

# Workplace Violence and its Impact on the Professional Identity among Nursing Students in China: A Multicenter Cross-Sectional Study

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## Research Article

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# Abstract

**Background:** Nursing students are one of the most vulnerable group suffering from workplace violence. This study aimed to investigate the violence toward Chinese nursing students, their response and effects on their careers.

**Methods:** A cross-sectional study was conducted among 954 nursing students in ten universities in China.

**Results:** The study found the incidence of workplace violence among nursing students was 42.98%. The violent incidents ranking from high to low were: verbal abuse, threat, body attack, sexual harassment and gathering disturbance. The majority of the nursing students chose to avoid the conflict during the incident. 86.34% of the students didn't report the incidents. More than half of the victims developed post-traumatic stress disorder after the incidents. Students who explored violence scored lower in professional identity than those not. Measurement methods are used to build up the ability of the students to prevent, react, report and recover when they exposed to the incidents.

**Conclusions:** Chinese nursing students were exposed to physical and psychological WPV during clinical practice with insufficient coping methods and psychological adjustment. The experience of violence significantly worsened the professional identity of nursing students.

## 1. Introduction

Workplace violence (WPV) is one of the significant public health issues in the health care setting. WPV is defined as 'incidents where staff is abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health', including physical and psychological violence(1). Violence against nursing staff was a growing problem in health sectors(2). The nursing staff is targeted with higher risk of workplace assault than other health professionals. Meanwhile, the nursing student is one of the most vulnerable and high-risk group suffering WPV due to inadequate experience in clinical practice, frequent clinical placement shifts and challenges of building the relationships with patients and multidiscipline team in a short period(3).

WPV in the nursing staff was reported 68.31%, including 25.77% in the physical WPV and 63.65% in the non-physical WPV – according to a survey from 28 hospitals in 13 provinces in China(4). Recent studies showed that more than half of nursing students experienced WPV during their clinical practice(5–7). Another survey(8) showed 69.2% of the nursing students from 3 hospitals in Beijing, China experienced WPV during clinical practice. Wang(7) reported 66.2% nursing students suffered from WPV, including emotional abuse 77.6%, threat 55.9%, physical aggression 15.2% and sex assault 10.3% in Xiamen, China. The majority of the nursing students experienced psychological abuse. Therefore, both physical and psychological violence cannot be ignored(8).

The main perpetrator of violence is widely recognized as patients(9). The underlying medical condition may contribute to patients' assault behavior. According to a study in Korea, 84.8% of violence was identified by patients and patients' family members, followed by nurses (78.6%) and physicians (57.9%) (10). A survey in China showed most WPV comes from patients and relatives (77.1%)(11). Magnavita and Heponiemi(12) found that psychiatric and emergency departments were the highest risk work environments. A large retrospective study (n = 1000) in the UK, which focused on physical violence, reported that nursing students were assaulted significantly more than nursing staff in the psychiatric setting(13). Among nursing students, the characteristics of violence and the current situation of response to violence were not very clear. A survey in Australia found that most midwifery students discussed the incident with acquaintance after a violence incident and few of them completed an incident report or received official debriefing(14). Some students may worry about losing their job after the violence, while some do not trust the hospital staff who are not helpful for recovery after a violent incident. All these suggest the WPV influences the nursing students' attitude toward the professions and their level of satisfaction with the work(15).

WPV was considered to potentially cause long-term physical and psychological impact to the nursing students(16). A survey in China indicated that 59.1% of nursing students (n = 543) worried about WPV in the clinical practice(17) and the majority of the students experienced WPV appeared anxiety and depression(6). Nursing students who witnessed or experienced WPV reported more psychological problems such as fear, anger and irritation than others(3). The nursing students recover longer in mental health than the registered nurses. The students reported less ability and experience to adjust the negative emotions after unexpected incidents(18). WPV also impacts the students' nursing performance 12.3% of students announced that WPV experience influence the quality of patient care(15). This will lead to unacceptable nursing performance. Additionally, WPV deteriorated the professional acceptance(1). Budden et al(6) found that 46.9% of the nursing students considered to change their careers after encountering WPV. The students received inadequate WPV management training during the nursing education. Therefore, they are lack of sufficient psychological and mental preparation for WPV, which might in turn drop their evaluation of the nursing profession. It is necessary to clarify the impact of WPV to build up the professional identity among the nursing students, who are considered to be primary backup forces of the professional nurses.

