RESEARCH ARTICLE

Mediating role of perceived social support in the relationship between perceived stress and job burnout among midwives in the post-COVID-19 era

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Abstract

Aim: The aim of this study was to explore the mediating role of perceived social support in the association between perceived stress and job burnout in midwives.

Design: A descriptive, cross-sectional online survey.

Methods: Using the stratified cluster sampling method, 329 midwives in 20 hospitals in China were selected as the participants. They completed self-report assessment measures of job burnout, perceived stress and perceived social support.

Results: 63.5% of the participants had job burnout. Perceived stress was negatively associated with social support ($r = -.350$, $p < .01$), while it was positively associated with job burnout ($r = -.382$, $p < .01$). Social support was negatively correlated with job burnout ($r = -.569$, $p < .01$). The total effect of perceived stress on job burnout was 0.474 (95% CI: 0.367~0.596, $p < .01$), the direct effect was 0.242 (95% CI: 0.142~0.355, $p < .01$), and the indirect effect was 0.232 (95% CI: 0.160~0.316, $p < .01$). Social support programmes for midwives should be implemented to control the impact of perceived stress on job burnout.

KEYWORDS
burnout, midwifery, perceived social support, perceived stress

1 | INTRODUCTION

Maternal and children health have been considered to play crucial roles in the public health globally. Midwives can meet most of the basic needs of women and newborns and play key roles in improving women's and children's health (Amiri, 2020; Bolan et al., 2021). According to the State of the World's Midwifery 2021, there is a shortage of about 900,000 midwives in worldwide. Although there are no definite data on the shortage of midwife in China, the current situation of midwifery human resources in China is not optimistic.

With the releasing of the two-child policy in 2016 and the three-child policy in 2021, the number of childbirths in China increased significantly. Therefore, the midwife human resources allocation in China will face more severe challenges. At present, the global COVID-19 epidemic has rebounded several times, including in China, and the Delta and Omicron variant viruses have spread in many countries. The epidemic situation is still very serious. At present, there are still many cases emerging around the world. With no indication of when the COVID-19 pandemic will end, its effects will linger (Nicola et al., 2020). China has adopted stricter prevention

and control strategies, especially in hospitals, which increased the workload of understaffed midwives. As a result, midwives may feel great pressure and even have a sense of job burnout in the face of increasing numbers of pregnant women and complexity of delivery situations. Therefore, in order to promote maternal and child health, it is necessary to conduct an in-depth study on midwife burnout.

2 | BACKGROUND

In recent years, job burnout has been one of the research hotspots in the field of medical care professionals. According to Maslach's three-dimensional structural model, job burnout includes emotional exhaustion, depersonalization and personal accomplishment. Job burnout of medical care professionals may not only have a negative impact on personal health, but also affect job satisfaction, resulting in low work efficiency and even medical accidents (Iacobucci, 2021). Previous studies have found that midwives in Australia and United Kingdom experienced a higher incidence of job burnout (Hunter et al., 2019; Vaičienė et al., 2021). In China, most of the studies on job burnout focused on doctors and nurses (Li et al., 2021; Ren et al., 2021; Song et al., 2021). Midwives have often been grouped with nurses in the analysis in the previous studies, so that no conclusions can be drawn about job burnout of midwives as a specific group, especially in the post-COVID-19 era. Therefore, it is necessary to carry out a study on job burnout among midwives in China to understand its prevalence and related factors, so as to provide a basis for the promotion of the midwives' mental health.

Among the studies on the influencing factors of job burnout in different populations, occupational stress has attracted much attention (Guthier et al., 2020). Studies have demonstrated that midwives experience more work-related stress resulting from work-private life conflicts than nurses (Peter, Halfens, et al., 2021). High intensity of work stress is one of the factors contributing to job burnout of health care professionals (Fischer et al., 2020). The impacts of stressful events on the individuals are determined by how the individuals perceive the stress rather than the objective stressful events (Song et al., 2020). There are a few studies concentrating on the effect of perceived stress on burnout (Kumpikaitė-Valiūnienė et al., 2021); however, such study has not yet been performed among midwives in Chinese clinical settings. Hence, studies focusing on the relationship between perceived stress and job burnout among midwives are needed to design appropriate prevention and intervention strategies.

