Workplace Violence Against Frontline Nurses in a University Hospital in Bangkok, Thailand: A Cross-sectional Study

Nareerat Pummala
Faculty of Public Health, Mahidol University, Bangkok, Thailand

Ann Jirapongsuwan
Faculty of Public Health, Mahidol University, Bangkok, Thailand

Sukhontha Siri
Faculty of Public Health, Mahidol University, Bangkok, Thailand

Surintorn Kalampakorn
Faculty of Public Health, Mahidol University, Bangkok, Thailand

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Faculty of Public Health, Mahidol University, Bangkok, Thailand

Abstract

Background: Workplace violence against nurses has increased attention worldwide. This study aimed to investigate the prevalence of workplace violence (WPV) and related factors against frontline nurses in a university hospital in Bangkok, Thailand.

Method: A cross-sectional study was conducted among 275 nurses. Bivariate and multivariate logistic regression was applied to identify any associations.

Results: Findings indicated that the prevalence of psychological WPV was 60.0% and physical WPV was 9.1%. Factors associated with physical WPV included working in the emergency, outpatient or psychiatric examination units (aOR = 4.62; 95% CI: 1.86−11.50). Additionally, work experience <10 years (aOR = 2.66; 95% CI: 1.53−4.62), personality type B (aOR = 2.51; 95%CI: 1.21−5.18), inadequate lighting (aOR = 2.53; 95%CI: 1.38−4.66), poor management of WPV (aOR = 1.77; 95% CI: 1.36−4.86) and poor organizational culture toward WPV (aOR = 2.22; 95% CI: 1.32−5.66) were associated with psychological WPV.

Conclusion: Findings provide novel empirical evidence on the context of WPV in a Thai university hospital. Significant risk factors of WPV have the potential to be developed in an intervention to prevent WPV toward frontline nurses. The hospital should adopt WPV prevention programs in all settings to prevent healthcare workers from adverse effects.

Keywords: Workplace violence, Frontline nurse, University hospital, Thailand

1. Introduction

Workplace violence (WPV) has increased attention worldwide. It refers to physical and psychological incidents where staff are abused or threatened in circumstances related to their work, involving challenges to their safety, well-being or health [1]. Physical WPV refers to receiving action to intentional harm including beating, kicking, slapping, stabbing, shooting, pushing, biting or pinching [1]. Psychological WPV refers to receiving diverse aggressive tactics which have the potential to cause emotional injury including verbal abuse, bullying, cyberbullying, or harassment [1]. Later violence which is psychological harassment such as verbal abuse, criticism, or social exclusion is also regarded as WPV. The National Institute for Occupational Safety and Health revealed that most cases of WPV can be observed in hospitals [2]. WPV against nurses constitutes a serious problem as they are primarily responsible for providing care to patients which makes them more vulnerable to being attacked by patients, family members, and other co-workers. A global study of 150,000 nurses indicated that one-third of nurses have been physically assaulted, while around two-thirds have experienced nonphysical assault [3]. Causative factors including individual and workplace factors contribute to WPV [1]. A related study reported that nurses working in the absence of management of violence and in environments lacking clear support protocols, lack proper communication skills contributing to WPV [4]. However, a study indicated that violence against nurses remains underreported

[5]. WPV, therefore, leads to negative consequences including the physical and mental health of nurses as well as burnout syndrome, and a high rate of turnover, ultimately leading to negative outcomes for patients [5]. Moreover, being exposed to WPV affects negative emotions which may impair nurses' work ability [6]. A systematic review reported that workers exposed to violence manifest problems related to sleep with relevant consequences on workers' safety and health [7].

In Thailand, the increasing number of attacks against nurses has raised serious concerns. The Ministry of Public Health reported that from 2011 to 2019, violence has occurred in a hospital one to three times a year and tends to increase yearly [8]. In 2019, a total of 64 incidents occurred with three cases of healthcare workers reported dead and 15 injured. Nurses were the most exposed healthcare workers experiencing those events.

