Humanities & Social Sciences Communications

REVIEW ARTICLE

https://doi.org/10.1057/s41599-023-02402-6 OPEN

Mindfulness and job performance in Chinese nonprofit workers: mediation effects of PANA and work engagement

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Despite the rapid growth of the Chinese nonprofit sector within the last 20 years, research shows Chinese nonprofit employees experience high rates of burnout and turnover. This has led to an increase in organizational instability and a decrease in service quality. This study examines the effect of mindfulness on job performance and whether positive and negative affect (PANA) and work engagement mediated this relationship in a sample of 233 Chinese nonprofit employees. The SEM results indicate mindfulness significantly increases job performance and that PANA and work engagement partially mediates the association between mindfulness and job performance. Mindfulness had a total effect of 0.52 on job performance, while its indirect effect on the performance was 0.16. These findings underscore the importance of mindfulness on job performance, as well as its effects on PANA and work engagement of nonprofit employees in China.

Introduction

Over the past few decades, China has experienced significant economic and social changes due to its rapidly growing transitional economy (Garnaut et al., 2018). The country's shift from a traditional totalitarian command economy to an open market economy has led to a range of administrative reforms and the expansion of the nonprofit sector (Huang et al., 2014; Lan and Galaskiewicz, 2012; Lu et al., 2020). In 2004, the Chinese government implemented the Regulations on Foundation Management, which permitted the establishment of charitable foundations. Thereafter, there became four types of non-profit organizations in China: (1) social associations (i.e., membership groups), (2) social service organizations (i.e., unions), (3) foundations, and (4) public institutions (Council on Foundations, 2022). This policy change led to a remarkable growth in the number of foundations nationwide, increasing from under 1000 to 7200 in just three years. Furthermore, by 2017, the nonprofit sector witnessed a significant expansion, growing from 4000 organizations to an astounding 816,000 organizations, while employing well over 800,000 individuals (Ministry of Civil Affairs, 2017). Alongside this expansion, the workforce within foundations also saw a substantial rise, with the number of full-time employees nearly tripling from 10,100 to 31,000 (China Foundation Development, 2011). Additionally, foundation net assets experienced significant growth during this period, surging

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from 4.2 billion RMB (approximately 650.5 million USD) to 159.2 billion RMB (approximately 24.6 billion USD) (Cheng et al., 2020; China Foundation Development, 2011).

However, this remarkable growth in the nonprofit sector has been accompanied by a notable increase in work demands for employees, leading to significant burnout and turnover (Tsinghua University Philanthropy Research Institute, 2018; Wen, 2019). A study revealed that in 2017, 27.6% of employees in philanthropy organizations, including nonprofit organizations and foundations, left their positions (Wen, 2019). Another study found that approximately 20.2% of employees in charity organizations expressed the intention to resign, with a higher proportion observed in nonprofit organizations (29.0%) and a slightly lower proportion in foundations (15.9%) (Tsinghua University Philanthropy Research Institute, 2018). This constant turnover has brought about continuous recruitment pressure and has jeopardized the sustainability—and quality—of work within this sector (Tsinghua University Philanthropy Research Institute, 2018; Wen, 2019). Thus, there is a clear need to examine the work conditions and outcomes of nonprofit employees in China and whether potential resources such as mindfulness can make a difference. Currently, there is a dearth of empirical studies investigating the effects of mindfulness on work processes and outcomes specifically among nonprofit employees in China. The objective of this research is to examine how mindfulness and job demands influence psychological affect, work engagement, and job performance of employees within nonprofit organizations in China, to ultimately fill this gap.

Mindfulness

Mindfulness is a mental state characterized by non-judgmental and non-reactive awareness of the present moment, exhibiting both trait-like properties and variability among individuals and from moment to moment (Baer et al., 2006; Bishop et al., 2004; Guidetti et al., 2019). Within the past decade, research on mindfulness has flourished and provided empirical evidence on its positive effects on individual competency, overall health, and general well-being (Song et al., 2021). Additionally, studies also show mindfulness is associated with less exhaustion, increased well-being at work (Deng et al., 2021a; Grover et al., 2017), increased happiness and productivity at work (Coo and Salanova, 2018; Dust et al., 2022).

Mindfulness has also been shown to help individuals control emotional responses (Guidetti et al., 2019; Jiménez-Picón et al., 2021). For example, mindfulness can help individuals remain tranquil and objective during emotional situations or when confronted with emotional feelings/thoughts. Additionally, the practice can help individuals remain mentally in the present moment. This is an important skill, especially in the workplace, because it helps individuals to ignore or sidestep distractions or emotional situations that detract from work performance. Moreover, this ability to stay present and non-judgmental can help employees to increase attention span and positive affect, while reducing negative affect and burnout. Collectively these two combining forces improve work engagement and overall job performance (Dust et al., 2022; Good et al., 2016; Malinowski and Lim, 2015).

