Research Article

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Factor Related to Violence among Nursing Professionals at Emergency Rooms of Community Hospitals in Metropolitan Area

Pikun Pitja[1], Naruemon Auemaneekul[2], Arpaporn Powwattana[2]

[1] Master of Nursing Science major in Community Nurse Practitioner, Department of Public Health Nursing, Faculty of Public Health, Mahidol University, Bangkok, THAILAND

[2] Department of Public Health Nursing, Faculty of Public Health, Mahidol University, Bangkok, THAILAND

Correspondence: Naruemon Auemaneekul, Department of Public Health Nursing, Faculty of Public Health, Mahidol University, 10400, THAILAND. E-mail: naruemon.aue@mahidol.ac.th

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Abstract

The present cross-sectional survey research aimed at investigating factors related to violence among nursing professionals at emergency rooms of community hospitals in the metropolitan area. The concept of ecology was employed as the conceptual framework. This study included 208 nursing professionals working at emergency rooms, randomly selected of community hospitals in the metropolitan area by obtained using a Google form. The statistical analysis used were descriptive statistics, Pearsons' Product Moment Correlation, and Multiple Regression Analysis. The results showed that there were relationships between violence and the selected variables of stress (r= 0.619), interpersonal interaction (r= 0.487), work condition (r= 0.527), physical environment (r= 0.669), type of service users (r= 0.615), and sufficiency of healthcare personnel (r= 0.524). Furthermore, physical environment, type of service users, work condition, and educational were the factors that can predict of violence among professional nurses working at emergency rooms by 59.3%. (Adj R^2= 0.593). Also, physical environment, had the greatest to violence among nursing professionals at emergency rooms (beta=0.374). This study could be used for developing a stress management, categorization of at risk service receivers, and communication training.

Keywords: Violence, Nursing professional, Emergency room, Community hospitals

What was Known

- The study addressed selected factors, particularly relational and social factors that promote emergency room violence.
- Even though at present there are policies and measures to deal with violence at emergency rooms, the incidence rates of violence at emergency rooms continue to increase.

What's New and Next

- Qualitative research should be conducted to elicit more in-depth information regarding factors promoting violence among nursing professionals at the emergency room of community hospitals.
- Investigate risk factors of nursing professionals in the tertiary level and study all factor to determine occurrence of the violence in each types of hospitals with different levels of personnel and medical tools and equipment.

Introduction

At present, the cases of violence among public health personnel are continuously increasing, including those caused by the patients, their caregivers, service users, or persons with an intention to conduct violent acts at the hospital.[1] According to the Bureau of Labor Statistics of the United States of America, the rate of mortality among healthcare personnel was as high as 27%, most of which were caused by physical assault.[2] Previous studies have reported that nurses and assistant nurses constitute major victims of physical violence. This may be because nurses are constantly in direct contact with the patients and their family. They also work long hours and are always in a close contact with the patients, hence more susceptibility to violence[3,4,5,6,7]. Violence includes both physical violence and verbal violence, and the place where it mostly occurs is the emergency department[8].

In Thailand, the total number of cases of violence at the emergency room of the hospitals under the Ministry of Public Health between 2012 and 2019 was 51 cases. Most of the cases were assaults of healthcare personnel. However, it is worth noting that there is no record of verbal or psychological abuse, but the tendency rose to 0.6 times of the cases in the previous year[9]. This is consistent with the statistics of service users at the emergency room, which is 35 million times per year. In Thailand, the rate of emergency room service uses is 458 in 1,000 persons[10]. A survey conducted with provincial public health data in the five provinces around Bangkok, namely Samut

Prakarn, Nontaburi, Pathum Thani, Nakhon Pathom, and Samut Sakorn, has revealed that the ratio of nurses and people who seek services at the emergency room is 1:12, which is higher than the ratio specified by the Council of Nursing at 1:10. The crowdedness at the emergency room may affect satisfaction of critical emergency patients who do not receive immediate services as physicians and nurses have to overwork. For this reason, physical assaults and violence may take place.