There is already wide knowledge about the relationship between perceived stress and burnout; however, the underlying mechanism remains unknown. With the deepening of the research on the relationship between occupational stress and job burnout, some researchers found that occupational stress not only directly affects job burnout, but also indirectly affects job burnout through other factors, including social support (Wu et al., 2021). The Job Demands-Resources (JD-R) model provides a theoretical basis for the impact of social support on job burnout (Vander Elst et al., 2016). This model proposes that work resources are benign factors that promote individual growth and development, and lack of work resources will lead to negative consequences such as burnout. The most well-known models of social support are main effect and buffering effect models (Zaken et al., 2022), which provide evidence for the mechanism of occupational stress on job burnout. The main effect model holds that social support has a direct impact on individual work and health (van der Velden et al., 2022), which is consistent with the theory of JD-R model. According to the buffering effect model, social support can buffer the negative impact of stressful events on the physical and mental state of individuals, including burnout.

Based on the main effect and buffering effect models of social support and JD-R model, we propose the following hypotheses: (a) occupational stress will be positively associated with job burnout; (b) social support will be negatively associated with job burnout; and (c) social support will buffer the positive relationship between occupational stress and job burnout. The hypothesized model is shown in Figure 1.

Therefore, the aim of this study is to (a) investigate the prevalence of job burnout among midwives, (b) explore the relationship among stress, social support and job burnout in midwives and (c) determine the mediating role of social support between job stress and job burnout.

3 | METHODS

3.1 | Participants and procedures

Using the stratified cluster sampling method, midwives in 20 hospitals in Qingdao were selected as the participants. The specific sampling method was as follows: (1) The city is divided into 10 districts or counties according to administrative areas. (2) Two hospitals were selected from each district by convenience sampling method. (3) All the midwives engaged in the obstetric department for over 1 year were investigated.

Due to the continuing impact of COVID-19, medical institutions in Qingdao have strict regulations on all non-staff members entering and leaving hospitals. Therefore, an online survey in Chinese was used in this study from February to May 2021. Prior to data collection, the research team established a cooperative relationship with the hospital obstetrics department and obtained support
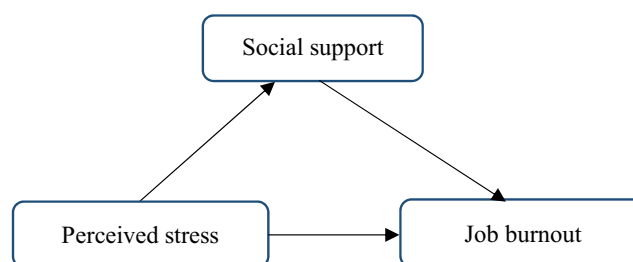

FIGURE 1 Conceptual model of the research

from the head nurses by the Midwifery Professional Committee of Qingdao Nursing Society. The head nurses of obstetrics department in each participating hospitals were informed of the purpose and content of the study, procedures and key points for filling in the online questionnaire. The project leader sent the link of the online questionnaire to the head nurses of 20 hospitals through WeChat, one of the most commonly used communication platforms in China. Then, the head nurses sent the link to the WeChat group of midwives, introduced the study and reminded midwives to complete the survey if they were willing to participate in the study. In this way, each midwife could access the online questionnaires and filled voluntarily. After participants completed the online questionnaire, all data were directly delivered to the research team from the online platform.

G*Power 3.1.9.2 program was used to calculate the sample with a significance level (α) of .05, power (1-β) of .95 and effect size (d) of .20. The resulting sample size was 327. 382 participants were investigated considering the dropout rate of 15%~20%, while 357 midwives answered the questionnaire, with a response rate of 93.4% (357 of 382). Questionnaires with incomplete values on some items were excluded from the analysis, and the final sample size was 329, yielding an effective response rate of 86.1% (329 of 382).

3.2 | Measures

3.2.1 | Demographics

Sociodemographic information included sex, age, marital status, educational background, years of working, job title and labour/personnel relations. The years of working were divided into four groups, including 1–5, 6–10, 11–15 and more than 15 years. Education background included two categories, junior college and below, bachelor's degree and above. Job titles and types of employment were nurse and head nurse, long-term and temporary, respectively.

