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How workplace violence correlates turnover intention among Chinese health care workers in COVID-19 context: The mediating role of perceived social support and mental health

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Abstract

Aim: To elucidate the effects of workplace violence on turnover intention among Chinese health care workers, and to identify the potential mediators in this relationship.

Background: Workplace violence has emerged as a crucial determinant of turnover intention for health care workers.

Methods: A cross-sectional survey was conducted among Chinese health care workers (N = 1,063) between 13 and 20 February 2020. Mediation effects were tested using structural equation modelling with weighted least squares mean and variance adjusted (WLSMV) estimator.

Results: Workplace violence had both direct and indirect effects on turnover intention among Chinese health care workers. Specifically, perceived social support, mental health and perceived social support together with mental health partially mediated the relationship between workplace violence and turnover intention.

Conclusions: Chinese health care workers experiencing violence during the COVID-19 outbreak were more likely to report turnover intention. Enhancing social support and reducing mental health problems would be beneficial in decreasing the detrimental effects of workplace violence on turnover intention.

Implications for Nursing Management: Ensuring health care workers' health and safety is vital in reducing turnover intention, which in turn ascertains continuity of health care delivery. Health care managers should develop targeted interventions to improve social support and prevent post-violence mental health problems.

KEYWORDS

health care workers, mental health, COVID-19, perceived social support, turnover intention, workplace violence

1 | INTRODUCTION

The outbreak of the coronavirus disease 2019 (COVID-19) in Wuhan, China, quickly proliferated nationwide. The COVID-19 represents the most serious respiratory virus threat to public health since the 1918 influenza pandemic (Nedjati et al., 2020). As of 12 October 2020, confirmed cases of the disease have reached 51,848,261, with 1,280,868 deaths globally (WHO, 2020). During the COVID-19 pandemic, as overburdened hospitals are faced with the surge of confirmed and suspected cases, the shortage of health care workers

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becomes increasingly serious. Over 42,000 health care workers were sent to Hubei Province (where COVID-19 was first identified) to fight against COVID-19 (Zhang, 2020).

Before the COVID-19 pandemic, a systematic review found that the prevalence of turnover intention among Chinese primary health workers reached as high as 30.4% (He et al., 2020). To date, several studies examined the effect of the COVID-19 pandemic on health care workers' turnover intention. For example, a cross-sectional survey conducted among front-line nurses in the Philippines revealed that fear of COVID-19 enhanced turnover intention (Labrague & de Los Santos, 2020). Similarly, the perceived threat of COVID-19 increased turnover intention among Pakistani nurses (Irshad et al., 2020). Younger health care workers and those working in the private sector were more likely to leave their current job in Peru during the COVID-19 pandemic (Yáñez et al., 2020). Among multiple determinants of turnover for health care workers, workplace violence has emerged as an important risk factor (Choi & Lee, 2017; Gan et al., 2018; He et al., 2020). For instance, Roche et al., (2010) pointed out that perceptions of emotional violence were correlated with intent to leave among nurses in Australia. A longitudinal survey also suggested that physical violence contributed to increased physician turnover intention (Heponiemi et al., 2014). Despite health care workers' fight against COVID-19 at the front line, workplace violence against health care workers is exacerbated by COVID-19 (Devi, 2020). Fear, panic, misinformation about COVID-19 and misplaced anger may drive workplace violence (McKay et al., 2020). Also, in India, the COVID-19 pandemic stirred an upsurge of workplace violence, and this phenomenon may attribute to ignorance and fear (BMJ, 2020). Hence, we hypothesize that workplace violence directly increases turnover intention among Chinese health care workers in the COVID-19 context.

