics

As shown in Table 2, family support is negatively correlated with emotional exhaustion (r = −0.41, $p < 0.001$), while emotional exhaustion is significantly correlated with work fatigue (r = 0.45, $p < 0.001$), which is consistent with the hypothesis. Additionally, we used the SEM to test all the hypotheses, and this model was able to simultaneously estimate all the proposed paths.

Leader Workaholism effects on employee fatigue. Tables 3 and 4 demonstrate a significant link between the leaders' workaholism and employee work fatigue (B = 0.30, SE = 0.03, $p < 0.001$, 95% confidence interval [0.23, 0.37]). Therefore, Hypothesis 1 is supported.

Figure 2 illustrates a significant correlation between leader workaholism and employee emotional exhaustion (B = 0.19, SE = 0.05, $p < 0.001$, 95% confidence interval [0.10, 0.29]), as is the relationship between employee emotional exhaustion and work fatigue (B = 0.20, SE = 0.04,

Table 1. Results of confirmatory factor analysis

Models	χ^2	*df*	$\Delta\chi^2$	RMSEA	SRMR	CFI	TLI
Four factor models (hypothesis)	1101.34	348		0.05	0.05	0.96	0.95
Three factor models (B + C)	1355.15	350	253.81***	0.12	0.09	0.84	0.79
Two factor models (B + C + D)	1503.12	352	401.78***	0.14	0.10	0.76	0.71
One factor models (A + B + C + D)	2597.53	353	1496.19***	0.16	0.11	0.71	0.65

Note. A: Workaholism; B: Emotional exhaustion; C: Family support; D: Work fatigue; ***$p < 0.001$.

Table 2. Descriptive statistics and correlation

Variables	M	SD	1	2	3	4	5	6	7
Team level (N = 79)									
1. Team size	5.16	1.19							
2. Gender	0.67	0.47	0.17						
3. Age	32.09	6.08	0.12	0.06					
4. Education	16.23	1.01	−0.22*	−0.00	−0.01				
5.Tenure	7.81	4.61	0.04	0.12	0.82**	−0.18			
6. Workaholism	3.27	0.73	0.34**	0.22	−0.00	0.02	−0.06	(0.93)	
Individual level (N = 408)									
1. Gender	0.74	0.44							
2. Age	26.18	0.39	0.01						
3. Education	16.33	0.75	0.01	0.04					
4. Work hours weekly	44.87	8.23	0.03	−0.02	−0.01				
5. Emotional exhaustion	3.59	0.66	−0.06	0.00	0.03	0.02	(0.75)		
6. Family support	3.41	0.95	−0.19**	−0.00	0.03	0.05	−0.41***	(0.87)	
7. Work fatigue	3.70	0.61	−0.20***	0.01	−0.02	0.05	0.45***	0.53***	(0.92)

Note. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$ (The same below).

Table 3. Results of path analysis study

Paths	Coefficient	Standard error	95% CI
LW → WF	0.30	0.03	[0.23, 0.36]
LW → EE	0.19	0.05	[0.09, 0.28]
EE → WF	0.20	0.04	[0.13, 0.27]
LW→ EE →WF	0.04	0.01	[0.02, 0.07]
EE → WF (at low level of Family support)	0.29	0.05	[0.20, 0.38]
EE → WF (at high level of Family support)	0.11	0.05	[0.02, 0.21]
LW→ EE →WF (at low level of Family support)	0.05	0.02	[0.02, 0.10]
LW→ EE →WF (at high level of Family support)	0.02	0.01	[0.005, 0.05]

Note. LW: Leader workaholism; EE: Emotional exhaustion; WF: Work fatigue; low level: Family support − 1SD; high level: Family support + 1SD; SD: Standard deviation.

$p < 0.001$, 95% confidence interval [0.14, 0.27]). Furthermore, Tables 3 and 4 present the path from leader workaholism to employee work fatigue via emotional exhaustion (B = 0.04, SE = 0.01, 95% confidence interval [0.02, 0.07]). Therefore, Hypothesis 2 is supported.