3.2.2 | Job burnout

Job burnout was measured by Maslach Burnout Inventory-General Scale (MBI-GS) (Maslach et al., 2001), which is one of the widely used scales in the field of burnout (Rotenstein et al., 2018). MBI-GS consists of three dimensions: (1) emotional exhaustion; (2) depersonalization; and (3) reduced personal accomplishment. The Cronbach's α coefficient of the scale in this study was 0.731, and the coefficients of the three dimensions were 0.912, 0.781 and 0.839, respectively, demonstrating good reliability in the data and feasibility for the usage among the Chinese midwives.

The score ranges of the three dimensions are 0–54 (emotional exhaustion), 0–30 (depersonalization) and 0–48 (reduced personal accomplishment) respectively. The higher scores in the two dimensions of emotional exhaustion and depersonalization and lower scores in the dimension of personal accomplishment indicate the higher levels of burnout. As for emotional exhaustion, a score lower than 19 indicates low burnout, a score between 19 and 26 indicates medium burnout, and a score more than 26 indicates severe burnout. As for depersonalization, a score lower than 6 indicates low burnout, a score between 6 and 9 indicates medium burnout, and a score more than 9 indicates severe burnout. As for reduced personal accomplishment, a score more than 39 indicates low burnout, a score between 34 and 39 indicates medium burnout, and a score lower than 34 indicates severe burnout.

In order to describe the degree of burnout objectively and accurately, a weighted burnout score with the cut-off points was proposed, which was widely adopted in the previous studies (Jia et al., 2021; Xu et al., 2020). The equation was determined as "burnout = 0.4 * emotional exhaustion+0.3 * depersonalization+0.3 *reduced personal accomplishment." The scores of eight items of reduced personal accomplishment were reversed. The range of the weighted burnout score was 0–6, which can be divided into three categories. The cut-off points were no burnout <1.50, medium burnout 1.50–3.49 and severe burnout >3.49. Participants with medium or severe burnout were defined as "burnout cases."

3.2.3 | Perceived stress

Perceived stress was measured by Perceived Stress Scale-14 (PSS-14), which was designed by Cohen et al. (1983) and is one of the most commonly used tools for assessing perceived stress (Lian et al., 2021). PSS-14 has 14 items, with seven positively stated and seven negatively stated items (Hewitt et al., 1992). A five-point Likert scale from 0 (never) to 4 (very often) is used in the scale. The total score of the scale is 0–56, and the higher scores indicate higher perceived stress. The score of ≥26 can be judged as potentially harmful to an individual's physical and mental health, compared with the score of ≤25. The Cronbach's α coefficient in this study was 0.843.

3.2.4 | Social support

Social support was measured by Perceived Social Support Scale (PSSS), which was developed by Zimet et al. (1988). The Chinese version of PSSS (Chou, 2000) was used in this study to measure the participants' perceived social support from family, friends and others. The total score ranges from 12 to 84. The higher scores mean that individuals perceive more social support. The score of 12–36 indicates low perceived social support, 37–60 indicates moderate perceived social support, and 61–84 indicates high perceived social support. The Cronbach's α coefficient of PSSS in this study was 0.952.

3.3 | Ethics statement

The study was approved by the medical ethics committee of the author's institution. All midwives in the study were informed that their participation in the study was voluntary, and their responses were anonymous.

3.4 | Data analysis

The common method deviation was analysed using SPSS 22.0 software, by Harman's single-factor test. Descriptive analysis was used to calculate the scores of perceived stress, job burnout and social support. The relationship between perceived stress, job burnout and social support in these midwives was explored by Pearson's correlation analysis. Amos 21.0 was used to create a structural equation model between perceived stress, social support and job burnout in the midwives to test the mediating effect of social support between perceived stress and job burnout. In this study, p-values <.05 were considered to be statistically significant.

The structural equation model was used to examine the complex relationship between perceived stress, social support and job burnout in the midwives. Perceived stress was considered to be an observed variable and independent variable in the model. Social support and job burnout were identified as latent variables because they could not be observed directly. The three dimensions of social support and job burnout were all used as observed variables. Social support acted as a mediator in the model. Finally, job burnout was dependent variable in the model. The maximum likelihood method was used to fit the initial model. The fitting degree was tested by the ratio of chi-square to degree of freedom (χ^2/df), comparative fit index (CFI), Tucker–Lewis index (TLI), normed fit index (NFI), incremental fit index (IFI), goodness-of-fit index (GFI) and root mean square error of approximation (RMSEA). Path coefficients were used to examine the action paths of perceived stress on job burnout (including direct and indirect effects). The bootstrap method was used to analyse the mediating effect of social support.