WPV in hospitals differs depending on particular contexts within the hospital. Studies have revealed that one of the common locations of hospital violence is the department providing front-line health services [9,10]. Frontline nursing staff are those interacting the most with patients and families; thus, they are at risk of encountering violent incidents. Factors leading to violence included long waiting periods and miscommunication [11]. The most recent studies on WPV against nurses have been conducted in frontline clinical settings at various types of hospitals focused on the emergency, psychiatric and outpatient units [10,12,13]. Yet, little is known about frontline services in university hospitals with their own specific contexts of services differing from other hospitals. The university hospital constitutes a tertiary advanced healthcare facility offering innovative treatments, instruments, and expertise considered a medical school for teaching and research. These facilities face great volumes of patients visiting the hospital with high expectations for obtaining professional medical care for complicated health problems and explicit needs after a referral from primary and secondary hospitals [13].

A university hospital in this study is defined as a tertiary care center serving around 8000 to 10,000 patients daily. According to the hospital risk management report, the incidents of violence caused by patients were ranked second after hospital infections. The present study focused on the examination units providing frontline services for around 8—24 h in every department in the hospital. Nurses in the examination unit are in close contact with patients to provide screening, assess medical history, and assist with physical examinations. Because

the hospitals have established WPV management systems, it remains unknown whether individual, job, or work environment contexts can lead to WPV occurrence. Given the fact that the causes of violence may differ from one context to another based on differences in setting, organizational management, and staff training, decreasing WPV requires a combined approach customized to the unique aspects defining each environment [11]. Obtaining more data on WPV in this setting would be essential to developing hospital preventive measures. This study covered both physical and psychological aspects of WPV and their related factors focusing on nursing staff working in examination units. The findings are provided to hospital management systems to develop strategies to prevent WPV and create safe working environments.

2. Methodology

A cross-sectional study was conducted in February 2021 among nurses working at examination units in a university hospital. A total of 218 nurses was calculated using the formula for estimating a single proportion. The inclusion criteria included full-time nurses having at least six months of experience working in an examination unit and who voluntarily participated in the research. Nurses on sick leave or vacation on the day of data collection were not included in the study. Then, systematic random sampling was used to recruit the participants from 45 departments. The sampling started by selecting subjects from the list of nurses at every fourth individual on the list. The participants were informed about the purpose of the study and were asked to sign a consent form. In addition, participants were guaranteed anonymity and confidentiality during the survey. The questionnaire and consent form were also returned separately in closed envelopes.

2.1. Instruments

The self-administered questionnaire was used with permission and developed based on related literature. The questionnaire included three parts as described below.

2.1.1. Part 1 individual factors

This part consisted of age, sex, education level, type of personality, participation in antiviolence training, work experience, department, shift work, job position, job characteristics, number of daily work hours, interaction with patients, and patient's relatives and interaction with coworkers. The

questionnaire included 35 items on a checklist and blanks to fill in. The personality type A/B questionnaire of 20 items, a Thai version modified from the Jenkins Activity Survey, was used to examine the personality of nurses [14]. The total scores ranged from 35 to 380; cut-off scores higher than 60 indicated personality type A. Personality type A is characterized by a constant strong sense of competitiveness and self-criticism to strive toward goals. Type B personality is more relaxed and enjoys achievements but does not tend to become stressed when goals are not achieved.

2.1.2. Part 2 experience of workplace violence (WPV)

This part included the experience of physical and psychological WPV in the past 12 months, characteristics of the instance, number of incidents, place and time of events, and consequences of the attack. Each physical and psychological WPV contained ten items of yes/no questions. The primary question was, "Have you experienced physical/psychological violence at your workplace in the last 12 months?". A "yes" response was categorized as having experience of such WPV. Then, the following questions followed relating to the frequency and details of the violence.

2.1.3. Part 3 attitude toward violence

The six items developed by the researcher for nurses' beliefs about the cause of and vulnerability to WPV were measured using a four-point Likert scale ranging from 1 (not true) to 4 (absolutely true). The higher scores indicated stronger beliefs about the cause of and vulnerability to WPV. The equal width binning method was also applied to divide the score into three groups (high, moderate, and low), with an equal range for each group and defined as (maximum to minimum)/3.

2.1.4. Part 4 workplace factors

This part contained the 13 items regarding opinions about the work environment, management of WPV, and organizational culture toward WPV. Each item was scored on a yes/no response. A "yes" response was categorized as the adequacy of such factors.

