

Analysis of the Mediating Effect of Self-esteem in Workplace Violence and Compassion Fatigue Among Psychiatric Nurses

Xuting Peng¹, Quan Zhang², Huali Lin^{2,*}

¹Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

²Mental Health Center of Xi'an City, Xi'an 710199, Shaanxi, China

*Correspondence Author

Abstract: ***Objective:** To explore the mediating effect of self-esteem between workplace violence and compassion fatigue among psychiatric nurses. **Methods:** A convenience sampling method was used to investigate 300 psychiatric nurses, who were assessed using the Workplace Violence Scale, Rosenberg Self-Esteem Scale, and the Chinese version of Compassion Fatigue Short Scale. **Results:** The findings revealed that the incidence of workplace violence experienced by the surveyed psychiatric nurses in last year was 87.4%. The total score of self-esteem among the participants was 27.97 ± 3.01 . The total score of compassion fatigue was 32.87 ± 17.68 . A positive correlation was observed between workplace violence and compassion fatigue ($r=0.310, p<0.001$), while a negative correlation was identified between self-esteem and compassion fatigue ($r=-0.353, p<0.001$). Meanwhile, self-esteem played a partial mediating role between workplace violence and compassion fatigue (indirect effect value 0.43), accounting for 30.07% of the total effect. **Conclusion:** Workplace violence can directly affect compassion fatigue, and it can also indirectly affect compassion fatigue through self-esteem. Managers should pay attention to nurses' self-esteem to improve their compassion fatigue situation.*

Keywords: Psychiatric nurses, Workplace violence, Self-esteem, Compassion fatigue, Mediating effect.

1. Introduction

Workplace violence (WPV) has been widely recognized as a global public health issue, and the World Health Organization's definition of the phenomenon encompasses verbal abuse, threats, physical assault and sexual harassment, which are classified as physical and psychological violence [1]. In the field of healthcare, workplace violence not only causes serious physical injuries to healthcare workers, but also triggers complex psychological problems including anxiety, depression, burnout, and compassion fatigue. Compassion Fatigue, also known as the 'price of caring', refers to the negative consequences of various adverse physical and psychological reactions caused by the helping groups themselves as a result of providing helping services to the clients [2]. It has been shown that compassion fatigue not only induces various physical and mental illnesses, but also is related to the reduction of work commitment, work enthusiasm, work efficiency, and may even be the cause of medical disputes and negligence, and has a positive predictive effect on the intention to leave the nursing staff [3, 4]. Psychiatric nurses, due to their occupational characteristics, need to be in constant contact with patients with mental and behavioral abnormalities [5], and the outbreak of the covid-19 pandemic has led to a multiplicative and dramatic increase in the population experiencing physical and mental problems such as anxiety, depression, insomnia, and headaches, which further exacerbates the work stress of this group, thus increasing the risk of compassion fatigue. Self-esteem, as an important personality trait in an individual's assessment of his or her own worth and competence, plays a key role in mitigating the effects of workplace violence. Based on this, this study will introduce the concept of mediating effect in order to explore the relationship between workplace violence, compassion fatigue, and self-esteem among psychiatric nurses, and to provide new perspectives and ideas for improving the situation of compassion fatigue in this group.

2. Methods

2.1 Participants

This study was conducted with in-service psychiatric nurses, who were randomly invited to participate in completing the questionnaire through a combination of online and offline, using a convenience sampling method. Inclusion criteria: (1) nurses with a registered nurse's licence in the People's Republic of China and registered in the survey unit; (2) informed consent and voluntary participation in this study. Exclusion criteria: (1) being on psychotropic drugs, undergoing physiotherapy or psychotherapy; (2) nurses who were not in the clinical frontline, such as those in full-time research, management, teaching, and logistics positions; (3) and those who were also involved in other related studies. The study was reviewed and approved by the Ethics Committee of Xi'an Mental Health Centre(XAJWKY-2024001), and the study subjects signed an informed consent form.

2.2 Survey Tools

General information questionnaire Designed by the researcher, it included demographic variables (gender, education, age, marital status, presence of children) and work status variables (monthly income, number of years of work, average number of hours worked per week, presence of night work).