Positive and negative affect

Affect refers to any experience of feeling or emotion that can range from misery to euphoria. On one end of the affect spectrum, positive affect (PA), includes positive feelings or emotion such as confidence and optimism, while in contrast, negative affect (NA) contains negative feelings or emotions such as nervousness, worry, and fear (Diener et al., 2020). Fredrickson's (2001) Broaden-and-build Theory postulates the positive emotions from PA can expand an individual's behavioral or emotional repertoire, which help the individual accrue and learn new skills. Ultimately these skills will help facilitate success, especially within the work environment. Studies have also found PA is a positive predictor of an individual's job performance, job satisfaction, work engagement, and coping strategy (Diener et al., 2020; Malinowski and Lim, 2015).

In contrast, Affective Events Theory explains how employees' negative emotions and reactions can negatively influence job performance and job satisfaction (Weiss and Cropanzano, 1996). Studies have found NA reduces work engagement, job performance, and overall well-being (Dubreuil et al., 2021; Sandrin et al., 2020). In short, PANA play an important role in the cognitive, behavioral, and overall well-being of an individual's daily personal and work life (Diener et al., 2020; Dubreuil et al., 2021).

Work engagement and job performance

Work engagement considers how an employee is positive, fulfilling, vigorous, and dedicated within their work while job performance is the efficiency with which an employee performs work tasks (Schaufeli et al., 2009). Generally, job performance consists of two main elements: task and contextual performances (Borman and Motowidlo, 1993). First, task performance is the core job responsibilities of an employee, or in-role prescribed behavior, which can be measured by analyzing an employees' work product. Second, contextual performance is the discretionary extra-role behaviors that move beyond formal job responsibilities, such as coaching coworkers, mentorship, and remaining organized. Even though contextual performance is considered an extra-role outside of specific task performance, it is the foundation for an overall successful job performance. Research suggests high work engagement can lead to high job performance, including both task and contextual performances (Bakker and Demerouti, 2018; Halbesleben and Wheeler, 2008; Song et al., 2018). For example, Halbesleben and Wheeler (2008) used 587 employees from various industries and occupations, and found work engagement was significantly associated with high job performance. Song et al. (2018) also found that work engagement was positively correlated with job performance (beta = 0.23) in 481 Korean teachers.

Conceptual framework and hypothesis

We aim to explore the effects of mindfulness and job demands on the psychological well-being, work outcomes of employees in Chinese nonprofit organizations. Thus, our conceptual framework draws upon various theories in the realms of work, mindfulness, and psychological affect. Specifically, the conceptual model of this study is based on the job demands and resources (JD-R) theory, the mindfulness framework, the broaden-and-build theory, and the affective events theory (Bakker and Demerouti, 2018; Fredrickson, 2001; Good et al., 2016; Kabat-Zinn, 1990; Weiss and Cropanzano, 1996). The JD-R Theory examines the way JD and JR interact to help or hinder employees within the workplace. It posits that JD and JR affect work engagement and performance through two processes: the health-impairment process and the motivation-driven process (Bakker and Demerouti, 2018). First, JD encompass the various work-related conditions that force an employee to maintain constant physical or mental effort. Typically, these efforts involve health-impairment process and come with steep physiological costs, such as exhaustion and fatigue, and ultimately lead to a loss of energy and reduced work engagement and performance. Second, JR entail motivation-driven process and are work aspects that help employees complete work goals, create a stimulating work