The content validity of the questionnaire was examined by three experts in public health fields. The content validity index ranged from 0.97 to 1. A pilot test with 30 nurses not participating in the final survey was conducted to test the internal consistency reliability using Cronbach's alpha coefficient method. The reliability in this study ranged from 0.70 to 0.72.

Statistical Package for the Social Sciences (SPSS), Version 18.0 was used for data analyses [15], and descriptive statistics were applied to all variables. Chi-square tests were conducted to explore the association between factors and workplace violence. The multicollinearity of variables was checked before testing multiple logistic regressions, and the level of statistical significance was set at 0.05.

2.2. Ethical approval

All procedures performed in studies involving human participants were in accordance with the Ethics Committee for Research on Human Subjects, Siriraj Hospital, Mahidol University (Ref. No. 1004/ 200).

3. Results

3.1. Individual factors

A total of 275 nurses responded to the questionnaire (response rate of 99.6%). More than one-half of nurses were aged less than or equal to 35 years. The age ranged from 21 to 60, with a mean age of 35.9 years. The majority of nurses were female (89.8%) and had a bachelor's degree level education (67.3%). More than one-half were practical registered nurses (54.6%), 58.2% of nurses indicated less than or equal to ten years of work experience and 61.5% of nurses had never received any training about violence mitigation. The majority of nurses had personality Type B (83.6%), and 93.1% of nurses were at a high level of attitude toward violence. In all, 72.7% reported 40 working hours weekly, with 76.4% working during the day shift. The majority of nurses performed urgent work (75.3%). The majority of the clients were adults (72%Over two-thirds of nurses indicated that their organization had a workplace violence reporting system (74.5%).

3.2. Workplace factors

Regarding the work environment, the majority of nurses indicated adequate lighting (73.8%), having a private work section (83.3%), and no dead corners or isolated points in the workplace (82.5%). As for managing WPV, the majority of nurses reported clear guidelines for organizational WPV management (84.0%), clear instructions for the report system (72.7%), and clear understanding of the WPV policy (80.4). Concerning organizational culture toward WPV, the majority of nurses indicated the hospital had campaigned against WPV (82.25%) and maintained an organizational culture toward WPV

(81.5%), employees' interests, and acceptance of WPV prevention (77.1%).

3.3. Workplace violence among nurses

Results showed the prevalence of physical WPV among the respondents in the past 12 months was 9.1%. Of this number, 84.0% reported an attack without a weapon. With regard to the perpetrators, 56.0% indicated patients, 44% indicated relatives of patients and 16% indicated co-workers. About one-third of the incidents occurred in the examination room (64.0%) from 07.01 am to 03.00 pm (60.0%). After the incident, 76.0% of nurses told senior staff and 48.0% ignored the situation. Regarding their feelings, 44.0% of nurses felt sad, 40.0% reported a loss of job satisfaction and 36.0% indicated stress. Consequently, 12% of nurses were treated by doctors and 12% went on sick leave (Table 1).

The prevalence of psychological WPV in nurses in the past 12 months was 60.0%. Of this number, the most common cause of psychological WPV was verbal abuse (69.1%). Regarding the perpetrators, 57.6% of nurses reported relatives of patients, 51.5% reported patients and 44.2% indicated co-workers. About one-half of the incidents occurred in the examination room (45.5%), from 07.01 am to 03.00 pm (83.7%). After the incident, 67.3% of nurses ignored the situation and 58.8% informed their senior staff. In all, 47.9% of nurses felt a loss of job satisfaction and 42.4% presented stress symptoms (Table 1).

3.4. Factors related to WPV

Multiple logistic regression with the enter method was used to examine factors related to WPV among nurses under the assumptions in way confounders that are modeled in the regression analysis. The outcomes of the models include two types of violence, physical WPV, and psychological WPV. After testing the collinearity of variables, all of the independent variables were tested for the association with each outcome variable. The results indicated that working in emergency, outpatient, and psychiatric examination units were associated with physical workplace violence (aOR = 4.62; 95% CI: 1.86—11.50) (Table 2). Factors associated with the psychological workplace violence were work experience (aOR = 2.66; 95% CI: 1.53—4.62), personality type (aOR = 2.51; 95% CI: 1.21—5.18), lighting (aOR = 2.53; 95% CI: 1.38—4.66), management of WPV (aOR = 1.77; 95% CI: 1.36—4.86) and organizational culture toward WPV (aOR = 2.22; 95% CI: 1.32—5.66). (Table 3).