Further, the detrimental effects of workplace violence on the mental health of health workers have been well established in the existing literature. For instance, cross-sectional studies in China have revealed that workplace violence exerted considerable negative impacts on nurses' mental health (Cheung & Yip, 2017; Zhang et al., 2018; Zhao et al., 2018). In the same vein, our previous study indicated that health care workers who experienced workplace violence were more likely to suffer from mental health problems using propensity score matching (Wang et al., 2020). A longitudinal study also found that work-related threats and violence increased subsequent risk for depression (Andersen et al., 2019). Hence, let alone during a pandemic such as the COVID-19, exposure to violence has already been a significant risk factor for health care workers' mental health and turnover (McKay et al., 2020). Accordingly, we assume that workplace violence exacerbates mental health problems and turnover intention among health care workers.

On the other hand, not all health care workers exposed to violence intend to leave their job or experience mental health problems; those with high levels of social support may be better protected (Duan et al., 2019; Zhao et al., 2015). The deterioration model of social support suggests workplace violence as a potential stressor that erodes available social support networks, due to increased danger of workplace behaviours (Breslau, 2001). For example, health care workers who experienced workplace violence reported low support at work in the following year (Magnavita, 2014). A national survey in Japan noted that support from the nurse manager significantly predicted long-term intention to stay in the workplace (Eltaybani et al., 2018). Both prospective and retrospective studies have linked low degrees of supervisors' support to turnover intention (Fukui et al., 2019; van der Heijden et al., 2010). Moreover, a cross-sectional survey conducted in nine Chinese tertiary hospitals has indicated that workplace violence is positively correlated with turnover intention and is negatively related to social support, with social support as a partial mediator (Duan et al., 2019). Furthermore, psychiatric nurses with higher levels of family support reported fewer mental health consequences from workplace violence (Hsieh et al., 2018). A survey revealed that perceived social support was negatively correlated with psychological outcomes during the COVID-19 epidemic (Si et al., 2020). Hence, we hypothesize that social support mediates the positive relationship between workplace violence and turnover intention.

In addition to social support, mental health appears to be another conduit through which workplace violence impacts turnover intention. For example, as noted by Chiang and Chang (2012), stress and depression negatively influenced turnover intention among clinical nurses. Based on the events–emotions–behaviours model, Li and colleagues (2018) revealed that violence increased intention to resign through negative feelings towards work among Taiwanese nurses in emergency departments. The perceived threat of COVID-19 heightened psychological anxiety and turnover intention among Pakistani nurses, with psychological anxiety partially mediating this relationship (Irshad et al., 2020). Therefore, we hypothesize that workplace violence increases turnover intention through mental health problems.

Despite the abundant literature on workplace violence and turnover intention, relatively little is known about the relationship between workplace violence, turnover intention and the potential mediators in this relationship among Chinese health care workers in the COVID-19 context. Accordingly, the current study aimed to: 1) examine the effect of workplace violence on turnover intention among Chinese health care workers; and 2) explore whether social support and mental health mediate the effects of workplace violence on turnover intention.

2 | METHODS

2.1 | Design, setting and participants

A cross-sectional online survey was conducted among Chinese health care workers from 13 February and 20 February 2020, using respondent-driven sampling. Three seeds were selected from major tertiary health care institutions in Hubei, Jiangsu and Shanxi provinces, given local differences in confirmed cases (Appendix S1). These three provinces represent high, medium and low crisis levels of COVID-19 in China mainland, respectively. Next, three seeds invited other health

care workers to fill this anonymous questionnaire, relying on their social and professional networks. A link or a quick response (QR) code of a questionnaire was sent to health care workers through WeChat, which is one of the largest social media applications in China. Eligible participants included doctors, nurses and allied health care workers (pharmacists, technicians, etc.). All respondents provided informed consent. Finally, a total of 1,469 health care workers from 31 provinces completed the questionnaire, and data for 1,063 respondents were eligible for analysis. Kline (2015) recommended using sample sizes of at least 200 or 10 cases per parameters in structural equation modelling (*SEM*). As the hypothesized model of this study had 25 free parameters, the sample size was appropriate.