Workplace Violence Scale (WVS) The original scale was developed and written by Schat et al [6], and the Chinese version was translated and modified by Wang Peixi [7]. The WVS has a total of 5 items, including physical assault, emotional abuse, threat of intimidation, verbal harassment, and physical harassment, and is based on a 4-point Likert scale, with scores for each item ranging from 0 (never) to 3 (4 or more times), and total scores ranging from 0 to 15, with

higher scores indicating a higher frequency of workplace violence. The scale is graded on a frequency scale: zero frequency (0 points), low frequency (1 to 5 points), medium frequency (6 to 10 points), and high frequency (11 to 15 points). The Cronbach's alpha coefficient for this scale was 0.92, and the Cronbach's alpha coefficient for the scale in this study was 0.784. The results of the principal component factor analysis showed that the 2 factors explained a total of 80.141% of the total variance, and the structural validity was good.

The Chinese version of Compassion Fatigue Short Scale (C-CF-Short Scale) The scale is an assessment tool developed through further analysis and testing based on, for example, the Revised Compassion Fatigue Scale. Adams et al [8] used a data-driven extraction method to revise the original scale in 2006, thus generating a total scale consisting of two subscales, burnout and secondary trauma, with a total of 13 items, which was translated into Chinese by Lou Baona [9] in 2012. The scale is based on a 10-point Likert scale, with scores for each item ranging from 0 (never) to 10 (very often), and total score ranges from 13 to 130, with higher total scores indicating more severe compassion fatigue. The Cronbach's alpha coefficient for this scale was 0.90, and the Cronbach's alpha coefficient for the scale in this study was 0.92. The results of the principal component factor analysis showed that the 2 factors explained a total of 66.31% of the total variance, with good structural validity.

Rosenberg's Self Esteem Scale (SES) The scale [10] is widely used as a measure of overall self-esteem, where subjects directly report whether these descriptions fit them or not, and consists of 10 entries administered on a Likert 4-point scale, with 1 representing a strong nonconformity and 4 representing a strong conformity, with higher total scores indicating higher levels of self-esteem. Numerous studies have shown that this scale has good reliability and validity, and the Cronbach's alpha coefficient for the self-esteem scale in this study was 0.681.

2.3 Statistical Analysis

SPSS 19.0 was used for data processing. Qualitative information was described using headcounts and composition ratios; quantitative information was expressed as mean±standard deviation(SD±S); two independent samples t-test and ANOVA were used for comparison between groups, and LSD tests were used for post hoc comparisons; Pearson's correlation was used to explore the relationship between the

variables; the mediating role of self-esteem in the relationship between violence in the workplace and compassion fatigue was analysed using Process v3.5, and the samples were repeated 5,000 times to calculate the confidence intervals for the effects. The test level was $\alpha = 0.05$.

3. Result

3.1 Overall Status

A total of 300 questionnaires were distributed, and after excluding 33 invalid questionnaires, a total of 277 valid questionnaires were finally included, with a valid recovery rate of 92.33%. The incidence of workplace violence in the last year among the surveyed psychiatric nurses was 87.4% (242/277). The prevalence of each type of violence in descending order was emotional abuse (78%), physical assault (77.3%), threatening intimidation (62.5%), verbal harassment (31%) and physical harassment (23.1%). The total score of compassion fatigue was (32.87±17.68), burnout was (21.78±12.07), secondary trauma was (11.09±7.08), and compassion fatigue was low in 244 (88.1%) and moderate in 33 (11.9%). The total score of self-esteem scale was (27.97±3.01).

3.2 Distribution of Different Demographic Characteristics and Results of One-way Analyses

Differences in the total scores of the workplace violence scale among psychiatric nurses of different ages and with or without night shifts were statistically significant ($P \leq 0.05$), with psychiatric nurses aged 29-39 years experiencing a significantly higher frequency of workplace violence than nurses aged 18-28 years in the last 1 year, and psychiatric nurses with night shifts experiencing a significantly higher frequency of workplace violence than nurses without night shifts in the last 1 year; the differences in the total scores of psychiatric nurses with different years of service and marital status were statistically significant ($P \leq 0.05$). The differences in total compassion fatigue scores between psychiatric nurses with different years of experience and marital status were statistically significant ($P \leq 0.05$), with psychiatric nurses with more than 6 years of experience having significantly higher levels of compassion fatigue than those with less than 1 year of experience, and single/widowed/divorced/separated psychiatric nurses having significantly lower levels of compassion fatigue than married nurses; differences in self-esteem levels were not statistically significant across demographic characteristics, as detailed in Table 1.