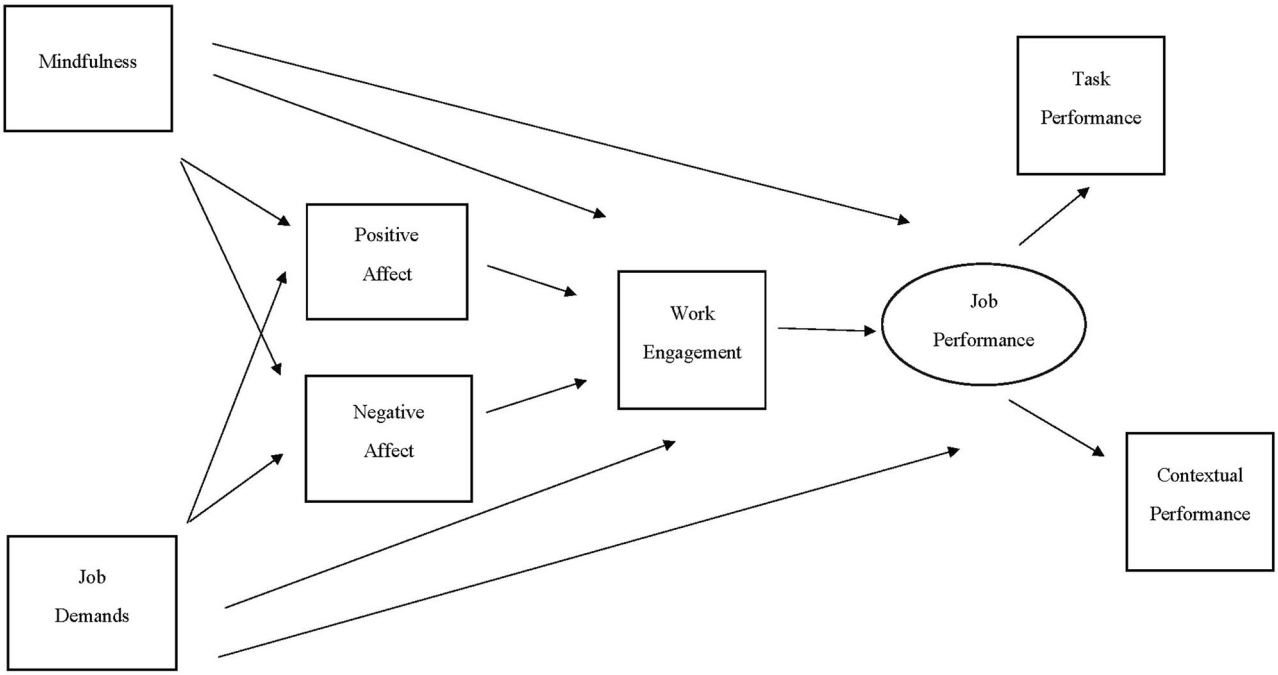

Fig. 1 Conceptual model of mindfulness and job performance.

environment, alleviate psychological costs of JD, and enhance work engagement and performance (Bakker and Demerouti, 2018).

Within the mindfulness framework, it is hypothesized that the cultivation of mindfulness enables individuals to engage in non-judgmental awareness, leading to improved emotional adaptation in each moment. Consequently, this process broadens PA and diminishes NA (Good et al., 2016; Kabat-Zinn, 1990). Drawing from the broaden-and-build theory and the affective events theory, individuals who experience higher levels of PA and lower levels of NA are more likely to accumulate physical, psychological, and social resources. These accumulated resources, in turn, can foster work engagement and improve job performance (Cheung et al., 2022; Diener et al., 2020; Malinowski and Lim, 2015; Lyubomirsky et al., 2005; Song et al., 2021). Figure 1 presents the conceptual model of this study. In this study, we investigated the mediating effects of PANA and work engagement on the relationships between mindfulness, job demands, and job performance among non-profit employees in China:

Hypothesis 1: Mindfulness is positively associated with PA
Hypothesis 2: Mindfulness is negatively associated with NA
Hypothesis 3: Mindfulness is positively associated with work engagement
Hypothesis 4: Mindfulness is positively associated with job performance
Hypothesis 5: JD is negatively associated with PA
Hypothesis 6: JD is positively associated with NA
Hypothesis 7: JD is negatively associated with work engagement
Hypothesis 8: JD is negatively associated with job performance
Hypothesis 9: PA is positively associated with work engagement
Hypothesis 10: NA is negatively associated with work engagement
Hypothesis 11: Work engagement is positively associated with job performance
Hypothesis 12: PANA mediates the effects among mindfulness, JD, and job performance
Hypothesis 13: Work engagement serves as a mediator between mindfulness, JD, and job performance

Methods

Data and sample. For this study, an anonymous survey was administered by the Social Innovation and Rural Revitalization Research Center (SIRRRC) at the School of Public Policy and Management of Tsinghua University in Beijing, China. SIRRRC, Guangdong Guoqiang Foundation, and the China Foundation Development Forum held a training for nonprofit employees working at 270 local foundations in March 2021. SIRRRC utilized quota sampling for the survey. To ensure representation of both local and national foundations in China, SIRRRC supplemented data collection by including 12 randomly selected national foundations, in addition to the existing percentages of 95.8% local foundations and 4.2% national foundations reported by Tsinghua University Philanthropy Research Institute (2018). This approach aimed to create a final sample frame ($n = 282$) that closely mirrored the distribution of local and national foundations in the country.

To perform the survey, SIRRRC invited the 282 foundations to partake in the online survey on May 20th, 2021. SIRRRC additionally sent follow-up reminders to complete the survey on May 27th and June 3rd, 2021 respectively. By June 20th, 2021, 233 participants had completed the survey. Each participant was informed of their voluntary consent and participation and were reminded of their right to end the survey at their will. Each participant was randomly compensated based on the red envelope they picked. Each envelope contained cash ranging from 0 to 18 RMB. On average, participants collected 5 RMB (around 1 USD).

This protocol was approved by the research review committee at one of the co-authors' university. Approximately two-thirds of the sample consisted of females, and the average age of the sample was 35. More than half of the participants earned a college degree (60%). Additionally, more than half were married (59%) when taking the survey. Finally, 39% of the participants were frontline workers, 31% were mid-level managers, and 30% were senior-level managers.