2.2 | Measures

2.2.1 | Perceived social support

The 12-item perceived social support (PSS) scale (Zimet et al., 1988) was used to assess perceived social support from families, friends and significant others (four items per subscale). Items were rated on a 7-point Likert scale (from 1 = very strongly disagree to 7 = very strongly agree), with higher scores indicating greater perceived social support. The total scale had a high internal consistency of 0.94 in the current study.

2.2.2 | Mental health

The Chinese Depression Anxiety Stress Scales-21 (DASS-21) (Moussa et al., 2001) was used to measure the symptoms of depression, anxiety and stress (seven items per subscale). Items were rated on a 4-point Likert scale (from 0 = did not apply to me at all to 3 = applied to me very much or most of the time). The composite scores of each subscale were multiplied by 2 to make the scores comparable to the DASS-42 (Sinclair et al., 2012). Higher scores indicated more negative emotional states in the past week. DASS-21 demonstrated a Cronbach's alpha of 0.94 in the current study.

2.2.3 | Workplace violence

Workplace violence was evaluated using a dichotomous variable (Yes or No): 'Have you experienced any type of violence by patients and/or their relatives/friends during the COVID-19 pandemic, including physical and non-physical violence?'

2.2.4 | Turnover intention

We measured turnover intention with a single item (Yes or No): 'Do you intend to leave your current job next year?' This single-item instrument for turnover intention has been widely used in previous studies (Van Bogaert et al., 2014; Fang et al., 2014), which support our use.

2.2.5 | Socio-demographic characteristics

We also collected several socio-demographic characteristics (age, gender and education), job-related factors (job type, technical title, working time, working at a designated hospital for COVID-19 and adequacy of preventive medical equipment) and interpersonal factors (experience discrimination for working in hospitals and household transmission-related fears).

2.3 | Statistical analysis

Descriptive statistics were generated for all study variables. *SEM* was used to test the hypothesized model in Mplus 8.0, while other statistical analyses were performed using SPSS 23.0. Perceived social support and mental health were modelled as latent variables, whereas workplace violence and turnover intention were observed binary variables. The hypothesized model (Figure 1) was tested with weighted least squares mean and variance adjusted (WLSMV) estimator for binary outcomes using probit link (Muthén & Muthén, 1998–2017). WLSMV estimator is the default method for models with categorical outcomes, which has been shown to provide satisfactory parameter estimates in the analysis of categorical data (Suh, 2015; Wang & Wang, 2020). The bias-corrected bootstrap method (1,000 times) was performed to examine the significance of path coefficients and compute 95% confidence interval (CI). An acceptable goodness-of-fit model was indicated by the Comparative Fit Index (CFI) value >0.90, Tucker–Lewis Fit Index (TLI) > 0.90, Weighted Root Mean Square Residual (WRMR) ≤ 1.0, and Root Mean Square Error of Approximation (RMSEA) ≤ 0.06 (Kline, 2015). In terms of standardized coefficients, we reported the STDYX for continuous independent variables and the STDY for binary independent variables. A probability of $p < .05$ was considered statistically significant.

3 | RESULTS

As shown in Table 1, 12.4%, 34.9% and 9.9% of respondents came from Hubei, Jiangsu and Shanxi provinces, respectively. The mean age of the participants was 34.1 ± 7.2 years (range 20–58). 66.6% of the sample were females, 20.4% experienced workplace violence during the COVID-19 pandemic, and 12.1% intended to leave. The mean scores of perceived social support and mental health were 64.7 and 27.9, respectively.