Table 1: Comparison of workplace violence, self-esteem, and compassion fatigue scores among psychiatric nurses with different demographic characteristics

	n(%)	workplace violence		self-esteem		compassion fatigue	
		SD±S	P value	SD±S	P value	SD±S	p value
Gender	female	70.0	5.06±3.80	28.08±2.78	0.34	32.75±17.28	0.86
	male	30.0	5.72±3.48	27.70±3.69		33.16±18.68	
Age	18~28	29.6	4.52±3.65	27.73±2.97	0.05	29.82±17.56	0.22
	29~39	48.0	5.87±3.7 ^a	27.74±3.06		34.67±17.47	
	40~50	17.0	4.77±3.69	28.43±3.08		32.11±18.00	
	over 51	5.4	5.40±3.58	29.80±3.32		36.07±18.31	
Marital status	married	66.8	5.33±3.74	28.04±3.03	0.81	34.50±17.98	0.01
	cohabitation	1.4	3.25±3.77	27.25±5.32		29.25±13.07	

Presence of children	single/widowed/divorced/separated	31.8	5.20±3.67		27.85±3.09		29.63±16.88 ^b	
				0.35		0.28		0.16
Education	yes	43.7	5.02±3.80		26.81±18.37		31.17±18.37	
	no	56.3	5.44±3.64		29.01±14.89		34.19±17.06	
Number of years of work	Specialist and below	26.7	26.81±18.37		27.61±3.02		32.53±18.18	
	Bachelor's Degree	70.8	29.01±14.89	0.31	28.09±3.10	0.48	33.20±17.76	0.69
	Master's Degree	2.5	34.25±18.88		28.43±2.99		32.87±17.68	
Monthly income (yuan)	≤1	5.8	3.75±2.79		28.75±1.91		26.81±18.37	
	1~5	28.5	4.92±3.86		27.72±2.88		29.10±14.81	
	6~10	29.2	5.83±3.98		27.88±3.43		34.62±19.46 ^c	
	≥11	36.6	5.31±3.43		28.11±3.09		35.87±17.68 ^c	
Presence of night shift				0.13		0.88		0.11
	≤3500	6.5	4.22±4.12		27.61±2.90		28.39±17.28	
	3500~7500	80.1	5.48±3.72		28.00±3.08		32.40±17.34	
Presence of night shift	≥7500	13.4	4.43±3.31		27.97±3.23		37.92±17.68	
	yes	62.8	5.65±3.79	0.02	27.84±3.27	0.39	33.20±17.71	0.38
	no	37.2	4.60±3.50		28.17±3.50		31.29±17.46	

Compared with the age group of 18-28 years, ^aP≤0.05; compared with the marital status group of married, ^bP<0.05; compared with the working years of 1-5 years, ^cP<0.05.

Table 2: Correlation results (r-values) of workplace violence, self-esteem, and compassion fatigue among psychiatric nurses

	self-esteem	burnout	secondary traumatization	compassion fatigue	workplace violence
self-esteem	1	-	-	-	-
burnout	-.343**	1	-	-	-
secondary traumatization	-.298**	.682**	1	-	-
compassion fatigue	-.353**	.956**	.866**	1	-
workplace violence	-.309**	.277**	.301**	.310**	1

***p<0.001, **p<0.01, *p<0.05, the same as below.

Table 3: Mediating effect analysis of self-esteem between workplace violence and compassion fatigue

	pathway relationship	efficiency value	se	LLCI	ULCI	effective quantity
total effect		1.43	0.27	0.89	1.96	
direct effect	workplace violence→compassion fatigue	1.00	0.27	0.46	1.54	69.93%
mediating effect	workplace violence→self-esteem→compassion fatigue	0.43	0.13	0.20	0.69	30.07%

3.3 Correlational Analysis of Workplace Violence, Self-esteem, and Compassion Fatigue Among Psychiatric Nurses

The results showed that workplace violence among psychiatric nurses was positively correlated with compassion fatigue ($r=0.310$, $p<0.01$), positively correlated with burnout ($r=0.277$, $p<0.01$), positively correlated with secondary traumatization ($r=0.301$, $p<0.01$), and negatively correlated with self-esteem ($r=-0.309$, $p<0.01$), and self-esteem was negatively correlated with compassion fatigue ($r=-0.353$, $p<0.01$), negatively correlated with burnout ($r=-0.343$, $p<0.01$), and negatively correlated with secondary traumatization ($r=-0.298$, $p<0.01$), as detailed in Table 2.