Table 1. Frequency and percentage of experiencing physical WPV and psychological WPV.

Variables	Physical WPV		Psycho-logical WPV	
	n	%	n	%
Experiencing WPV				
No	250	90.9	110	40.0
Yes	25	9.1	165	60.0
Physical attacked				
Attacked without a weapon/object	21	84.0	—	—
Attacked with a weapon/object	4	16.0	—	—
Psychological attacked[a]				
Verbal abuse	—	—	114	69.1
Threatened	—	—	56	33.9
Bullied (Gossip)	—	—	50	30.3
Unauthorized voice/video recording	—	—	26	15.8
Sexual harassment	—	—	2	1.2
Perpetrator[a]				
Patients	14	56.0	85	51.5
Relative of patients	11	44.0	95	57.6
Coworkers	4	16.0	73	44.2
Location[a]				
Examination room	16	64.0	75	45.5
Screening area	7	28.0	67	40.6
Waiting area	5	20.0	64	38.8
Time				
07.01 am—03.00 pm	15	60.0	138	83.7
03.01 pm—11.00 pm	7	28.0	22	13.3
11.01 pm—7.00 am	3	12.0	5	3.0
Respond to the incident[a]				
Informed a senior staff	19	76.0	97	58.8
Took no action	12	48.0	111	67.3
Completed incident form	11	44.0	35	21.2
Requested the person to stop	7	28.0	29	17.6
Walked away from the incident	6	24.0	48	29.1
Tried to explain the reason	0	0.0	10	6.1
Reported to police	1	4.0	0	0.0
Feeling of victim[a]				
Sadness	11	44.0	73	44.2
Job dissatisfaction	10	40.0	79	47.9
Stress	9	36.0	70	42.4
Anger	8	32.0	62	37.6
Anxiety	6	24.0	48	29.1
Fear	6	24.0	14	8.5
Indifference	5	20.0	16	9.7
Intention to quit	5	20.0	31	18.8
Bored	2	8.0	48	29.1
Consequence				
No action	19	76.0	153	92.7
Formal treatment by doctors	3	12.0	2	6.1
Absence/Sick leave	3	12.0	10	6.1

[a] Multiple responses.

4. Discussion

Findings from the present study confirmed that WPV against nurses working in frontline settings is a high concern in a university hospital. The main finding of the study showed that the prevalence of psychological WPV was 60.0% and physical WPV was 9.1%. A similar result was found in a WPV

Table 2. Multiple logistic regression to determine the association between physical violence and related factors.

Variables	Crude odds ratio (OR)	95% confidence interval (CI)	Adjusted odds ratio (aOR)	95% confidence interval (CI)
Emergency, Outpatient and Psychiatry examination unit	4.65	1.87—11.53	4.62	1.86—11.50
Other examination units	1		1	

*95%CI adjusted by age and sex.

study in a large teaching hospital in Iran [16]. Similar to related studies, it was obvious that psychological WPV occurred at a higher prevalence than physical WPV toward nurses working in frontline settings, but lower degrees of the prevalence of both WPVs were found in the present study [10]. The difference in the research instrument, as well as the workplace factors such as type of hospital, culture, and violence management, could have affected the prevalence of WPV. However, compared with a study at a tertiary hospital in Thailand, the prevalence of verbal violence was lower than that of the present study, while physical violence was higher [11]. Another study of frontline departments at primary, secondary, and tertiary hospitals in Thailand found a higher number of both WPV types [12]. Evidence showed that various degrees of prevalence were also found in Thai studies depending on the context of departments and type of hospital. However, nurse exposure to

psychological and physical WPV was confirmed as a significant occupational risk factor in the workplace. The risk assessment, occupational health programs as well as comprehensive policy, and WPV prevention plan throughout the setting are needed. In addition, the consequences of WPV as adjustment and Post-Traumatic Stress Disorder (PTSD) should also be recognition, assessment, and prevention [17].