Measures. Job performance was measured as a latent variable and was assessed in two magnitudes: task and contextual

performances. First, to measure task performance we used a 9-item task performance scale (Goodman and Svyantek, 1999). This scale asked participants questions such as whether the worker feels they were able to "achieve the job". Second, to measure contextual performance, we used a 7-item contextual performance scale (Goodman and Svyantek, 1999). This scale asked participants questions such as whether they "help other employees with their work when they have been absent". This task and contextual performance scale have been verified for validity, psychometric soundness, and reliability by previous research (Goodman and Svyantek, 1999). For each of these task and contextual performance questions, participants were able to choose an answer along a 7-point Likert scale, ranging from 0 ("not characteristic") to 6 ("completely characteristic"). High scores meant the item was completely characteristic of the employee, while a low score meant it was not characteristic of the employee. We then averaged the mean score of all items for task and contextual performance. The Cronbach's alpha was .94 for task performance and .91 for contextual performance in this study.

Next, we measured work engagement using a short form of the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006). This short form has been verified by numerous studies for its validity, reliability, and soundness (Balducci et al., 2010; Schaufeli et al., 2006; Tran et al., 2020). The UWES-9 includes 9 items to gauge the three areas of work engagement: vigor, dedication, and absorption. Each has three items. Within the scale, participants were asked to answer opinion questions about their jobs. Some of these questions were: "At my work, I feel bursting with energy" (vigor), "I am enthusiastic about my job" (dedication), and "I am immersed in my work" (absorption). Participants had the option to select an answer along a 7-point Likert scale, ranging from 0 ("never") to 6 ("always") about how often they felt the proposed feeling at work. The overall work engagement score was given an average mean score of all nine items. The Cronbach's alpha of work engagement was 0.96 in this study.

Third, we measured PANA using the short form version of the International Positive and Negative Affect Schedule (I-PANAS-SF) (Thompson, 2007). I-PANAS-SF is a 10-item scale which has proven to have cross-sample stability, reliability, and validity (Jovanovic et al., 2021; Thompson, 2007). To measure PANA participants were asked about how frequent they felt various emotions (argumentative, sad, motivated, determined, etc.) within the past two weeks. Participants had the option to select an answer ranging from 1 ("never") to 5 ("always"). Next, we averaged the corresponding PA and NA scores. Each participant was given a PA and NA score ranging from 1 to 5. Here, the PA subscale had Cronbach's alpha of 0.77, while the NA subscale had a Cronbach's alpha of 0.83.

Fourth, we measured mindfulness using a 20-item short-form version of the Five Facet Mindfulness Questionnaire (FFMQ), which assesses the trait-like tendency of mindfulness in daily life (Baer et al., 2006; Meng et al., 2020). Moreover, we used Meng et al. (2020) Chinese version of the FFMQ. We chose this tool because it measures mindfulness through five various faces: (1) non-reactivity to inner experience, (2) observing, (3) acting with awareness, (4) describing, and (5) non-judging of experience. Additionally, FFMQ is psychometrically reliable and valid across a multitude of populations (Baer et al., 2006; Meng et al., 2020). Participants answered FFMQ questions along a 5-point Likert scale ranging from 1 ("never") to 5 ("always"). Afterwards the negative items were reverse coded and higher scores per item were highlighted to adequately analyze the levels of mindfulness. Finally, we calculated the mindfulness score by averaging the scores of all 20 items. The Cronbach's alpha was 0.87 in this study.

Fifth, we measured JD using Lequeurre et al.'s (2013) Questionnaire sur les Ressources et Contraintes Professionnelles (QRCP). The QRCP assesses JD through three dimensions: pace and volume of workload, emotional workload, and task changes. First, pace and volume of workload examines whether participants have excess work tasks to complete within limited or tight deadlines. Second, emotional workload examines the emotional energy employees have to retain and expel to complete specific JD. Third, task changes examines the challenges of job role changes both on an individual and team level. The QRCP asks four questions per each of the three dimensions and participants can select a response along a 7-point Likert scale ranging from 1 ("never") to 7 ("always"). The higher the score selected, the greater the presence of JD. Finally, each item was averaged to get a final JD score. The Cronbach's alpha of JD was 0.82 in this study. Table 1 lists all scale items used in this study.

Analytical approach. We first conducted descriptive and correlation analyses for all variables using STATA software 16.0. Then, Structural Equation Modelling (SEM) was used to examine the direct and indirect effects of mindfulness on job performance through the hypothesized mediators, PANA and work engagement, while controlling for JD. The maximum likelihood (ML) estimation was used in SEM. The model-to-data fit was assessed by numerous fit indices, including Chi-square statistics, Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). Values of Chi-square statistics > 0.05, CFI > 0.95, SRMR < 0.08, and RMSEA values < 0.08 indicate good model-to-data fit. Next, we performed regression analyses with extensive covariates, including personal characteristics, as a robust test. The outcomes of the regression analyses, which can be obtained upon request, align closely with the SEM findings presented in this report.

Results

Table 2 depicts the descriptive statistics and correlations found from our analyses. The participants' responses indicated that task and contextual performance, as well as work engagement, were reported at a moderately high level, all surpassing a rating of 5. The average PA score was above the mean, while the NA score was slightly below the mean. The mean scores of mindfulness and JD were 3.2 and 4.6, respectively. Based on the descriptive findings, it can be inferred that nonprofit workers in China exhibited moderately high levels of work engagement and job performance. They reported moderate levels of PA and mindfulness, while experiencing slightly low levels of NA, despite encountering medium-high levels of JD.