WPV affected nursing students from the beginning of their clinical practice. Colleges and clinical providers have engaged in workplace cultures practice in recent years, with initiatives to raise awareness, introduce new policies against harassment and provide WVP identity, report and management training. However, social media among the students may influence the evaluation of clinical placements and suggest that WPV remains a problem. Although many universities and hospitals tried to change the culture of practice in China, the evidence of the change was still unclear. This study describes the prevalence and characteristics of WPV, explore the students' responses, the effect of WPV on their professional identity and engage in reducing WPV within nursing students in China

The aims of this study are:

(i) to explore and describe the violence incidence and experience among Chinese nursing students during clinical practice; (ii) to explore and describe the negative impact on the development of students' professional identity; (iii) to supply essential training in identification, reporting and management of WVP, elimination of the impact among the students and building up the professional identity in China.

## 2. Methods

### 2.1 Design

A cross-sectional study design was used following the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines(19).

### 2.2 Participants

Nursing students from 10 universities/colleges in 5 cities in China: Shanghai, Suzhou, Dali, Nanchang, and Hefei were recruited to this study by convenience sampling method from March 1st 2019 to May 31st 2020. The study entry criteria are: ☐The nursing students in the final year training who participate in clinical practice, ☐Students consented to participate in this study. Exclusion criteria: students were excluded if the sick leave was longer than month.

#### Ethical approval

was obtained from Huzhou University Research Ethics Committees (20190910). The questionnaires were issued to the nursing students in an internship after they returned to school for academic study. All students were required to sign a consent form after they were explained clearly with the aim and method of this study. It took 10 to 15 minutes for the students to complete the questionnaires. The questionnaires were completed anonymously and collected on the spot. 1094 nursing students were recruited in this study and 954 questionnaires (87.20%) were completed.

### 2.3 Instruments

A General Information Survey Sheet was designed including gender, age, family residence, education background, college major selection, training of violence management, and the concern about violence. The Hospital Workplace Violence Questionnaire, which was designed by Mr. Zuhui Chen and revised by Mr. Xiaoduo Yang, was used widely in China(20, 21). In this study, the questionnaire was revised according to the study purpose and characteristics of the nursing students and renamed as Hospital Workplace Violence Questionnaire for Nursing Students (HWVQNS). The HWVQNS is composed of two parts: various types of violence that took place during the internship and a description of a violence incident. The Primary Care Posttraumatic Stress Disorder (PC-PTSD) was included(22). There were four items in the PC-PTSD: re-experience, highly awake, numbness and escape. The item is marked by 'yes' or 'no'. It is noticed that when the classification score is 3, the sensitivity is 78% and the singularity is 87%. The Professional Identity Questionnaire for Nursing Students (PIQNS) was developed by Yufang Hao(23).

The PIQNS included seventeen items and five dimensions: professional self-image, benefit of retention and risk of turnover, social comparison and self-reflection, independence of career choice, and social modelling. The items were rated on a 5-point scale. A higher score indicates a higher professional identity. The Cronbach's  $\alpha$  of the questionnaire was 0.827 and the split-half reliability was 0.842.

## **2.4 Data Analysis**

Data analysis was conducted with SPSS 24.0. Descriptive statistics were used to analyze the demographic characteristics of the participants and the current situation of WPV suffered by the nursing students. A chi-square test was used to examine the differences in the occurrence of WPV among demographic characteristics. Independent-samples t-test was used to examine the effect of WPV on professional identity. An alpha level of 0.05 was used for all statistical tests.