With the context of the work of emergency room nurses must assess the condition and classify the symptoms of emergency patients. Urgent medical treatment is required. and provide timely treatment. They are faced with urgent needs from patients and relatives all the time[11]. together with the dissatisfaction with the treatment of the service recipients the long wait, the stress and the loss of one's relatives. is a risk factor that causes violence[12]. The unsafe working environment makes clients feel unsafe. and the fast-paced work style of the emergency room [6,13] including congestion in the emergency room This results in nurses working overtime, which is a risk factor for violence[10]. As a result, emergency room nurses are more likely to be subjected to violence than other departments.

A review of literature has shown that most of the previous studies were conducted to investigate the magnitude of workplace violence and management of nursing personnel at emergency rooms of a hospital at a tertiary level[14] and to study factors related to violence among medical personnel as a whole[15,16,17].

Past studies have not covered various factors, especially social relations factors. Measures to deal with the violence that occurs in the emergency room. But violence in emergency rooms continues to increase. The researchers were community nurse practitioners who were responsible for conducting screening and triaging patients with physical and psychological emergency conditions, performing initial examinations, and providing close and constant care to patients at the emergency room by applying the ecological model to understand violence (WHO,2002)[18] that violence could not be explained with only one factor. The risk factors comprise many levels starting from individual level, relationship level, community level, and social level. It is believed that understanding risk factors would create the ultimate goal of preventing violence.

A violent behavior can occur to one person or one community. The concept has the ultimate goal of preventing violence. It was anticipated that the findings of this study could be used as baseline data for policy planning to reduce risks and prevent violence among nursing professionals at a community hospital as well as for development of security systems for service users and healthcare personnel to appropriately deal with violence at a healthcare setting.

Materials and Methods

Research Objectives

1. To investigate violence among nursing professionals at the emergency room of community hospitals

2. To explore personal factors, relationship factors, community factors, and social factors related to violence among nursing professionals at the emergency room of community hospitals

Methodology

The present study was descriptive research with cross-sectional analysis.

Population and sample: The population of the study consisted of nursing professionals who were working at the emergency room of 25 community hospitals under the Minister of Public Health in the five provinces in Bangkok perimeter, namely Samut Prakarn, Nontaburi, Pathum Thani, Nakhon Pathom, and Samut Sakorn provinces.

The sample size was calculated using the formula of Daniel (1 9 9 5)[19] based on the population size in the study conducted by Wanpen Saimai,[14] which has reported that the experience with workplace violence was 84.7%. Thus, in this study, the sample size was at least 2 0 8 nursing professionals working at community hospitals in the perimeter of Bangkok by selecting nursing personnel in the emergency room proportional to size Random Sampling.

Research conceptual framework: Ecological model for understanding violence (WHO[18] and independent variables and dependent variables.