4 | RESULTS

4.1 | Testing of common deviation method

In this study, the three questionnaires of perceived stress, social support and job burnout were all answered by midwives, which may have common method deviation. The results of Harman's single-factor test showed that there were 11 factors with eigenvalue greater than 1. The amount of variation explained by the first factor was 30.03%, which was less than the critical standard of 40%. The result indicated that there was no obvious deviation from the common method and the homologous error in the data of this study was well controlled.

TABLE 1 Sociodemographic characteristics of the participants ($N = 329$)

Characteristics	Value
Age, mean (SD), y	30.01 (8.04)
Job tenure, mean (SD), y	
≤5	127 (38.6)
6–10	105 (31.9)
11–15	34 (10.3)
>15	63 (19.1)
Marital status, *n* (%)	
Married	201 (61.1)
Nor married	128 (38.9)
Education level, *n* (%)	
Junior college and below	105 (31.9)
Bachelor's degree and above	224 (68.1)
Professional title, *n* (%)	
Primary	201 (61.1)
Medium	107 (32.5)
High	21 (6.4)
Job title, *n* (%)	
Nurse	302 (91.8)
Head nurse	27 (8.2)
Type of employment, *n* (%)	
Long-term	107 (32.5)
Temporary	222 (67.5)

4.2 | Participants' characteristics

In total, 329 midwives were included in the analysis. Table 1 presents the sociodemographic characteristics of the participants. The midwives were all female and their mean age was 30.01 ± 8.04 years, ranging from 19 to 55 years. 31.9% of the sample were at the education level of junior college and below. 61.1% of the midwives were at the professional title of primary rank. Only 32.5% of the respondents belonged to long-term type of employment, and others were temporary.

4.3 | The characteristics of job burnout among midwives

The characteristics of the three dimensions of job burnout are shown in Table 2. According to the cut-off points of emotional exhaustion, depersonalization and reduced personal achievement, the percentage of midwives in high burnout was 39.2% (129/329), 32.2% (106/329) and 30.1% (99/329), respectively. The mean of the weighted burnout score was 2.04 ± 0.93, with a range from 0.52 to 5.04. According to the classification criteria based on the weighted burnout score, 63.5% of the participants had job burnout, among

TABLE 2 Three dimensions of job burnout among midwives (N = 329)

Dimensions	Value mean (SD)	Low n (%)	Medium n (%)	Severe n (%)
Emotional exhaustion	24.75 (10.75)	113 (34.3)	87 (26.4)	129 (39.2)
Depersonalization	8.65 (4.89)	95 (28.9)	128 (38.9)	106 (32.2)
Personal accomplishment[a]	36.78 (9.89)	166 (50.5)	64 (19.5)	99 (30.1)

[a]The scores of items in personal accomplishment were not reversed in the analysis of the single dimension.

TABLE 3 Prevalence of job burnout among midwives (N = 329)

Degree	Range	n	Percentage (%)
No burnout	0–1.49	120	36.5
Medium burnout	1.50–3.49	183	55.6
Severe burnout	3.50–6.0	26	7.9

which 55.6% had medium burnout and 7.9% had severe burnout (Table 3).

4.4 | The characteristics of perceived stress and social support among midwives

The average score of PSS-14 in this study was 26.78 ± 7.19, ranging from 6 to 39. The average scores of perceived coping ability and perceived distress were 14.89 ± 6.38 and 15.29 ± 5.34, respectively. 68.1% of the participants (224/329) had a score above the cut-off (≥26).

The average score of PSSS in this study was 64.92 ± 12.03, ranging from 25 to 84. The average scores of family support, friend support and other support were 22.25 ± 4.56, 21.97 ± 4.16 and 20.70 ± 4.43, respectively. The majority (99.4%, 327/329) of midwives had a medium to high level of perceived social support, among which 35% were medium and 64.4% were high.