## **3. Results**

### **3.1 Demographic characteristics**

Table 1 reveals that 954 nursing students participated in the survey. 89.31% were female, 93.08% aged between 18–23 years old. Most of them stayed in the internship for more than 6 months.

### **3.2 Types of WPV**

Among the responsibilities of the 954 nursing students of this study, 42.98% experienced at least one case of violence in the past year during their internship. The types of violent incidents ranging from high to low were: verbal abuse (38.47%), threat (14.78%), physical attack (2.73%), sexual harassment (1.99%) and gathering disturbance (medical dispute) (1.78%).

### **3.3 Comparison of the occurrence of WPV by different characteristics**

It was disclosed in the study that the WPV incidents differ statistically in various education levels, location of the school, the reason for major choice and degree of concern about violence. The violence incident rate was higher in the students with bachelor's degrees than with junior college degrees. The violence incident rate was high in the students who had changed their college major and those with high-level concerns about violence) (Table 2).

Table 2

Variables	N	%
Gender		
Female	852	89.31
Male	102	10.69
Age (year)		
18–20	68	7.13
21–23	820	85.95
≥24	66	6.92
Place of residence		
City	491	51.47
Rural area	463	48.53
Are you the only one child in the family?		
Yes	539	56.5
No	415	43.5
Education level		
Bachelor's degree or higher	370	38.78
Junior college	584	61.22
School location		
Shanghai	639	66.98
Suzhou	24	2.52
Dali	76	7.97
Nanchang	71	7.44
Hefei	144	15.09
Duration of the current internship		
≤6	10	1.04
≥6	944	98.95

Occurrence of WPV by characteristics of the nursing students.

Variables	N	%
Student leader		
Yes	314	32.91
No	640	67.09
Have you joined school clubs?		
Yes	667	69.92
No	287	30.08
The reason for choosing nursing as your college major		
Voluntary application	539	56.5
Family member's suggestion	219	22.96
Major change	196	20.55
Attended the violence prevention training?		
No	643	66.46
Yes	320	33.54
Concern about the violence during the internship		
Not at all	58	6.08
Not too much	261	27.36
Not sure	110	11.53
Slightly worried	435	45.6
Extremely worried	90	9.43
Occurrence of WPV by characteristics of the nursing students.		

### 3.4 Characteristics of WPV among nursing students

The high risk of WPV department ranked from high to low – emergency department (38.05%), surgical department (11.12%), medical department (10.49), outpatient department (10.24%), etc. The perpetrators were mostly relatives of the patients (60.98%) and patients themselves (31.64%). Most WPV were caused by: perpetrators' offensive physical behavior (44.63%), dissatisfaction with nursing performance (38.29%), long time waiting (31.71%), requests rejected unreasonably (29.27%), etc. The responses of the nursing students to the WPV included: avoiding conflict (51.71%), explaining with patience (50.49%), seeking help from colleagues or teachers (31.95%), etc. 86.34% of the nursing students didn't report the violence incidents. The reasons for the low incident report included being unaware of how to report (27.07%), irrelevant to me (20.49%), no response will happen (16.34%), etc. 11.22% of the nursing

students consider WPV part of their job. 10.98% of the nursing students got 3 points of PT-PTSD score, 40.73% got 4 points. (Table 3)

### **3.5 The effect of WPV on professional identity**

The differences of all dimensions and total score of the PIQNS between groups with or without WPV have statistical significance ( $P < 0.05$ ), except the “social comparison and self-reflection”. The nursing students without WPV experience scored higher in professional identity than those with WPV. (Table 4)