As shown in Figure 2, the measurement model was acceptable. All subscales loaded higher than 0.75, which were significant (at the 0.001 alpha level) on their respective underlying construct. The overall fit of the model was good (CFI =0.964, TLI = 0.937, WRMR = 0.654, and RMSEA = 0.063, 90% CI: 0.050–0.077). Workplace violence had a positive direct effect on turnover intention in health care workers ($\beta = 0.297$, $p = .006$). The results also displayed that perceived social support and mental health partially

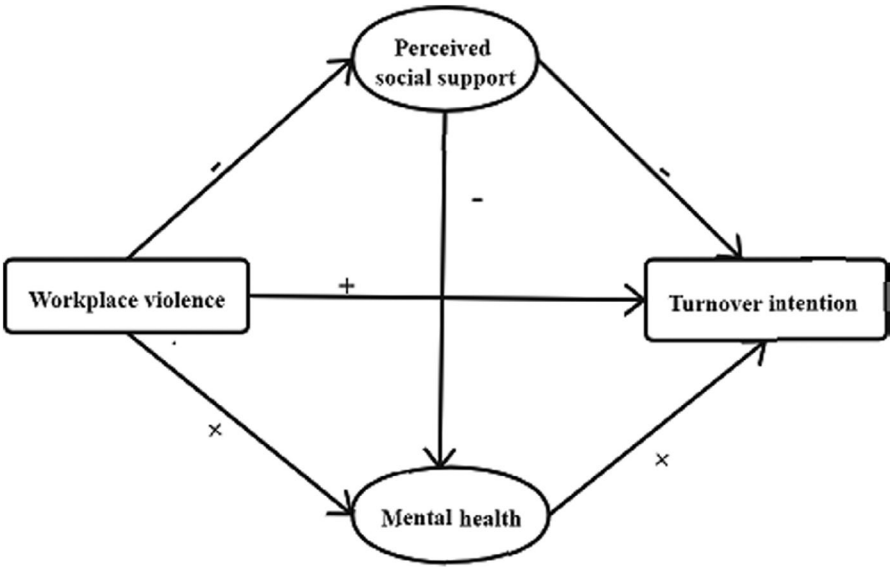

FIGURE 1 Hypothesized model

TABLE 1 Sample demographics (N = 1,063)

Variables	Mean (*SD*)	Range
Age (years)	34.1 (7.2)	20–58
Perceived social support	64.7 (11.5)	12–84
Mental health	27.9 (22.0)	0–126
Category	*n*	%
Turnover intention		
Yes	129	12.1
No	934	87.9
Workplace violence		
Yes	217	20.4
No	846	79.6
Province		
Hubei	132	12.4
Jiangsu	371	34.9
Shanxi	105	9.9
Other	455	42.8
Gender		
Male	355	33.4
Female	708	66.6
Education		
Junior college	64	6.0
Bachelors	584	54.9
Masters or above	415	39.0
Job type		
Doctor	657	61.8
Nurse	240	22.6
Other	166	15.6
Technical title		
None	80	7.5
Junior	446	42.0
Intermediate	366	34.4
Senior	171	16.1
Working at a designated hospital		
Yes	613	57.7
No	448	42.1
Working time (hours/day)		
≤8	544	51.2
>8	519	48.8
Adequacy of preventive medical equipment		
Enough or basically enough	584	54.9
Insufficient	398	37.4
Scarce	81	7.6
Discriminated against for nature of their job		
Yes	208	19.6
No	855	80.4
Household transmission-related fears		
Yes	949	89.3
No	114	10.7

Abbreviations: *SD*, standard deviation.

mediated the influence of workplace violence on turnover intention. Specifically, workplace violence was inversely associated with higher perceived social support ($\beta = -0.348$, $p < .001$), which in turn was negatively correlated with turnover intention ($\beta = -0.186$, $p < .001$); workplace violence also exerted a strong effect on mental health ($\beta = 0.475$, $p < .001$), which in turn had a positive association with turnover intention ($\beta = 0.300$, $p < .001$). Higher perceived social support was negatively related to worse mental health ($\beta = -0.399$, $p < .001$) (Table 2).