Moreover, the findings from the correlation analyses were generally consistent with our hypotheses. First, mindfulness had a positive correlation with PA ($r = 0.34$, $p < 0.001$), work engagement ($r = 0.41$, $p < 0.001$), task performance ($r = 0.45$, $p < 0.001$), and contextual performance ($r = 0.31$, $p < 0.001$), but a negative correlation with NA ($r = -0.24$, $p < 0.001$). Second, JD had a positive association with NA ($r = 0.29$, $p < 0.001$) and contextual performance ($r = 0.19$, $p < 0.01$). But there was an insignificant correlation between JD and PA, work engagement, and task performance. Third, PA had a positive correlation with work engagement and job performance, while NA showed a negative correlation with each of these two variables. Fourth, work engagement showed a strong correlation with task performance ($r = 0.45$, $p < 0.001$) and contextual performance ($r = 0.40$, $p < 0.001$). Finally, task performance and contextual performance had a high correlation ($r = 0.62$, $p < 0.001$).

Table 1 Scale Items.

Job Performance - Task Performance
1. Achieves the objectives of the job
2. Meet criteria for performance
3. Demonstrates expertise in all job-related tasks
4. Fulfills all the requirements of the job
5. Could manage more responsibility than typically assigned
6. Appears suitable for a higher-level role
7. Is competent in all areas of the job, handles tasks with proficiency
8. Performs well in the overall job by carrying out tasks as expected
9. Plans and organizes to achieve objectives of the jobs and meet deadlines
Job Performance - Contextual Performance
1. Helps other employees with their work when they have been absent
2. Volunteers to do things not formally required by the job
3. Takes initiative to orient new employees to the department even though not part of job description
4. Helps others when their workload increases
5. Assists me with my duties
6. Makes innovative suggestions to improve the overall quality of the department
7. Willingly attends functions not required by the organization but helps in its overall image
Work Engagement
1. At my work, I feel bursting with energy
2. At my job, I feel strong and vigorous
3. When I get up in the morning, I feel like going to work
4. I am enthusiastic about my job
5. My job inspires me
6. I am proud of the work that I do
7. I feel happy when I am working intensely
8. I am immersed in my work
9. I get carried away when I am working
Positive and Negative Affect
1. Upset
2. Hostile
3. Alert
4. Ashamed
5. Inspired
6. Nervous
7. Determined
8. Attentive
9. Afraid
10. Active
Mindfulness
1. I watch my feelings without getting lost in them
2. Usually when I have distressing thoughts or images, I am able just to notice them without reacting
3. Usually when I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it
4. Usually when I have distressing thoughts or images, I just notice them and let them go
5. When I am walking, I deliberately notice the sensations of my body moving
6. When I take a shower or a bath, I stay alert to the sensations of water on my body
7. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions
8. I pay attention to sensations, such as the wind in my hair or sun on my face
9. It seems I am "running on autopilot" without much awareness of what I'm doing
10. I do jobs or tasks automatically, without being aware of what I'm doing
11. I find myself doing things without paying attention
12. I do not pay attention to what I am doing because I am daydreaming, worrying, or otherwise distracted
13. I am good at finding the words to describe my feelings
14. Even when I am feeling terribly upset, I can find a way to put it into words
15. My natural tendency is to put my experiences into words
16. I can usually describe how I feel at the moment in considerable detail
17. I tell myself that I should not be feeling the way I am feeling
18. I believe some of my thoughts are abnormal or bad and I should not think that way
19. I tell myself I should not be thinking the way I am thinking
20. I think some of my emotions are bad or inappropriate and I should not feel them
Job Demands
1. Do you have too much work to do?
2. Do you have to work extra hard in order to complete something?
3. Do you have to hurry?
4. Would you prefer a calmer work pace?
5. Does your work demand a lot from you emotionally?
6. In your work, do you have to be able to convince or persuade people?
7. Are you confronted with things that affect you personally in your work?
8. Does your work put you in emotionally upsetting situations?
9. Have the proposed changes in your tasks been introduced well?
10. Do you find it difficult to adapt to changes in your tasks?
11. Do the changes in your tasks cause you problems?
12. Do the changes in your tasks have negative consequences for you?

Figure 2 shows the standardized coefficients of the SEM model results. The recommended model fit appropriately into the data: χ^2 (6) = 11.5, $p > 0.05$, CFI = 0.98, RMSEA = 0.06, SRMR = 0.03. The outcomes of the measurement model indicated that both task and contextual performance exhibited high loadings on the latent factors of job performance, aligning with the anticipated direction as hypothesized ($\beta = 0.84$ and 0.73, respectively, $p < 0.001$). Additionally, the structural model findings indicate mindfulness was positively associated with PA ($\beta = 0.35$, $p < 0.001$) and negatively associated with NA ($\beta = 0.21$, $p < 0.001$). This result

Table 2 Descriptive statistics and correlations of key variables.