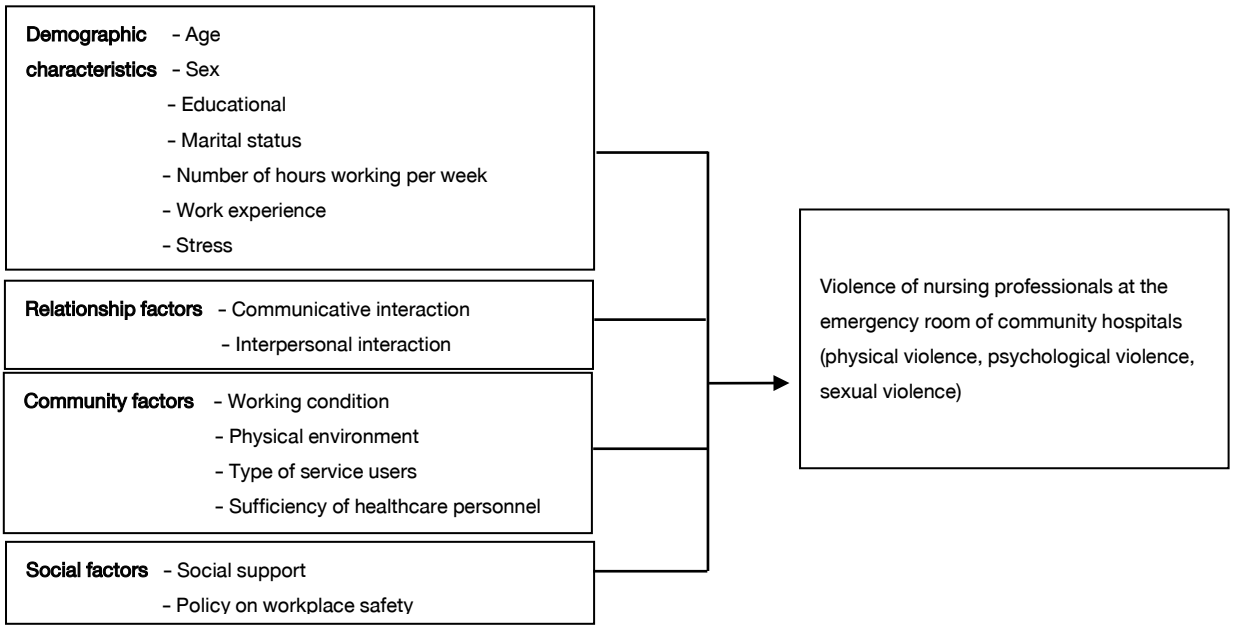

Figure 1 conceptual framework

Research Instruments

Part I: Demographic characteristics questionnaire

The questionnaire was divided into two parts. Part 1 elicited data regarding personal factors of age, sex, educational background, marital status, number of working hours per week, and work experience, totaling six items.

Part 2 elicited data regarding work-related stress. The items were adapted from the questionnaire developed by Douangjai[20] based on the concept of Wheeler and Riding which was used to investigate work-related stress of Thai nursing professionals in California. The questionnaire items elicited the following data: 1. amount of work and pressure, 2. relationships, 3. pressure from patients and family, 4. organizational problems, and 5. occupation. There were 18 items arranged in a five-point rating scale. Possible total scores ranged from 18 to 90 points. As regards validation for the questionnaire, CVI was 0.83. and Cronbach's Alpha was equal to 0.903.

Part II: Relationship factors questionnaire

The questionnaire was also divided into two parts. The first part consisted of 17 items designed to elicit communicative interaction designed based on a review of literature on the concept of communication proposed by O'Shea[21]. The items were arranged into a five-point rating scale, and they were divided into different skills including clear provision of information, listening, unbiased reception of information, and open communication. The items were arranged in a five-point rating scale. Possible total scores ranged from 17 to 85 points. As for validation, CVI was equal to 0.88 and Cronbach's Alpha was equal to 0.865.

The second part was composed of 12 items arranged in a five-point rating scale and adapted from the questionnaire on interpersonal relationship designed by Jongrak Malisanec[22] based on the concept of Whipple. The items were divided into different aspects of interpersonal interaction including offering help, respecting individuality, practicing with individuality taken into consideration, and mutual interaction. The items were arranged in a five-point rating scale. Possible total scores ranged from 12 to 60 points. With regard to validation of the instrument, CVI was 1 and Cronbach's Alpha was 0.891.

Part III: Community factors questionnaire

The 15 items in the questionnaire, arranged in a four-point rating scale, were developed based on a review of related literature and research. They were divided into four aspects as follows: 1) working condition, 2) physical environment, 3) type of service users, and 4) sufficiency of healthcare personnel. The items were arranged in a four-point rating scale. Scoring 15-60 points.CVI = 0.93, Cronbach's Alpha = 0.701.

Part IV: Social factors questionnaire

There were 11 items which were divided into two parts as follows: 1) social support and 2) policy on workplace safety. The items were arranged in a four-point rating scale. Possible total scores ranged from 11 to 44 points. In terms of validation, CVI was 0.45 and Cronbach's Alpha was 0.900.