4.5 | Correlation analysis between perceived stress, social support and job burnout

The correlations between the main variables are shown in Table 4. The results indicated that perceived stress was negatively associated with social support ($r = -.350$, $p < .01$), while it was positively associated with job burnout ($r = -.382$, $p < .01$). Social support was negatively correlated with job burnout ($r = -.569$, $p < .01$).

4.6 | Mediating effect of social support between perceived stress and job burnout

The structural equation model was established and modified by AMOS 21.0, to certify the following hypotheses: (1) Perceived stress

TABLE 4 Correlation coefficient between perceived stress, social support and job burnout

Variable	Perceived stress	Social support	Job burnout
Perceived stress	1.00		
Social support	−0.350**	1.00	
Job burnout	0.382**	−0.569**	1.00

**$p < .01$.

has a direct effect on job burnout; (2) Social support has a direct effect on job burnout; and (3) Perceived stress has an indirect effect on job burnout through social support. As shown in Table 5, the fitting index of the initial model (M1) was not ideal, so we revised the model according to the modification indices, which was adopted by Jia et al. (2021). The model fitting indexes of final model (M2) ($\chi2$/df = 1.421, RMSEA = 0.036, CFI = 0.996, NFI = 0.986, IFI = 0.996, TLI = 0.992 and GFI = 0.986) met the criteria of goodness-of-fit indices, demonstrating that the model was reasonable. The path diagram and path coefficients between the variables are shown in Figure 2. The path coefficients of perceived stress and job burnout ($\beta = 0.19$, $p < .01$), perceived stress and social support ($\beta = -0.36$, $p < .01$), and social support and job burnout ($\beta = -0.51$, $p < .01$) were all statistically significant.

In order to certify the mediating effects of social support in the relationship between perceived stress and job burnout, the bootstrapping analysis by Preacher and Hayes was used to explore the indirect effects (Preacher & Hayes, 2008). 2,000 bootstrap tests were performed and a 95% confidence interval was calculated. The total effect of perceived stress on job burnout was 0.474 (95% CI: 0.367~0.596, $p < .01$), the direct effect was 0.242 (95% CI: 0.142~0.355, $p < .01$), and the indirect effect was 0.232 (95% CI: 0.160~0.316, $p < .01$) (Table 6), which were all statistically significant. Therefore, social support had a mediating role between perceived stress and job burnout, with a mediating contribution rate of 48.9%.

5 | DISCUSSION

The present study was conducted to explore the status and structural relationship between perceived stress, social support and job burnout, focusing on midwives in Qingdao, China. The results of

		Initial (M1)		Final (M2)	
Index	Suggested values	Measured value	Evaluate	Measured value	Evaluate
χ2/df	<3.00	3.699	Poor	1.421	Good
CFI	>0.90	0.970	Good	0.996	Good
TLI	>0.90	0.948	Good	0.992	Good
NFI	>0.90	0.960	Good	0.986	Good
IFI	>0.90	0.970	Good	0.996	Good
GFI	>0.90	0.963	Good	0.986	Good
RMSEA	<0.08	0.091	Poor	0.036	Good

Harman's single-factor test showed that the common method deviation was not serious, which verified the reliability of the results in the study.