	Mean (SD)	1	2	3	4	5	6	7
1. Task Performance [1–7]	5.4 (0.9)	—						
2. Contextual Performance [1–7]	5.5 (0.9)	0.62 ***	—					
3. Work Engagement [1–7]	5.2 (1.3)	0.45 ***	0.40 ***	—				
4. Positive Affect [1–5]	3.2 (0.6)	0.34 ***	0.30 ***	0.58 ***	—			
5. Negative Affect [1–5]	2.3 (0.8)	−0.21 **	−0.07	−0.23 ***	−0.03	—		
6. Mindfulness [1–5]	3.2 (0.4)	0.45 ***	0.31 ***	0.41 ***	0.34 ***	−0.24 ***	—	
7. Job Demand [1–7]	4.6 (0.8)	0.12	0.19 **	−0.05	0.07	0.29 ***	−0.10	—

$N = 233$; ** $p < 0.01$, ***$p < 0.001$.

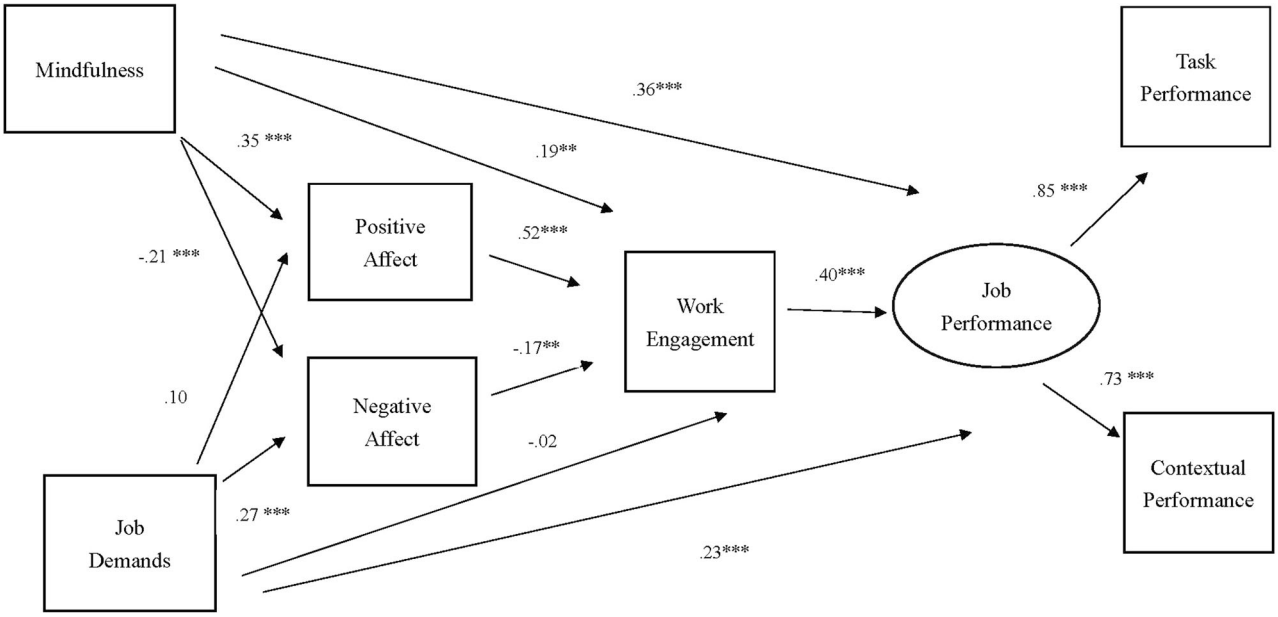

Fig. 2 Standardized estimates of the hypothesized model. Note: $N = 233$; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

confirms Hypotheses 1 and 2. Mindfulness also had a significant influence on work engagement ($\beta = 0.19$, $p < 0.01$) and job performance ($\beta = 0.36$, $p < 0.001$). These results confirm Hypotheses 3 and 4, but did not support Hypothesis 5 because JD had no influence on PA. Next, JD showed a positive effect on NA ($\beta = 0.27$, $p < 0.001$), which confirms Hypothesis 6. However, there was no evidence that JD had effects on work engagement (Hypothesis 7). In addition, contradicted with Hypothesis 8, JD was positively associated with job performance ($\beta = 0.23$, $p < 0.001$). PA had a strong and positive influence on work engagement ($\beta = 0.52$, $p < 0.001$), while NA shows a negative effect on work engagement ($\beta = -0.17$, $p < 0.001$). These results are consistent with Hypotheses 9 and 10. Finally, consistently with Hypothesis 11, work engagement was positively linked with job performance ($\beta = 0.40$, $p < 0.001$).

Table 3 presents the full results of the mediation analysis. Mindfulness has indirect effects on work engagement ($\beta = 0.22$, $p < 0.001$) and job performance ($\beta = 0.16$, $p < 0.001$) via its effects on PA and NA. Likewise, PA has a positively indirect effect on job performance ($\beta = 0.21$, $p < 0.001$) while NA has a negatively indirect influence on job performance ($\beta = -0.07$, $p < 0.001$), via its effect on work engagement. These findings suggest PANA and work engagement partially mediated the connection between mindfulness and job performance, confirming Hypotheses 12 and 13.