3.4 A Test of the Mediating Effects of Workplace Violence, Self-esteem, and Compassion Fatigue in Psychiatric Nurses

Based on the research hypothesis that workplace violence affects compassion fatigue through the chain mediation effect of self-esteem, with workplace violence score as the independent variable, compassion fatigue score as the dependent variable, self-esteem score as the mediator variable, and age, years of working experience and marital status as the control variables, applying the Process plug-in in SPSS, selecting Model 4, Bootstrap sample selection 5000, set the confidence interval as 95%, and carried out the validation analysis of the mediating effect. Self-esteem in the workplace violence and compassion fatigue three variables path coefficients are shown in Figure 1.

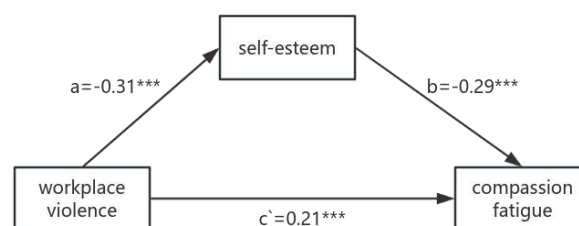


Figure 1: Path analysis of the impact of workplace violence and self-esteem on compassion fatigue

According to Table 3, the upper and lower limits of the Bootstrap 95% confidence interval for the mediating effect of workplace violence on compassion fatigue as well as self-esteem do not include 0, indicating that workplace violence not only acts as a direct effect on compassion fatigue, but also partially mediates the effect on compassion fatigue through self-esteem. This direct and mediating effect accounted for 69.93% and 30.07% of the total effect, respectively.

4. Discussion

4.1 Workplace Violence, Compassion Fatigue and Self-esteem of Psychiatric Nurses

This study found that the incidence of workplace violence among psychiatric nurses was 87.4% in the past 1 year, and a comparison with the study of Li Rui et al [11] showed that the incidence of workplace violence among psychiatric nurses was much higher than that of nurses in internal medicine (57.51%), obstetrics and gynecology (49.12%), and pediatrics

(55.20%), which was similar to that of the study of Rossi et al [12], which may be due to the fact that psychiatric patients are 10 times more likely to engage in aggressive behavior than the general patient population [13], and the lack of effective communication between nurses and patients due to factors such as the stigmatization of mental illness and insufficient resources for mental health services in our country, which in turn triggers the occurrence of more workplace violence. In addition, this study concluded that the types of workplace violence were dominated by emotional abuse, physical assault, and threatening intimidation, which is consistent with the findings of Zeng Junfang and other scholars [14]. In this study, the mean self-esteem score of psychiatric nurses was (27.97 ± 3.01) , which was slightly lower than that of the domestic adult norm (28.75 ± 4.86) , and this discrepancy may stem from the nature of psychiatric nursing work, which focuses more on basic and psychological care rather than technical nursing operations, and which is unable to directly reflect the technical content, which leads to the professional value being questioned, and thus affects the nurses' self-esteem level. However, compared with the study by Liu Yulian et al [15], the self-esteem score (22.53 ± 3.97) increased significantly, which may be due to the fact that the global prevalence of mental illness has increased significantly since the New Crown Epidemic, and society's discrimination and prejudice against mentally ill patients and healthcare workers is gradually changing. The total compassion fatigue score of psychiatric nurses in this study was (32.87 ± 17.68) , and it is noteworthy that nurses with more than 6 years of service had significantly higher compassion fatigue scores than nurses with 1 to 5 years of service. Although the total compassion fatigue score in this study was lower than the results of the study by Zhu Zhenai et al [16], it coincided with the results of the study by Wu Min et al [17] in terms of the variability in the effect of years of working experience on compassion fatigue scores. This difference may be related to the geographical differences in the survey respondents and the differences in the scale instruments used.

4.2 Psychiatric Nurse Workplace Violence, Self-Esteem Can Directly Influence Compassion Fatigue

The results of this study revealed a significant positive correlation between workplace violence and compassion fatigue ($r=0.310$, $p<0.01$); moreover, regression analysis showed that psychiatric nurses' workplace violence could directly affect compassion fatigue ($\beta=0.310$, $p<0.001$), i.e., the more frequently psychiatric nurses experienced workplace violence, the more severe their level of compassion fatigue, which is in line with the results of the study conducted by Liu Yang et al. [18] scholars' findings. Faghihi et al. study [19] pointed out that workplace violence not only causes damage to the physical and mental health of individuals, but may also have a negative impact on interpersonal and intra-organizational relationships. In the field of psychiatric nursing, workplace violence is mainly manifested in the form of emotional abuse, and nurses may experience negative emotional experiences, such as anxiety and tension, when confronted with psychological violence from patients and their families, which not only deplete their emotional resources, but also exacerbate compassion stress, which ultimately leads to compassion fatigue.