Part V: Violence of nursing professionals at the emergency room of community hospitals questionnaire

The questionnaire items were adapted from the Revised Conflict Scale (CTS2) constructed based on the concept of Straus and Hamby 1996 [23] There were 23 items which were divided into physical violation (CVI = 1; Cronbach's Alpha = 0.727), psychological violation (CVI = 1; Cronbach's Alpha = 0.828), and sexual violation (CVI = 1; Cronbach's Alpha = 0.703). The items were arranged in a five-point rating scale. Possible total scores ranged from 0 to 92 points.

Data Collection

The research proposal was submitted. Permission to collect data was also sought from Provincial Public Health Office of Samut Prakarn, Nontaburi, Pathum Thani, Nakhon Pathom, and Samut Sakorn provinces. The researcher collected data by sending a letter to the emergency room of community hospitals as well as their nursing department to explain the research procedures. The QR code for the Google Form online questionnaire was also sent to them. The information sheet was also provided to describe the research objectives and data collection procedures for the prospective participants to decide whether they wanted to take part in the study and sign the informed consent form if they agreed to participate. Data were collected using the QR code of the online questionnaire. Each participant spent approximately 30 minutes to complete the questionnaire and submitted the online questionnaire. The researcher made the appointment with them when the questionnaires would be retrieved.

The researcher made an appointment with the participants to collect the completed questionnaires one week later. In the first round, 240 questionnaires were sent to the randomly selected participants, of them were returned, making up 40.0% of the total participants who agreed to participate in the study. Thus, the researcher sent the QR code of the Google form online questionnaire back to the participants one more time. In the second round, 240 questionnaires were sent to a different group of participants, and they were returned within one week, with the response rate equal to 46.66%. Therefore, the total response rate of the Google form online questionnaire was 86.6%.

Statistical analysis

Data were analyzed using the SPSS version 18. Data regarding demographic characteristics, relationship factors, community factors, social factors and violence of nursing professionals at the emergency room were analyzed with descriptive statistics including number, percentage, mean, and standard deviation. The relationships between demographic characteristics

such as age, sex, educational and marital status statistics were analyzed with the Chi-square test. The number of hours working per week, work experience, stress, relationship factors, community factors, and social factors were analyzed by means of Pearson correlation statistics. Finally, data regarding violence of nursing professionals at the emergency room were analyzed using stepwise multiple regression.

Results

Violence of nursing professionals at the emergency room

With regard to prevalence of violence, the findings revealed that 86.5% of nursing professionals working at the emergency room of community hospitals had been victims of psychological violence, with 91.1% having their scores at a moderate level. This was followed by physical violence at 39.9%, with 66.3% of the participants having their scores at a high level. Finally, 36.1% of the participants had suffered sexual violence, with 78.9% having their scores at a moderate level. To further explain, physical violence experienced by the participants included pinching, scratching, and slapping, while psychological violence involved being scolded at or shouted at. Lastly, sexual violence mostly included sexually teasing. It could be seen that the most common violators were family members of the patients, committing psychological violence 427 times, followed by psychological violence committed by the patients themselves at 365 times. The patients committed physical violence 103 times.

Demographic characteristics

Age, Sex, Educational and Marital status the largest group of participants were between 22 and 29 years old. Almost all of them, or 91.3%, were female, and 92.8% graduated with a Bachelor's degree. In addition, 61.1% of the participants were single.

Number of hours working per week more than one-third, or 38%, had been working for one to five years. Also, more than two-thirds, or 69.2%.

Work experience worked for 41 to 80 hours per week both at and outside their hospital working hours.

Stress 63.9% of them had a moderate level of stress.

Relationship factors

Communicative interaction as regards the relationship factors, 61.1% had their overall score of communicative interaction at a moderate level. Moreover, 52.4% had a moderate level of skills to provide of clear information, 65.4% had a high level of listening skill, 54.3% had a high level of the skill to receive unbiased information, and 51% had a high level of open communication skills

Interpersonal interaction in terms of interpersonal interaction, 60.6% of the participants had their mean score at a moderate level. When considering each aspect of interpersonal interaction, it could be seen that 63% had a moderate level of provision of assistance, 58.2% had a moderate level of respecting individuality, 51.9% had a moderate level of practicing with consideration of individuality, and 61.5% had a moderate level of mutual interaction.