Mindfulness had a total influence of 0.52 on job performance, and an indirect influence of 0.16. PANA and work engagement proportionately mediated the effect of mindfulness on job performance by 0.31 (0.16/0.52). Likewise, PANA mediated the relationship between mindfulness and work engagement. Mindfulness had a total influence of 0.41 on work engagement, and an indirect effect of 0.22 via PANA. PANA proportionately mediated mindfulness's effects on work engagement by 0.54.

Discussion

The purpose of this study was to examine the effect of mindfulness on job performance and whether PANA and work engagement mediated this relationship amongst Chinese nonprofit employees. Understanding this relationship, specific to the experience of nonprofit employees, can potentially help nonprofit agencies reduce the high agency turnover rates and burnout. The findings from the descriptive analysis show nonprofit workers in China, on average, maintain high work engagement and job performance, including task and contextual performance, despite high JD. Nonprofit workers also have above mean mindfulness and PA, but slightly low NA. The correlation analyses additionally reveal mindfulness is positively associated with PA, work engagement, and task and contextual performance, but negatively correlated with NA. These findings are in line with current literature and support claims that mindfulness can help employees remain positive and more productive at work (Coo and Salanova, 2018; Dust et al., 2022; Malinowski and Lim, 2015).

Table 3 Full results of mediation analysis.

Predictor	Dependent Variable	Direct Effect	Indirect Effect	Total Effect
Mindfulness	Positive Affect	0.35***	—	0.35***
Mindfulness	Negative Affect	−0.21***	—	−0.21***
Mindfulness	Work Engagement	0.19**	0.22***	0.41 ***
Mindfulness	Job Performance	0.36***	0.16***	0.52 ***
Job Demand	Positive Affect	0.10	—	0.10
Job Demand	Negative Affect	0.27***	—	0.27***
Job Demand	Work Engagement	−0.02	0.01	−0.01
Job Demand	Job Performance	0.23***	−0.01	0.22***
Positive Affect	Work Engagement	0.52***	—	0.52***
Positive Affect	Job Performance	—	0.21***	0.21***
Negative Affect	Work Engagement	−0.17**	—	−0.17**
Negative Affect	Job Performance	—	−0.07***	−0.07***
Work Engagement	Job Performance	0.40***	—	0.40***

$N = 233$; ** $p < 0.01$, ***$p < 0.001$.

Additionally, JD has a strong correlation with NA and appears to have negative effects on work engagement and task performance. These findings are aligned with JD-R Theory. This correlation suggests high JD affects work engagement and task performance through the health-impairment process because JD increases NA (Bakker and Demerouti, 2018; Dubreuil et al., 2021; Sandrin et al., 2020). Opposingly, the results also show JD are positively correlated with contextual performance. One explanation could be nonprofit workers, unlike private employees, are more likely to perform extra-role behavior such as coaching coworkers and being good organizational citizens when their colleagues are facing high JD (Bakker and Demerouti, 2018).

The results obtained from the SEM analysis provide support for the hypotheses suggesting that mindfulness has both a direct impact on job performance and an indirect impact through its influence on PANA and work engagement. Mindfulness exerts a substantial influence on job performance, with a coefficient of 0.52, and approximately one-third of this effect can be attributed to its impact on PANA and work engagement. This finding is also in line with current literature regarding how mindfulness leads to positive, happier workers who actively engage with their work and have high job performance (Coo and Salanova, 2018; Dust et al., 2022; Malinowski and Lim, 2015).

The SEM findings also show work engagement mediates the effects of PANA on job performance. PA has a strong, direct influence on work engagement ($\beta = 0.52$) and an indirect influence on job performance ($\beta = 0.21$). Likewise, NA has a strong, direct influence on work engagement ($\beta = -0.17$) and an indirect influence on job performance ($\beta = -0.07$). The relative estimates suggest employers of nonprofit agencies in China could improve work engagement and job performance by elevating PA amongst employees (Coo and Salanova, 2018; Dust et al., 2022; Malinowski and Lim, 2015). Likewise, given the strong effects of work engagement on job performance ($\beta = 0.40$), employers can improve job performance amongst employees by promoting work engagement.

Implications and limitations. The results here offer important practice, policy, theoretical, and research implications. First, considering the documented effects of mindfulness on PANA, work engagement, job performance, and its potential influence on mental health well-being (Deng et al., 2021a; Grover et al., 2017), it is advisable for employers to contemplate implementing mindfulness intervention programs within their organizations. While our study did not specifically investigate the effectiveness of mindfulness interventions or focus on trait-like mindfulness, existing literature suggests that these programs have the potential to encourage employees to engage in mindfulness practices, subsequently enhancing their level of mindfulness in daily life. This, in turn, can contribute to improved work productivity and overall well-being (Bossi et al., 2022; Coo and Salanova, 2018; Dust et al., 2022; Malinowski and Lim, 2015).