Self-esteem and compassion fatigue were both negatively correlated ($r=-0.353$, $p<0.01$), and further regression analysis showed that the level of self-esteem of psychiatric nurses is an important factor that can directly affect compassion fatigue ($\beta=-0.353$, $p<0.001$), i.e., the lower the level of self-esteem of psychiatric nurses, the more severe the degree of compassion fatigue. Self-esteem is a dispositional tendency to believe in one's ability to cope with life's basic challenges and to be worthy of happiness. Individuals with lower levels of self-esteem may be more inclined to be overly concerned with the needs and feelings of others due to a lack of intrinsic sense of control, and to neglect their own emotions and needs, which increases the risk of compassion fatigue and negatively affects the quality of nursing care. However, there is relatively little domestic research on self-esteem among psychiatric nurses and a lack of specific implementation guidance programs.

4.3 Self-esteem Partially Mediates the Effect between Workplace Violence and Empathy Fatigue in Psychiatric Nurses

The results of this study found that the total effect of workplace violence in predicting empathy fatigue was significant, and when self-esteem was introduced, workplace violence was still able to predict empathy fatigue ($\beta=-0.209$, $p<0.001$), i.e., there was a partial mediating effect of self-esteem between workplace violence and empathy fatigue, suggesting that workplace violence not only affects empathy fatigue among psychiatric nurses directly, but also can affect empathy fatigue by first affecting self-esteem and then indirectly affecting empathy fatigue. According to the Stress System Model (SMS) proposed by Jiang Qianjin [20]: stress or stress is actually a complex system covering multidimensional factors such as life events, cognitive evaluation, and personality traits. In this model, cognitive appraisal is regarded as the key factor, and personality traits are the core factors. Greenwald and Farnham [21] divided self-esteem into two dimensions, implicit and explicit self-esteem, and pointed out that implicit self-esteem plays a significant role in predicting individuals' spontaneity and emotionally-driven behaviors, while explicit self-esteem is the main influence on individuals' conscious social behaviors and judgments, which suggests that self-esteem not only contains components of cognitive appraisal, but is also a component of personality traits.

According to Resource Conservation Theory, individuals will utilize resources to avoid negative consequences when faced with a threatening situation. Self-esteem, as a positive psychological resource, is more likely to be affected by the negative consequences of the stress accompanying helping behaviors when individuals with low self-esteem are faced with stressors, resulting in negative psychological experiences such as depression, burnout, and empathy fatigue. Yang Ziyang and other scholars [22] investigated the cognitive neural mechanisms of self-esteem and found that in dangerous situations, people with low self-esteem would produce stronger defensive responses, including repression, compared to those with high self-esteem. Therefore, this study defines workplace violence as a stressor, empathy fatigue as a stressor outcome, and self-esteem as a mediating variable affecting the stress response, which is consistent with the SMS theoretical

framework.

Based on this, hospitals should establish a workplace violence reporting system to strengthen monitoring, management, and prevention; pay attention to the improvement of psychiatric nurses' self-esteem level, such as detoxifying negative emotions through positive thinking, decompression, and other methods, and enhancing the nurse's ability to help them do a good job of self-psychological debugging in a timely manner, to change the nurses' cognition, and to set up a good professional mindset, in order to reduce the level of nurses' empathy fatigue and to safeguard the nurses' physical and mental health.

5. Conclusion

The present study shows that psychiatric nurses suffer from a high prevalence of workplace violence and that their empathy fatigue needs to be improved. The findings suggest that self-esteem level plays a partially mediating role between workplace violence and empathy fatigue to date, and the indirect effect is significant, providing a theoretical basis for hospital administrators to develop intervention programs to improve nurses' empathy fatigue. However, given the cross-sectional design of this study, the results are insufficient to establish a causal relationship between the three. In addition, the study sample was limited to psychiatric nurses in psychiatric hospitals and general hospitals in Xi'an, which makes the sample underrepresentative. Future studies could further enrich the sample composition and expand the sample size by investigating hospitals in different regions and levels in order to more comprehensively explore the mechanism of self-esteem's role between workplace violence and empathy fatigue.

Acknowledgements

General Research Project of Xi'an Health Commission (2024yb30).