329 midwives were investigated in this study. The results showed that the prevalence of job burnout was 63.5%, which is slightly higher than that of the midwives in Fujian, China (52.9%) (Jiang et al., 2020). Although the results of the two studies on job burnout of Chinese midwives were slightly different, the incidences of job burnout were both relatively high (over 50%). The difference between the two studies may be due to the different periods of the survey. The study in Fujian was conducted from July to August 2015, while our study was conducted from February to April 2021. From 2015 to 2021, China's fertility policy has changed significantly. In China, the one-child policy has cancelled, while the two-child policy and the three-child policy take effect in 2016 and 2021, respectively. After the implementation of two-child policy, the percentage of pregnant women with advanced age increased significantly (Liu et al., 2019). It is generally accepted that the advanced gestational age is strongly associated with higher risk during the pregnancy and childbirth. Advanced-aged mothers are more vulnerable to have emotional problems, which maybe correlated to increased complications during pregnancy and childbirth. Midwives need to be able to deal independently with the various emergencies during childbirth. However, midwives generally have lower educational levels than nurses because the higher education of midwifery started late in China. From 2014, China started to offer bachelor's degree in midwifery (Gu et al., 2021). In 2016, only four universities nationwide offered bachelor's degree programmes in midwifery. The core competence of midwives in China is not optimistic. The previous study showed that Chinese midwives were deficient in middle and high-level competencies (Dai et al., 2018). In China, midwives have been subordinate to nurses since 2008 (Zhu et al., 2018). There are no independent legal frameworks for midwives in China similar to those for doctors and nurses, which may lead to the loss of confidence and a sense of belongings (Jiang et al., 2020; Zhu et al., 2018) In addition, this study was conducted during the COVID-19 pandemic. Studies have found that the pandemic had exacerbated already existing job burnout among health care workers (Best, 2021). In addition to their regular duties, midwives in this study also had to deal with additional work caused by the pandemic, such as daily nucleic acid reports for pregnant women and their families. All of these factors can cause emotional exhaustion and depersonalization in midwives. The incidence of severe emotional exhaustion and depersonalization in this study was 39.2% and 32.2%.
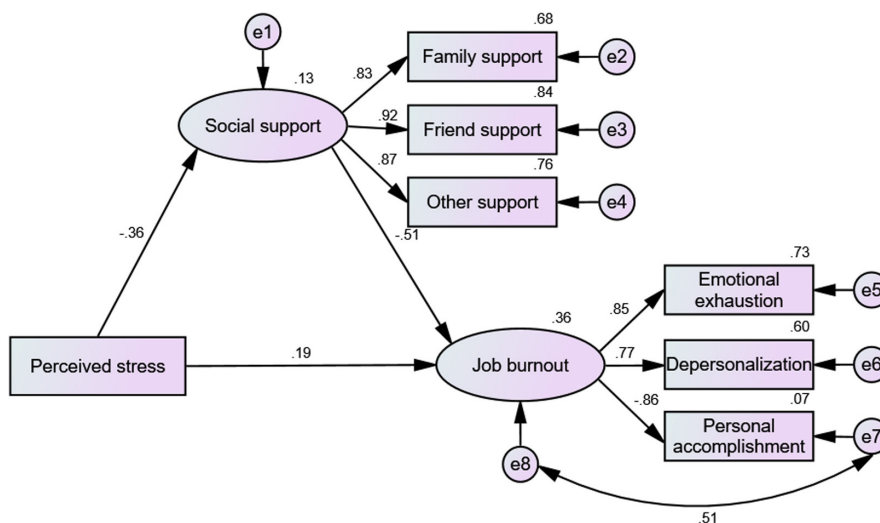

FIGURE 2 Mediating model of social support between perceived stress and job burnout among midwives

TABLE 6 Bootstrap test of the mediating effect of perceived stress on job burnout

Pathways	Estimate	Standard error	95% CI	*p*-value	Relative effect value
Total effect					
Perceived stress→job burnout	0.474	0.059	0.367~0.596	<.001	
Direct effect					
Perceived stress→job burnout	0.242	0.054	0.142~0.355	<.001	51.1%
Perceived stress→social support	−0.188	0.026	−0.240~−0.135	<.001	
Social support→job burnout	−1.236	0.139	−1.498~−0.950	<.001	
Indirect effect					
Perceived stress→social support→job burnout	0.232	0.040	0.160~−0.316	<.001	48.9%

As for reduced personal accomplishment, more than half of the midwives had medium and high personal accomplishment (19.5% and 50.5%). The percentage of low personal accomplishment of midwives in the study (30.1%) was lower than that in the nurses (38%) found in previous research (Molina-Praena et al., 2018). Karin et al. found that midwives had a higher meaning of work than nurses (Peter, Meier-Kaeppeli, et al., 2021). In China, the reform of birth policy has brought great changes to the work of midwives. After the two-child policy, the rate of preterm birth increased significantly, as did the maternal childbirth age, and the incidence of maternal and infant complications (Deng et al., 2021). With the introduction of the three-child policy, these situations may become more severe. Therefore, midwives will face more complex situations in clinical work, which will bring more work pressure to them. However, the proper handling of these problems requires the rich experience accumulated in clinical practice and the comprehensive ability to deal with these complex problems flexibly and tactfully, which can best reflect the value of midwives. Although the complicated problems of childbirth can bring pressure to midwives in the process of dealing with them, midwives may experience the pleasure and sense of achievement in solving the problems. In a word, because of the pressure resulting from the complexity of obstetrics today, a successful birth outcome in this complex situation can bring a higher sense of accomplishment to the midwives.