One of the remarkable findings of this study was that 16% of the physical WPV episodes involved using a blunt weapon or an object. Although this study has not explored the types of weapons or objects used, this constitutes a critical behavior and could cause serious injury to nurses or other witnesses. Therefore, hospital security systems such as CCTV cameras and panic buttons should be maintained in this regard. Also, a periodic survey to remove objects that could be used inappropriately is required. Similar to related studies, WPV is mostly

Table 3. Multiple logistic regression to determine the association between psychological violence and related factors.

Factor	Crude odds ratio (OR)	95% confidence interval (CI)	Adjusted odds ratio (aOR)	95% confidence interval (CI)
Individual factors				
Work experience (year)				
≤10	2.37	1.44—3.91	2.66	1.53—4.62
>10	1		1	
Personality				
Type B	2.66	1.38—5.11	2.51	1.21—5.18
Type A	1		1	
Workplace factors				
Lighting				
Inadequate	2.78	1.60—4.83	2.53	1.38—4.66
Adequate	1		1	
Organizational relationship				
Inadequate	2.19	1.23—3.91	1.64	0.79—3.38
Adequate	1		1	
WPV Report system				
Inadequate	2.47	1.44—4.25	1.54	0.68—3.50
Adequate	1			
WPV policy				
Inadequate	1.83	1.00—3.33	0.37	0.13—1.05
Adequate	1			
Management of WPV				
Inadequate	3.18	1.63—6.22	1.77	1.36—4.86
Adequate	1		1	
Organizational culture toward WPV				
Inadequate	3.15	1.68—5.92	2.22	1.32—5.66
Good	1		1	

*95%CI adjusted by all variables in the table.

perpetrated by patients and their relatives [12]. Although reasons for this were not investigated in the present study, previously reported causes of violence against frontline nurses included long waiting times, high patient volumes, overcrowding, and unmet expectations [11,18]. This study was conducted in the largest university hospital in Thailand with great volumes of patient visits each day. The causative factors might have triggered violent behaviors related to one's perceived urgent condition. Surprisingly, coworkers comprised a high proportion of perpetrators for both physical (16.0%) and psychological (44.2%) WPV. Frontline nurses have to deal with fractious colleagues; thus, lack of team cohesion, work overload, and ineffective communication may stoke tensions, leading to conflict and WPV. Further in-depth details need to be investigated and addressed by hospitals to prevent miscommunication and harmful events. Similar to related studies, WPV incidents took place mostly in the examination room where nurses work directly with patients and coworkers [18]. Their work deals with immediate inquiries that increase the risk of violence when communication is ineffective. Also, within the context of overcrowding and long waiting time, any delay in managing care may lead to anger or frustration resulting in violent behaviors.

Regarding the response to physical violence incidents, the majority of nurses informed a senior staff member. This reflected trust in the senior nurses to manage and control the situation. This detail should be given attention in considering senior nurses as key individuals in WPV prevention programs. In this study, although the majority of the participants indicated procedures were enforced and encouragement was provided from the hospital for reporting WPV incidents, a significant portion of the survivors did not complete the incident report of physical (56.0%) and psychological (78.8%) attacks. Related literature has confirmed that WPV was underreported because of the perception that WPV is one part of the job which needs to be tolerated, and the lack of administrative support. However, maintaining and monitoring reports of WPV incidents can help determine any necessary actions to prevent recurrences. Further investigation is required to assess the reason for the non-reporting of WPV incidents. Nurses in the present study reported feelings of job dissatisfaction, anger, and stress after the attack. Similar to related studies, this finding sheds some light on the phenomenon which may be partly attributed to low job satisfaction [11]. Decreasing job satisfaction impacts burnout, and consequently the intention to quit. In all, 6–12% of

nurses in the present study indicated that they went on sick leave and 1–12% received treatment by doctors. Therefore, psychological support for the survivors should also be considered.