Table 4

Variables	Frequency	
	N	%
Department		
Emergency room	156	38.05
Surgery department	46	11.22
Physical department	43	10.49
Outpatient department	42	10.24
Obstetrics and Gynaecology department	13	3.17
Orthopedics department	10	2.44
Intensive care unit	8	1.95
Psychiatry department	8	1.95
Pediatric department	7	1.71
Perpetrator		
Relatives of patient	250	60.98
Patient(s)	129	31.46
Registered nurse(s)	8	1.95
Doctor(s)	7	1.71
College internship	3	0.73
The circumstances that incur the violence		
Perpetrators' offensive physical behavior	183	44.63
Unsatisfied with the nurse's work	157	38.29
Long time waiting	130	31.71
Requests rejected unreasonably	120	29.27
Unsatisfied with the treatment	93	22.68
Unsatisfied with the doctor's work	75	18.29
Overestimation of the medical expenses	53	12.93
The patient died	46	11.22
Analysis of independent-samples <i>t</i> -test		

Variables	Frequency	
	N	%
Seeking financial compensation	39	9.51
Mental disorder	39	9.51
Drunken	38	9.27
Drug addiction	6	1.46
Response		
Avoid conflict	212	51.71
Explain with patience	207	50.49
Call in colleagues or teachers	131	31.95
Call in security guard	111	27.07
Call in chief nurse (suggest mentor)	70	17.07
Call in the police	53	12.93
Reason before fighting back	32	7.80
Seek help from other patients and family members	9	2.20
Conflict with each other (eg. Shouting/clashing)	8	1.95
Release a report	354	86.34
No		
Reasons for not releasing a report	111	27.07
Unaware of how to report	84	20.49
It's irrelevant to me	67	16.34
No response will happen	46	11.22
It's part of the job	13	3.17
I am afraid I will be revenged	37	9.02
Yes		
PT-PTSD (score)	72	17.56
1	62	15.12
2	45	10.98
Analysis of independent-samples <i>t</i> -test		

Variables	Frequency	
	N	%
3	167	40.73
4		
Analysis of independent-samples <i>t</i> -test		

## 4. Discussion

In this study, 42.98% of the 954 nursing students had experienced at least one case of violence in the past year during their internship. Among the various types of violence, the prevalence of nonphysical violence (verbal abuse 38.47% and bullying 14.78%) was much higher than that of physical violence (body attack 2.73%, sexual harassment 1.99% and gathering disturbance 1.78%). Similar patterns were observed in regional and global statistics data. Spector et al(24) indicated that non-physical violence (65.5%) was higher than physical violence (26.7%) globally. The gap between the finding of Spector et al(24) and this study may relate to differences in health care environments, culture, and perception or definition of violence across different people and cultures. Considering the prevalence of global WPV reported by qualified staff, it is not surprising that such a significant number of nursing students experiencing similar events. The unacceptable circumstances should raise attention and awareness of WPV among nursing students. Adequate training in identifying, reporting and management of WPV should be introduced in the school and the clinical provider.

The second valuable finding of this study was to identify high-risk groups of nursing students. As mentioned before, senior degree nursing students encountered more violence than those with junior degree students. Students who had changed their college major and those who concerned more about violence encountered more violence. Consistent with previous literates, nurses with university degrees, higher workload or stress, worse adaption to the environment may get higher risk of experiencing any form of violence(25, 26). This study found that the main responses of nursing students to the WPV were avoiding conflict and explaining with patience, while fewer students sought help from teachers, security guards, and police. In the future, training programs offered by nursing educators should focus on raising students' prevention and response-ability in combination with building up characteristics of nursing students.

Thirdly, the nursing students were main target of hospital violence. The emergency department was one of the high violence targets in the hospital. In the emergency department, high-risk patients, such as patients experiencing an episode of mental illness or inebriated patients, and longer waiting time, were determined to be precipitating factors of potential violent behaviour(27). High patient expectations(28), and the negative propaganda in the media(29) lead to patients aggressive behavior. Patients, for instance, tend to believe that they deserve high-quality care and good clinical outcomes once they are admitted to the hospital, regardless of the severity of their disease(30). However, these accusations are

frequently one-sided presenting only the patient's point of view and are inaccurate, thus creating public distrust and anger toward medical professionals(29). Something always happens at the beginning of the violence, such as offensive behavior, unsatisfied with nurses' performance, rejected unreasonable requests, etc. It is important to develop the ability of early identification, assessment, reporting and management of WPV among the nursing students.