Figure 2 also indicates that family support can moderate the positive relationship between employee emotional exhaustion and work fatigue (B = −0.09, SE = 0.05, $p < 0.01$). To better illustrate this interaction, we followed the procedure proposed by Aiken and West, 1991 and plotted the interaction graph based on the average level of family support plus or minus one standard deviation (see Figure 3). Additionally, Tables 3 and 4 show that when the level of family support is higher, the positive correlation between

Table 4. Regression analysis model

Variables	Emotional exhaustion		Work fatigue			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variable						
Gender	−0.09	−0.10	−0.28***	−0.30***	−0.15*	−0.18**
Age	0.00	−0.02	0.01	−0.04	0.02	−0.01
Education	0.02	0.03	−0.02	−0.01	−0.03	−0.03
Work hours weekly	0.01	0.01	0.01	0.01	0.01	0.01
Team size	0.02	0.03	0.02	0.03	0.03	0.03
Independent variable						
Workaholism		0.19***		0.41***		0.30***
Mediating variable						
Emotional exhaustion					0.21***	0.20***
Moderating variable						
Family support					−0.58***	−0.58***
Interaction terms						
Emotional exhaustion * Family support					−0.09*	−0.09**
R^2	0.01	0.04	0.04	0.25	0.37	0.21
ΔR^2		0.03***		0.24***	0.36***	0.20***

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

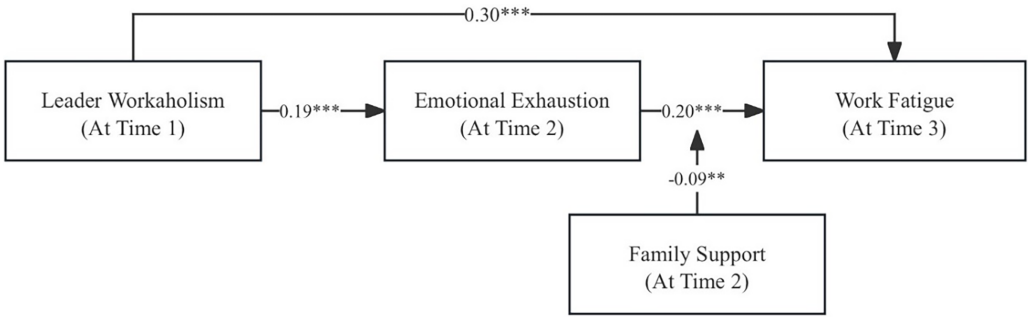

Figure 2. Model path coefficient diagram of study. *Note.* The test results are obtained while controlling for the influence of the control variables. ***p < 0.001, **p < 0.01.

emotional exhaustion and job fatigue is weaker than when the level is lower (B = 0.11, SE = 0.05, 95% confidence interval [0.02, 0.21]); while when the level is lower, this positive correlation is stronger (B = 0.29, SE = 0.05, 95% confidence interval [0.20, 0.38]). Therefore, Hypothesis 3 is supported.

We calculated the indirect mediation effect of emotional exhaustion under different levels of family support. Tables 3 and 4 show that leader workaholism on employee work fatigue via emotional exhaustion is significant at both low and high levels of family support (at low levels, B = 0.06, SE = 0.02, 95% confidence interval [0.02, 0.11]; at high levels, B = 0.02, SE = 0.01, 95% confidence interval). Therefore, Hypothesis 4 is supported.

Discussion

This study indicates that there is a significant positive correlation between leader workaholism and employee work fatigue. This result aligns with Conservation of Resources theory (Hobfoll, 1989, 2001), which suggests that individuals strive to protect their limited resources—such as emotional energy—and experience stress and fatigue when these resources are depleted (Park et al., 2014; Sun & Pan, 2008). In the present context, leaders' workaholic behaviors appear to drain employees' psychological resources, thereby inducing emotional exhaustion and ultimately contributing to work fatigue.

Furthermore, emotional exhaustion was identified as a mediator in the relationship between leader workaholism and employee work fatigue. Our finding resonates with prior research (e.g., Allen & Finkelstein, 2014; Liu et al., 2015; Li & Peng, 2022) and can be understood from the perspective of the COR theory. Specifically, working under a workaholic leader gradually consumes employees' emotional and cognitive resources, thereby increasing their susceptibility to fatigue. This mediation mechanism helps to elucidate the underlying process—often referred to as the "black box"—by which leaders' excessive work engagement impairs employee well-being, as informed by both COR theory and the Social Support Buffering Model (Cohen & Wills, 1985; Hobfoll, 2001).

Additionally, family support was found to buffer the negative effect of emotional exhaustion on work fatigue. Consistent with the social support buffering perspective (Aneshensel & Stone, 1982; Cohen & Wills, 1985),