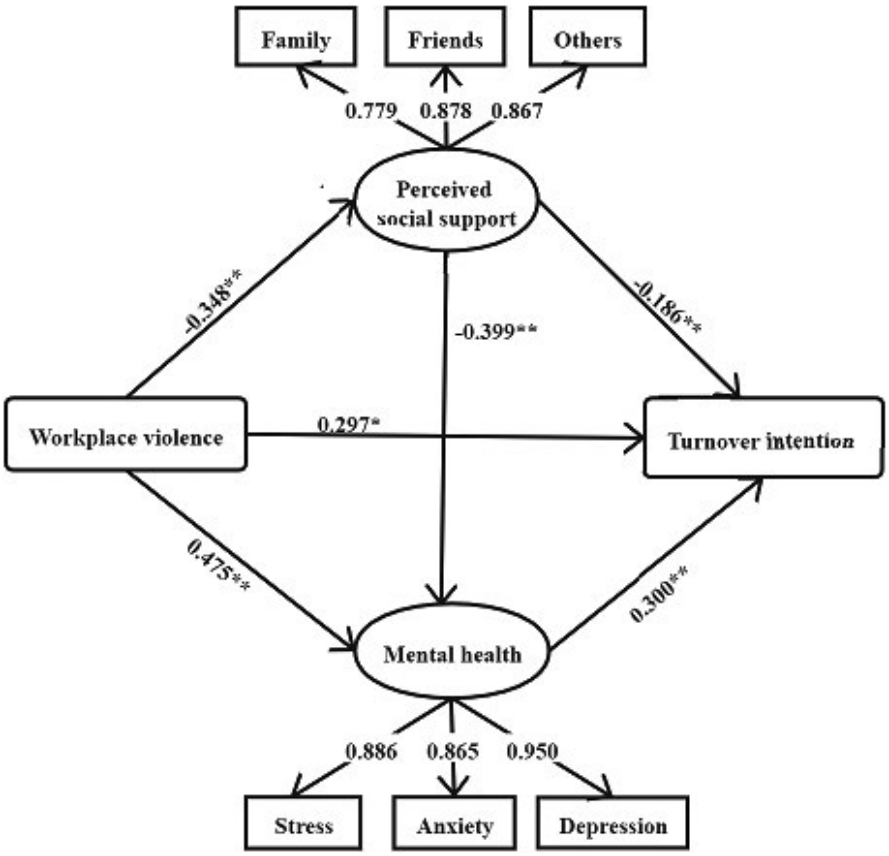

FIGURE 2 Standardized coefficients of the final model. The model fit indices: CFI = 0.964, TLI = 0.937, WRMR = 0.654 and RMSEA = 0.063; 90% CI: 0.050–0.077. $^{**}p < .001$, $^{*}p < .05$

TABLE 2 Standardized coefficients of the final model

Pathways	β	*p* value	95% bias-corrected CI
Turnover intention on			
Workplace violence	0.297	.006	0.088, 0.520
Perceived social support	−0.186	<.001	−0.276, −0.080
Mental health	0.300	<.001	0.217, 0.391
Mental health on			
Workplace violence	0.475	<.001	0.325, 0.645
Perceived social support	−0.399	<.001	−0.473, −0.330
Perceived social support on			
Workplace violence	−0.348	<.001	−0.519, −0.184

Abbreviations: CI, confidence interval.

4 | DISCUSSION

This study explored the relationship between workplace violence and turnover intention, and elucidated the mediation effects of mental health and perceived social support on this relationship among Chinese health care workers. Our results indicated that workplace violence had direct and indirect effects on turnover intention, with mental health and perceived social support partially mediating the effects of workplace violence on turnover. The current study expands findings from prior literature by examining both psychological (mental health) and behavioural outcomes (turnover intention) of workplace violence (Heponiemi et al., 2014; Kusui et al., 2017).

According to affective events theory (Weiss & Cropanzano, 1996), exposure of health care workers to workplace violence leads to higher negative emotions, which may increase their intention to quit. The conservation of resources theory also provides a theoretical foundation for this finding (Hobfoll, 1989). Specifically, violence from patients and their relatives/friends as a stressor exacerbates the already unprecedented COVID-19-related stress and burnout, which may deplete health care workers' valuable resources. The loss of resources leads to stress, anxiety and depression. Consequently, health care workers are more likely to resign to avoid violence exposure and resource loss (Irshad et al., 2020). Therefore, health care workers who reported mental health problems resulting from workplace violence during the COVID-19 pandemic showed increased turnover intention.