Community factors

Working condition almost half of the participants, or 46.2%, had a moderate level of working condition.

Physical environment 41.3% had a high level of physical environment.

Table 1 Factors related of violence among nursing professionals at the emergency room of community hospitals. (n = 208)

Factors	**violence among nursing professionals**	
	Chi-square	
	χ^2	**p-value**
Age	0.353	0.552
Sex	0.355	0.551
Educational	0.308	0.579
Marital status	2.696	0.747

Type of service users 46.6% had a moderate level of type of service users.

Sufficiency of healthcare personnel 59.1% had a high level of sufficiency of personnel.

Social factors

Social support in this study, it was found that 61.5% had a high level of social support

Policy on workplace safety almost three quarters, or 73.6% had a high level of policy on workplace safety.

According to Table 1, age, sex, education, and marital statuses were related to violence with no statistical significance.

Table 2 Factors related of violence among nursing professionals at the emergency room of community hospitals by Pearson Correlation statistics. (n = 208)

Factors	violence among nursing professionals Correlation coefficient	
	r	*p*-value
Number of hours working per week	0.091	0.730
Work experience	0.024	0.192
Stress	0.619	0.001**
Communicative interaction	0.014	0.846
Interpersonal interaction	0.487	0.001**
Working condition	0.527	0.001**
Physical environment	0.669	0.001**
Type of service users	0.615	0.001**
Sufficiency of healthcare personnel	0.524	0.001**
Social support	-0.042	0.554
Policy on workplace safety	0.027	0.027*

* *p*-value ≤0.05, ** *p*-value ≤0.001

Table 2 shows that stress, interpersonal interaction, working condition, physical environment, type of service users, sufficiency of healthcare personnel, and policy on workplace safety were associated with violence with statistical significance.

Predictability of personal factors, relationship factors, community factors, and social factors

The variables could explain violence against professional nurses at emergency rooms of community hospital by 59.3% (R^2 = 0.593, F = 23.639). It was found that the most influential factor was Physical environment (beta = 0.394), followed by client type (beta = 0.306). Such findings were partly in accordance with the concept of ecology proposed by WHO [18] that violence could not be explained with only one factor.

Table 3 Factors predicting the violence of Nursing Professionals at Emergency Rooms of Community Hospitals in Metropolitan Area by Stepwise multiple regression.

Factors	b	SE_B	β	t	*p*-value
Physical environment	0.271	0.046	0.394	5.191	0.000
Type of service users	0.213	0.048	0.306	4.453	0.000
Working condition	0.101	0.045	0.135	2.224	0.027
Educational	0.220	0.091	0.113	2.418	0.017
Constant = 0.703 R = 0.770 R^2 = 0.593 F = 23.639					

As shown in Table 3, factors that were related to violence of nursing professionals at emergency rooms of community hospitals in metropolitan areas with statistical significance included physical environment (b = 0.271; t = 5.191), type of service users (b = 0.213; t = 4.453), working condition (b = 0.101; t = 2.224), and education (b = 0.220, t = 2.418), with standard errors of prediction equal 0.332.

Discussion

Demographic characteristics

Age, sex, education, and marital status were not related to violence with statistical significance. This may have been because persons who are older tended to have more maturity, which influences their ability to solve problems, mental stability, and ability to adapt compared to persons who are younger[36,33]. Most nurses in this study were female, accounting for 95% of the total. Moreover, it was found that the female gender was the more important target of violence[33]. Thus, it could be seen that the female gender was more susceptible to violence compared to the male gender[34]. Finally, nurses generally hold a Bachelor's degree or higher, but they also fall victims of workplace violence and violence[27].