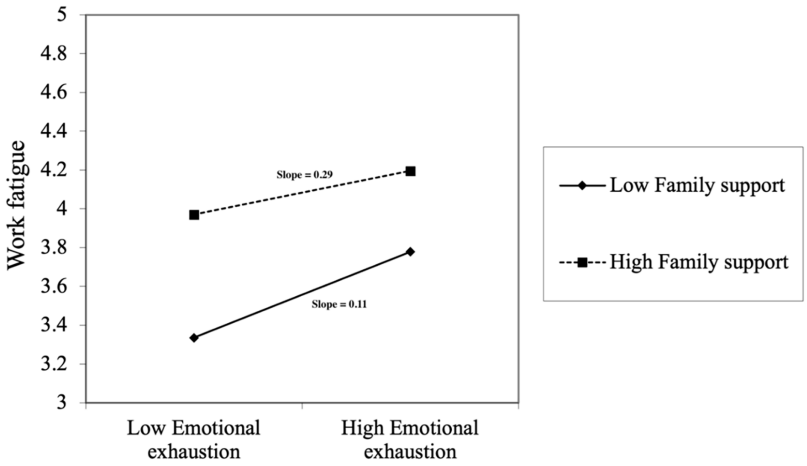

Figure 3. Moderating effect of family support

familial support appears to mitigate the translation of emotional exhaustion into work fatigue (Liu et al., 2015). This result highlights the vital role of non-work support systems in enhancing employee resilience (Bardoel et al., 2014; Meacham et al., 2025), illustrating how external resources can alleviate the adverse impacts of workplace stressors.

Implications for research and practice

This research offers practical implications for organizations seeking to proactively prevent workaholism and its negative consequences. First, organizations should cultivate a healthy work culture by promoting the value of balancing work and life, reducing excessive overtime, and implementing flexible working arrangements (Kahn, 1990; Parkes & Langford, 2008). Such initiatives can help establish normative boundaries around work intensity and availability.

Second, for each organization, establishing open communication channels is of utmost importance, as it enables employees can express their concerns regarding workload, stressors, and support needs (Edmondson, 1999). Complementary to this, organizations should integrate soft skill development into training programs to strengthen employees' resilience and stress management capabilities (Lengnick-Hall et al., 2011). Regular check-ins and constructive feedback sessions can help leaders identify challenges faced by team members and provide timely support. Furthermore, systematic monitoring of employee workload and stress levels can assist in detecting potential risks before they escalate (Sonnentag & Frese, 2002).

Third, given that family support can play a role in alleviating emotional exhaustion and work fatigue, organizations are encouraged to develop initiatives that foster family involvement in the work environment. Examples include organizing family days, offering workshops to help families understand common workplace stressors (Hammer et al., 2011), and providing resources to help employees strengthen their family support systems (Allen, 2001; Fox et al., 2022; Odle-Dusseau et al., 2016).

Limitations and future research directions

Our research has several limitations that warrant attention in future research. First, although the three-wave time-lagged design strengthens temporal inference, it does not establish definitive causality among workaholism, emotional exhaustion, family support, and work fatigue. While path analysis provides valuable insights into these relationships, future studies could employ experimental approaches—such as randomized controlled trials—or adopt longer-term longitudinal designs (Cole & Maxwell, 2003; Lu et al., 2021).

Furthermore, the universality of the research results may be limited by the characteristics of the sample, including a high proportion of female participants (74%) and a relatively narrow age distribution (SD = 0.39). Future research should attempt to replicate these results in more diverse and representative samples in order to enhance their external validity.

Second, although this study explains the mediator emotional exhaustion based on the Conservation of Resources theory and the Social Support Buffering Model (Aneshensel & Stone, 1982; Hobfoll, 1989, 2001), other theoretical frameworks may offer complementary insights. For example, incorporating the Job Demands-Resources model (Bakker & Demerouti, 2007; Bakker et al., 2023) could further the specific mechanism by which leader workaholism affect employee fatigue.

Finally, the use of self-reporting measurement methods may introduce common method bias (Cooper et al., 2020; Podsakoff et al., 2024). To improve methodological rigor, future studies are recommended to incorporate multiple sources of data—such as supervisor evaluations or objective indicators of work behavior and fatigue.

Conclusion

This study proposed a moderated mediation model to provide an understanding of leader workaholism and employee work fatigue, with emotional exhaustion serving as a mediator and family support as a moderator. Our results indicate that leader workaholism significantly contributes to employee work fatigue, with emotional exhaustion playing a key mediating role. Moreover, family support functions as a buffer that mitigates the

adverse effects of emotional exhaustion and weakens the association between leader workaholism and employee fatigue. A major strength of our research lies in its focus on the detrimental consequences of workaholic leader, including increased emotional exhaustion and fatigue among employees. Our findings underscore the urgent need for organizations to recognize and address leader workaholism, offering valuable insights for developing interventions that foster healthier and more sustainable work environments.

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Availability of Data and Materials: The data that support the findings of this study are available from the Corresponding Author, Zheng Zhang, upon reasonable request.

Ethics Approval: The study was approved and supervised by the Research Ethics Committee of Yiwu Industrial and Commercial College (ID: ZP2025-01-002). All participants provided informed consent before participation.

Conflicts of Interest: The authors declare no conflicts of interest to report regarding the present study.

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