The current study also confirmed the indirect influence of violence through perceived social support in coping with mental health and turnover intention. In line with a prior study (Duan et al., 2019), social support played a crucial mediating role in the relationship between workplace violence and turnover intention, and exposure to workplace violence exerted a negative effect on the amount of social support that individuals obtain from their social network.

Perceived supervisor support and perceived organisational support had inverse associations with psychological violence (Courcy et al., 2019). Social support, in turn, leaves health care workers less vulnerable to the detrimental effects of workplace violence, such as turnover intention (Chen et al., 2016).

Numerous studies have also shown that social support functions as a protective factor for the deleterious influences of stressful life events on depression (Cohen & Wills, 1985; Paykel, 1994). Workplace violence as a stressful life event increased the risk of developing psychiatric morbidity among health care workers (Seun-Fadipe et al., 2019). Health care workers suffered from unprecedented psychological distress during the COVID-19 pandemic (Kang et al., 2020; C. Zhang et al., 2020). Lack of social support was found to be linked to anxiety and stress among health care workers treating COVID-19 patients in a recent survey (Xiao et al., 2020). Additionally, a recent meta-analysis documented that social support was a common protective factor associated with decreased risk of mental health problems among health care workers during the COVID-19 pandemic (Muller et al., 2020). Hence, social support is a meaningful target for reducing the adverse effect of violence on mental health and turnover intention in this population.

Several limitations should be noted in the current study. First, a cross-sectional study design cannot establish the causality of the relationship between the study variables. Longitudinal studies are needed to verify these findings. Second, non-random sampling of health care workers limits the generalizability of our results. Future studies should attempt to replicate our findings in nationally representative samples. Third, workplace violence was measured using a dichotomous question, identifying the influences of a specific type may help to further inform targeted measures. Future studies should examine different forms of violence using validated instruments (Gerberich et al., 2004). Next, the antecedents of workplace violence were not assessed in the current study. Understanding the causes of violence is a priority of future studies. Last, as our survey was conducted in the COVID-19 context, we cannot discern whether the cause of the turnover intention is due to workplace violence, COVID-19 or both.

5 | CONCLUSIONS

In summary, exposure to workplace violence was associated with increased mental health problems, lower perceived social support and turnover intention among Chinese health care workers during the COVID-19 pandemic. The detrimental effects of workplace violence on turnover intention may be attenuated by enhancing social support and reducing mental health problems.

5.1 | Implications for research

The current study fills the literature gaps by examining the detrimental impact of workplace violence on turnover intention and elucidating the mediation effect of perceived social support and mental health in the relationship among Chinese health care workers in the COVID-19 context. Our findings confirm that providing a safer workplace where health care workers will not suffer from violence from patients and their relatives/friends should be urgently prioritized. Our results also suggest that enhancing perceived social support and reducing mental health would be beneficial to decrease the detrimental impacts of workplace violence on turnover intention.

5.2 | Implications for nursing management

It is vital to ensure health care workers' safety to reduce turnover, as health care workers are the cornerstone of health systems, especially in the context of infectious disease outbreaks. Despite the negative correlation of workplace violence to perceived social support in the current study, evidence shows that higher levels of received social support can counteract the perceived deterioration of social support (Norris & Kaniasty, 1996). Besides the supports from friends and family members, organisational-level interventions (i.e. communication, stress management, workload management, counselling and psychotherapy) should be designed to improve social support and prevent post-violence mental health problems.

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CONFLICTS OF INTEREST

The authors declare no potential conflicts of interest.

ETHICAL APPROVAL STATEMENT

Approval was obtained from the institutional review boards of Xuzhou Medical University (XYFY2020-KL026-01).

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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