The findings supported the concept that the risk of WPV involved individual and workplace factors combined. Regarding psychological WPV, individual risk factors included work experience and nurse's personality type as well as workplace factors of lighting, WPV management, and organizational culture toward WPV. Nurses reporting work experience less than or equal to 10 years were more likely to experience WPV than their coworkers. Similar to studies conducted in Thailand and Italy [10,12], when nurses are more experienced, they become sufficiently mature to deal with social issues and emergencies and are able to communicate and manage tense situations. This clarified the necessity for considering less experienced nurses as a high-risk group for psychological WPV. In the present study, nurses displaying a personality type B pattern exhibited a significant association with WPV. Personality type can lead to different responses of individuals to stressors under work conditions and situations [19]. The related literature reported that personality type A healthcare providers perform better than type B on performance and relationships with patients and coworkers [19]. The majority of nurses in this study (75%) stated that they worked against the clock to deliver excellent services to patients and family members. This circumstance requires an active and prompt response from staff to reduce waiting periods. Thus, the response of type B nurses may not be understood by a large number of patients, relatives, and coworkers.

Regarding workplace factors, findings revealed that nurses working in environments providing inadequate lighting were more likely to be exposed to violence than those working in the area of adequate lighting. Inadequate lighting can trigger or exacerbate a stressful situation [20]. The comfortable and safe physical conditions including adequate lighting are known as violence inhibitors. Therefore, worksite analysis and hazard identification should be conducted to create a suitable atmosphere and ensure adequate lighting in the setting. In this study, nurses indicating unclear procedures existed in managing WPV were more likely to be exposed to psychological violence than those indicating clear procedures were enforced. WPV management is about policy and procedure for risk assessment, violence reporting, prevention, and training. A lack of trust in management could aggravate emotions of dissatisfaction and create anxiety about violence which could result in WPV. Moreover, in the

present study, nurses stating the absence of an organizational culture against WPV were more likely to be exposed to psychological violence than those indicating having such a culture. Organizational culture against WPV refers to the values, beliefs, and norms regarding WPV shared by frontline nurses. Organizational culture can create and develop trusting relationships among employees, discouraging any act of WPV. This was consistent with the finding that the organizational culture could reduce the level of violence [21]. The hospital administration should ensure clear procedures of WPV management and provide resources for nurses to understand how to deal with WPV episodes. Also, the organizational culture needs to be supportive and healthy.

Considering physical WPV, the results indicated that nurses working in emergency, outpatient, and psychiatric examination units were more likely to be exposed to WPV than those working in other units. This finding could help direct a violence prevention program in high-risk areas. Working in a violence-related department leads to higher WPV incidence, especially in units related to patients, whose behavior was affected by health conditions, drugs, or mental illness. Similar findings were reported in studies from Thailand and Italy [10,13].

4.1. Strengths and limitations

The strengths of this study included that the findings provide novel empirical evidence concerning the context of WPV in a Thai university hospital. Findings highlighted the risk of WPV involving individual and workplace factors combined. In addition, this study increases attention to WPV as a serious occupational health risk among frontline nurses and contributes to the strengthening of the preventive and management policies in university hospitals nationwide. Nevertheless, the cross-sectional design created a limitation in this study so that its conclusions could only determine associations, not causal relationships. This study was conducted in a single university hospital, so the sample has limited generalizability and the prevalence of WPV may not fully represent the WPV status in university hospitals in Thailand. Furthermore, because this study retrospectively surveyed the prevalence of WPV occurring over the previous 12 months, recall bias is possible.

5. Conclusion

Resolving the challenges of WPV will require a multifaceted approach. The findings of the study clarified the necessity to focus on individual risk factors of nurses including those less experienced, and with personality type B as high-risk groups for WPV. In addition, workplace risk factors of inadequate lighting, lack of WPV management, and organizational culture against WPV need to be addressed. Interventions to prevent and reduce WPV should be implemented by health authorities to create a violence-free environment. Hospitals should seriously adopt a zero-tolerance policy throughout all settings. Regarding such policy, what is not tolerated is defined and workers are required to report any WPV that they have witnessed or experienced for the appropriate action to minimize the severity of the incidents and prevent healthcare workers from adverse effects. The WPV surveillance system should be carried out by the occupational health professional team responsible for the prevention of this phenomenon.

5.1. Recommendations for further study

Longitudinal research and more in-depth studies concerning related factors should be conducted among nurses, nationally. Additional experimental studies about related factors would be beneficial. Further, other forms of WPV against nurses, such as cyberbullying, should be considered.

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Conflict of interest

All authors declare no conflicts of interest.

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