The midwives in the study experienced a relative high level of stress, and more than half of them (68.1%) had a score above the cut-off (≥26), which meant that these midwives had potential health risks. Midwives experienced more work-related stress than nurses (Peter, Meier-Kaeppeli, et al., 2021). The stresses of midwives may result from the following aspects: (1) adverse events at work, such as traumatic delivery, or maternal and infant deaths (McDaniel & Morris, 2020); (2) work overload caused by a shortage of staff (Czarkowska-Pączek et al., 2021); (3) complex interpersonal relationship, including the relationship with doctors, patients etc; and (4) the continuing impact of COVID-19 (Adnani et al., 2021). Healthcare workers experienced more stresses than other groups during the pandemic, which resulted in more stress-related health problems, including job burnout (Razu et al., 2021). Women's births will not be reduced or stopped by COVID-19, and midwives' jobs have been complicated by the pandemic. Both

pregnant women and newborns are vulnerable to infectious diseases. Therefore, in addition to the routine work, midwives need to pay attention to infection prevention and control, including the protection of pregnant women and newborns, as well as their self-protection. The occupational stresses and health of midwives are global concerns (Wright et al., 2017).

More than half of the midwives had a high level of perceived social support in this study. This study also found that social support of midwives negatively predicted job burnout, which supported the hypothesis (b) and was consistent with the previous studies (Kilic et al., 2021; Yu & Gui, 2021). The negative prediction of social support on job burnout is consistent with the main effect model of social support (Cohen & Wills, 1985), that is social support has a general gain effect. Social support plays an important role in the emotional and health status of individuals, regardless of whether an individual is under stress (Yue et al., 2021).

In addition, social support can also play a role in mental health through the buffering model (Cohen & Wills, 1985). Social support can buffer the negative impact of stressful events on individuals' physical and mental health. A variety of supportive activities from individuals and organizations can mitigate the physical and psychological damage caused by occupational stress on midwives (McDaniel & Morris, 2020). Our study proved the mediating effect of social support on the relationship between occupational stress and job burnout of midwives, which was a partial mediating effect, with an explanatory result volume of 48.9%. The result was consistent with the buffer model of social support.

The results show that perceived stress could influence job burnout directly and positively or affect it indirectly through social support. Perceived stress and job burnout were both negatively correlated with social support. Social support moderates the relationship between perceived stress and job burnout negatively. Thus, two approaches can be used to prevent and mitigate job burnout among the midwives: reducing perceived stress level and actively mobilizing the social support system for midwives. Emotion regulation interventions, including cognitive-behavioural stress management and mindfulness-based stress reduction, have been considered to be effective in the reduction in midwives' stress (Aghamohammadi et al., 2022). Social support for midwives from multiple levels such as family, hospital and national system

needs to be drawn on. Hospital managers can provide training opportunities for midwives in knowledge and skills. At the national level, it is beneficial to issue professional organizations, policies and regulations specific to midwives, which will enhance their sense of belonging (Zhu et al., 2018). Fortunately, midwife organizations, such as the Chinese Confederation of Midwives, have played an important role in promoting the development of the midwifery profession.

There are also some limitations in this study. The study population was selected from only one city, so the conclusions need to be extrapolated with caution. The present study was a cross-sectional survey, so it was difficult to infer causality between the study variables. Longitudinal studies can be conducted to determine the causal relationship between variables in the future. Finally, a self-report instrument was used to collect the data in this study, the midwives may have over- or underreported their data, which may affect the results.

6 | CONCLUSION

More than half of the midwives suffered from job burnout. The midwives had a high level of perceived stress. The majority of midwives had a medium to high level of perceived social support. Perceived stress not only have a negative direct effect on job burnout, but also an indirect effect on job burnout through social support as a mediator. Therefore, the current situation of job burnout among midwives needs the attention of relevant medical institutions. Healthcare managers should endeavour to strengthen social support of midwives and reduce their occupational stress, thereby decreasing their job burnout.

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