References

- [1] XING Die, XIAO Aixiang, YE Junrong, et al. Effects of resilience on post-traumatic growth in psychiatric nurses exposed to workplace violence [J]. *Chinese Evidence-Based Nursing*, 2023, 9(14): 2616-2619.
- [2] Figley C. *COMPASSION FATIGUE: Coping with Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized*. NY: Brunner/Routledge [M]. 1995.
- [3] Jin M, Wang J, Zeng L, et al. Prevalence and factors of compassion fatigue among nurse in China: A protocol for systematic review and meta-analysis [J]. *Medicine*, 2021, 100(3):e24289.
- [4] WU Min, HE Ying. Impact of Nurses' Compassion Fatigue on Turnover Intention: the Mediating Role of Coping Styles [J]. *Journal of Nongken Medicine*, 2023, 45(2):167-172186.
- [5] SHI Xiaohong, ZHANG Lianming. Factors affecting the health of psychiatric nursing staff and measures to address them [J]. *Medical Journal of Chinese People's Health*, 2009, 21(18):2341-2342.
- [6] Schat A C H, Kelloway E K. Reducing the adverse consequences of workplace aggression and violence: the buffering effects of organizational support. [J]. *Journal of Occupational Health Psychology*, 2003, 8(2):110.
- [7] WANG Peixi. Survey of violence in medical settings and development of a theoretical model [D]. Sichuan University, 2006.
- [8] ADAMS R E, BOSCARINO J A, FIGLEY C R. Compassion fatigue and psychological distress among social workers: A validation study. [J/OL]. *American Journal of Orthopsychiatry*, 2006, 76(1): 103-108.
- [9] LOU Baona. The structure of empathy fatigue and its mechanisms: a test based on different groups of helpers. Zhejiang Normal University, 2012.
- [10] Rosenberg M. Self Esteem and the Adolescent. (*Economics and the Social Sciences: Society and the Adolescent Self-Image*) [J]. *The New England Quarterly*, 1965, 148(2).
- [11] LI Rui, YANG Jing, LYU Yalan. Investigation on the correlation between empathy fatigue of medical staff and violence in hospital workplace [J]. *Journal of Xinxiang Medical University*, 2020, 37(4):370-373
- [12] Rossi M F, Beccia F, Cittadini F, et al. Workplace violence against healthcare workers: an umbrella review of systematic reviews and meta-analyses [J]. *Public health*, 2023:221.
- [13] Flood C, Bowers L, Parkin D. Estimating the costs of conflict and containment on adult acute inpatient psychiatric wards [J]. *Nursing Economics*, 2008, 26(5): 325-330.
- [14] ZENG Junfang, ZHUANG Jingyi, ZHANG Huixian, et al. Study on the effect of workplace violence on nurses'compassion fatigue in psychiatric hospitals [J]. *Journal of Nursing Administration*, 2022, 22(6): 398-402.
- [15] LIU Yulian, CHENG Gen, YAO Xiuyu, et al. Self-esteem level of psychiatric nurses and related factors [J]. *Journal of Nursing Administration*, 2010, 10(8):536-537540.
- [16] ZHU Zhengai, Li Xiuhong, WANG Qianqian, et al. Correlation analysis of empathy fatigue with social support and professional identity among psychiatric nurses [J]. *Journal of Qilu Nursing*, 2022, 28(18): 111-113.
- [17] WU Min, HE Ying. Impact of Nurses'Compassion Fatigue on Turnover Intention:the Mediating Role of Coping Styles [J]. *Journal of Nongken Medicine*, 2023, 45(2):167-172186.
- [18] LIU Yang, WANG Ying, SHA Liyan. Analysis of the mediating effect of moral dilemma between workplace violence and empathy fatigue of clinical nurses [J]. *Chinese Journal of Nursing Education*, 2023, 20(7): 790-794.
- [19] Faghihi M, Farshad A, Abhari M B, et al. The components of workplace violence against nurses from the perspective of women working in a hospital in Tehran: a qualitative study [J]. *BMC Women's Health*, 2021, 21(1):1-13.
- [20] JIANG Qianjin. A 20-year exploration of psychological stress theory and its applications [D]. 2006 Conference on Psychosomatic Medicine, Zhejiang Provincial Medical Association, 2006.

- [21] Greenwald, Anthony, G, et al. Using the Implicit Association Test to Measure Self-Esteem and Self-Concept. [J]. Journal of Personality & Social Psychology, 2000.
- [22] YANG Ziyang, LUO Yu, GU Ruolei, et al. Self-esteem and brain: A social neuroscience approach [J]. Advances in Psychological Science, 2017, 25(5):788-798.