Number of hours working per week at present, the problem of nursing staff shortage is very serious, and nurse professionals have to endure more workload. An increase in workload may prevent nurses from effectively adapt themselves or solve problems in different situations, has found that the nurse participants worked for 41 to 80 hours per week. Most of the nurses worked for more than 40 hours per week or more than ten hours per day. This is one of the factors that influence verbal abuse[12] When the hospitals have to deal with staff shortage, nursing professionals have to work longer hours, more than 48 hours per week on average[15].

Work experience Nurses with more work experience are more familiar with the emergency room environment and have more capacity to deal with immediate problems, so they are more likely to avoid risk factors of violence, work experience is related to personality, communication skills, decision-making, and emotional control. In other words, individuals with more work experience are better able to solve problems[36]. Moreover has found that work experience could help reduce possible verbal violence,[4] and has that nurses who have less than one year of work experience have higher risks of violence[22].

Stress When individuals are stressed, their communication skills may be affected, and miscommunication can lead to violence. That verbal violence resulted from communication flaws, anger, stress, or pressure in an emergency situation[16]. Generally, nurses working in the emergency room that is open 24 hours a day have to rely on knowledge, skills, and decision-making in an urgent situation[33] so they are more prone to stress. has found that nurses developed a high level of work-related stress, particularly those who have to work in a shift longer than 12 hours per day and those who were younger and have to work morning, afternoon, and night shifts[34].

Relationship factors

Communicative interaction Nurses working in the emergency room of community hospitals have to deal and communicate with a large number of patients, their family members, and others. However, when family members of the patients are not allowed in the emergency rooms, their communication is reduced. However, nurses can still provide information to them when they are asked. On the contrary, found that violence against nurses in the emergency room tended to result from poor communication[31] and nurses were more likely to experience violence compared to doctors because they had to communicate with the patients and their family more[4].

Interpersonal interaction in other words, nurses working at emergency rooms who do not have good interactions with people around them are more likely to have conflicts which can result in violence[36,33]. In fact, nursing professionals have to communicate and coordinate with patients and their family who are suffering from pain, are highly stressed, and have a high level of needs and expectations. Some of the patients at the emergency room may even be drunk and cannot control themselves[34]. In the present study, it could be seen that nursing professionals had to constantly interact with the patients and their family, and the patients were the most important persons who caused physical violence of nurses and their family members were the most important persons who caused psychological violence of nurses. Similarly, has reported that nurses had to practice by constantly contacting the patients and their family[15]. It was found that the factors which promoted violence including physically touching the patients. Nurses had to directly interact with the patients and their family members, and some of the interactions may be negative in nature[3].

Community factors

Working condition nurses are working under stress offering nursing services to people who are injured and/or have emergency and critical physical or mental illnesses by assessing the severity of the illness and deciding to provide first-aid using tools, equipment, and medical supplies to save the lives of patients as well as monitoring the patients' changing symptoms in order to promptly resolve emergency situations that may threaten the patients' life[11]. They also have to work in the same environment with regular pressure. This can easily lead to conflicts such as when service users asking for assistance while nurses are working in a hectic and stressful environment. This could be explained that nurses who have to work in a stressful emergency situation are more likely to develop conflicts when they are asked for help, making them more susceptible to violence. Put another way, work condition can be an arousal that causes service users at the emergency room to become aggressive[16].

Physical environment the emergency room should manage the environment, or the building, to be convenient for provision of nursing care. Nurses should be fast in picking up patients' emergency situation to offer needed assistance. There is a security system for agencies, personnel, operators and service users[11] but it must use current emergency room conditions. For example, nurses who work in a physical environment with insufficient lighting outside the emergency room such as the walkway outside are more at risk of physical and sexual

abuse. At the same time, the emergency room can be crowded, lack good ventilation, and have a high temperature, and all of these could add up to stress. In such a condition, emotional conflicts may arise between nurses and the patients or their family members who are irritated or angry. The loud noise inside the emergency room can also be a cause of violence among nursing professionals at the emergency room of community hospitals[35,36].