Fourthly, the impact of WPV on individuals, in terms of mental well-being, should not be underestimated, since students often need additional support to cope with and manage challenging situations. Perhaps the most alert finding in this study was that 86.34% of the nursing students didn't report violence incidents. The reasons include: unaware of how to report (27.07%), irrelevant to me (20.49%), no response will happen (16.34%), etc. 11.22% of the nursing students considered WPV as part of their jobs. The culture which tolerates the violence incidents in clinical practice is unacceptable and should be abandoned. It was disclosed that students or novice nurses might come up against high rates of negative behaviour during their time in practice(31). Laschinger(32) suggested negative work experiences may result in new graduates assimilating such behavior and displaying the same toward others. It was found in this survey that more than half of the nursing students developed post-traumatic stress disorder after WPV, which suggested clinical nursing teachers should support the students in psychological adjustment and recovery after the occurrence of violence.

The adverse effects of violence on nursing students' mental health and professional identity have been revealed. It is urgent to provide relevant violence prevention education and training for nursing students to meet the need. Students should start raising awareness when preparing for their clinical placements. The process should include information to help understand and identify WPV and get access to clear information on how to report incidents. Students should be confident that incidents have to be handled properly with post-incident support through counseling and debriefing. Schools and placement providers should also provide training to mentors to assess the learning environment through audit and post-placement evaluation and provide debriefing sessions to students to accumulate their experience. Cooperation between academics in situations and service providers is critical to create best learning environments for students and build capacity for tomorrow's workforce(33). Nurse education institutions and health service providers should work together to better protect the nursing students and develop shared policies and procedures which raise understanding and awareness of the consequences and management of bullying/harassment(34), build up a culture of zero tolerance toward such behavior and set up a self-valued society.

### **Limitations of the study**

Firstly, this study was conducted in five cities in China, and the results may not apply to other regions. Secondly, due to the limitation of human resources, this study did not investigate nursing students at different practice time points. Whether the occurrence of WPV, coping style, and professional identity of nursing students have changed before and after clinical practice needs longitudinal research. Thirdly, the cross-sectional study cannot fully reflect the thoughts of nursing students. In the future, it will be

necessary to deeply explore nursing students' understanding and experience of violence through qualitative research, especially before and during the relevant violence prevention training conducted by nursing educators.

## 5. Conclusion

The results of this study demonstrated that nursing students were exposed to WPV during clinical practice, including physical and psychological behaviour. In addition, coping methods and psychological adjustment of nursing students to violence were not satisfactory. The experience of violence will significantly worsen the professional identity of nursing students, which will harm the quality of care and affect the long-term development of nursing. These results also highlighted the importance of violence prevention education during professional learning, especially training on risk assessment, how to cope with WPV, reporting WPV exposure and psychological recovery. More efforts are needed to reduce and prevent violence in the future.

## Abbreviations

Workplace violence

WPV

STROBE

Strengthening the Reporting of Observational Studies in Epidemiology

PIQNS

The Professional Identity Questionnaire for Nursing Students

## Declarations

**Ethics approval and consent to participate:** This study was approved by Huzhou University Research Ethics Committees (20190910). All the participants provided informed consent. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

**Consent for publication:** Not applicable.

**Availability of data and materials:** The datasets used and analysed during the current study are available from the corresponding author on reasonable request.

**Competing interests:** The authors declare that they have no conflicts of interest. **Funding:** None

**Authors' contributions:** Lingyan Zhu and Dongyan Lu designed the study; Lingyan Zhu, Dongyan Lu, Zhenlan Luo, Mengqi Xu and Linfang Sun collected data; Lingyan Zhu and Dongyan Lu analysed data; Lingyan Zhu, Dongyan Lu and Sanlian Hu drafted and revised the article. All authors approved the final version of the manuscript.

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