Second, the respondents expressed relatively high JD, which is an indicator of higher NA. As our study shows, the negative relationship between JD and NA can be dangerous within the work environment because it can cause employees to lose work engagement, fall behind in productivity, and increase workers' risk of morbidity. Considering the documented challenges faced by Chinese nonprofit employees, including high JD, burnout, psychological distress, (Deng et al., 2021b; Tsinghua University Philanthropy Research Institute, 2018) and a notable turnover rate of over 27% in the sector (Wen, 2019), it becomes imperative to prioritize interventions that address these issues. Thus, nonprofit employers must remain vigilant and wary of projecting high JD onto employees. Nonprofit employers should consider implementing policies that reduce JD and create practical supportive services and environments for their workers (Deng et al., 2021b; Huang et al., 2021).

However, as the nonprofit sector is quite varied in terms of sizes and resources (Cheng et al., 2020; Huang et al., 2014; Tsinghua University Philanthropy Research Institute, 2018), small foundations and local nonprofit agencies may not have sufficient resources to provide necessary support and services to their employees. To enhance work outcomes within the nonprofit sector in China and alleviate the challenges posed by limited resources, it is advisable for government entities and large foundations to proactively initiate measures. These may include providing direct grant support from the government and fostering alliances among nonprofit organizations in China. Such initiatives are essential for reducing JD and promoting positive work outcomes in the resource-constrained nonprofit agencies (Dong et al., 2019; Yu et al., 2021; Zhang and Guo, 2021).

Third, this study also makes unique contribution to the theoretical advancement. Within the context of China's nonprofit sector, employees commonly exhibit a strong altruistic drive. However, the combination of inadequate compensation, demanding job roles, and close interactions with individuals facing difficulties could propel employees towards heightened emotional involvement and dedication (Deng et al., 2021b; Tsinghua University Philanthropy Research Institute, 2018). The intensified emotional labor involved is prone to generating a greater emotional burden, potentially resulting in job burnout and emotional exhaustion, as outlined in the emotional labor theory (Humphrey, 2023; Grandey, 2000). The outcomes of this study

offer theoretical support for the notion that emotional labor could have negative association with job-related results in the nonprofit sector, particularly within collectivist cultures like China's (Deng et al., 2021b; Humphrey, 2023; Hur et al., 2015). Consequently, focusing on motivations and interventions related to emotional aspects becomes especially crucial for employees working in Chinese nonprofit sector.

Next, for research implication, the study found JD are positively associated with job performance, particularly with contextual performance amongst Chinese nonprofit workers. Thus, future studies may want to examine whether the effects of JD on in-role and extra-role behaviors vary based on types of agency: public, private, or nonprofit. Nonprofit workers typically perform more extra-role behavior than workers in other agencies, which can influence JD differently than workers in other agency types (Lee, 2016; Stater and Stater, 2019).

Additionally, this study has several limitations. First, the data of this study was based on a cross-sectional survey and, thus, the analysis only approximated the relationship between mindfulness, JD, PANA, work engagement, and job performance. Future studies may want to examine the causal relationships between these variables using a longitudinal experimental design. Second, our study likely had a few uncontrolled and unobserved variables that may have influenced our estimates and models. If any such variables exist, these would bias our findings. Third, our data was collected through a self-reporting process, which can create intended or unintended reporting errors. For example, when a respondent answers questions on their work engagement or task performance, it is possible the individual overreported his or her work duties because of the nature of the questions. Thus, future research should consider aggregating data from coworkers, supervisors, and relatives and utilizing a data triangulation process. Finally, these findings may not be generalizable to all Chinese nonprofit employees. The sample compromised of nonprofit employees who attended an online training at Tsinghua University and were not representative of all nonprofit employees. Thus, further research is required to understand how these results translate across all nonprofit workers throughout China.

Conclusion

The aim of this study was to understand how mindfulness and JD influence job performance, as well as whether PANA and work engagement mediate this relationship. Our findings further existing cross-cultural research on mindfulness and job performance, by uncovering that mindfulness increases PA, reduces NA, and improves work engagement and job performance amongst Chinese nonprofit workers. The notable presence of high JD, burnout, psychological distress, and turnover among Chinese nonprofit employees emphasizes the importance of implementing mindfulness interventions and providing additional support within Chinese nonprofit agencies. These significant findings underscore the need to assist workers in enhancing their psychological well-being, work engagement, and job performance. Ultimately, helping nonprofit workers with their overall mental well-being, will translate to better service for the vulnerable populations the workers serve.

Data availability

The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Received: 12 February 2023; Accepted: 16 November 2023;
Published online: 25 November 2023

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Author contributions

CCH: Conceptualization, Data Collection, Data Analysis and Writing; LC: Conceptualization, Data Collection, Data Analysis and Writing; SS: Conceptualization and Writing.

Competing interests

The authors declare no competing interests.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Research Review Committee, Huamin Research Center at Rutgers University (2021-003), and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent

The participants provided their informed consent to participate in this study.

Additional information

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