Type of service users Sometimes nurses working at the emergency room have to provide care to psychiatric patients who may have maniac episodes, persons who are intoxicated or drunk, and patients with life-threatening injuries or illnesses, and such severe conditions can stimulate violence among nursing professionals at the emergency room of community hospitals[14,36]. When service users are drunk or have psychiatric symptoms, they can have unexpected behaviors that may cause problems. Factor promoting violence is direct contact and physical touch. For example, if patients have uncontrollable behaviors and nurses have to restrain them, they may become more aggressive and violent toward healthcare personnel in the emergency room[3].

Sufficiency of healthcare personnel Nurse professionals working at the emergency room of community hospitals have a lot of burdens and their working condition is not fixed. An emergency situation can occur anytime, and no prediction can be made in advance. Besides this, a staff shortage at the emergency room may prevent nurses from providing timely care to patients, hence patients' or family members' dissatisfaction, irritability, or anger. Therefore, staff shortage can be an arousal leading to violence against healthcare personnel in an emergency room. A previous study has reported that staff shortage was related to physical violence,[15] the emergency room is a setting with a high risk of physical violence against nursing staffs due to unmet expectations of patients and their family, unavailability of necessary resources[35].

Social factors

Social support emergency rooms at a community hospital is small-scaled, and the number of healthcare personnel working in the emergency rooms is not large, so nurses have a close relationship with their colleagues and superiors and receive compassion, care, and advice on different issues such as taking a leave, asking for medical reimbursements, etc. It could be seen in this study that when nurses working at emergency rooms had to endure violence, all of

them received a good level of social support from other healthcare personnel at their workplace. In this study, 61.5% of the nurse participants had a high level of social support.

When nurses who were violented received social support from their bosses and colleagues, they felt more comfortable that there were protected and assisted by people around them[17].

Policy on workplace safety even though there are policies on workplace safety, including allocation of proper working hours and adding enough personnel to improve the workplace safety of the emergency room to meet the standards which is to separate the area from those who are not involved and to separate entrance-exit doors[10], violence in the emergency room cannot be predicted, including when it is going to happen.

At present, emergency rooms have adopted more practice guidelines on workplace safety. Some of the emergency rooms are equipped with facilities and tools to prevent violence and violence. For example, there are metal detectors at the entrance of the emergency room, and there is collaboration with local police to ensure safety.

Data collection in the ER because the sample group has time constraints together with collecting data during the COVID outbreak Therefore, it must be reminded every week, follow up or adjust the form of questionnaire collection such as google from.

Conclusion

The researchers found that the predictors for the variables of physical environment, type of service users, working condition, and educational background could co-predict violence among nursing professionals at the emergency room of community hospitals. The situation of violence in emergency rooms at community hospitals was higher than emergency rooms in tertiary care because emergency rooms were smaller. There were few personnel, the size was smaller, and there were no separate areas for those who were not related to or relatives of patients. However, to reduce and prevent violence factors, measures can be put in place such as decreasing emergency room over-crowdedness, managing high-risk patients such as those who are drunk or have psychiatric symptoms, solving problems with healthcare and nursing staff shortage, and relieving work-related stress of nursing professionals. This is because all of these factors could result in violence among nursing professionals at the

emergency room of community hospitals, which in turn, can cause nurses to quit their profession and lead to staff shortage, which adversely affects the nursing profession. Future studies qualitative research should be conducted to elicit more in-depth information regarding factors promoting violence, investigate risk factors of nursing professionals in the tertiary level and the study findings should be compared to determine the incidence of violence across different types of hospitals with different levels of availability of personnel and medical tools and equipment.

Ethical Approval Statement

The aforementioned project has been reviewed and approved according to the Declaration of Helsinki by Ethical Review Committee for Human Research, Faculty of Public Health, Mahidol University. No. MUPH 2020-152 Protocol No.: 161/2563 Received: November 30 2020

Author Contributions

PP designed the study and formulated the content of the intervention tools and knowledge questionnaire with guidance from NA and AP. PP conducted the study under the supervision of NA. All authors read and approved the manuscript prior to submission for publication.

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Conflicts of Interest

The authors have no conflicts of interest to declare.

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