OPEN ACCESS

Research Article

Workplace Violence among Nurses at Public Hospital in Bangladesh

Md. Kawsar Alam[1*], Dr. Abdul Latif[2], Dipali Rani Mallick[3] and Dr.Mosammed Khaleda Akter[4]

[1]Senior Staff Nurse, National Institute of Cardiovascular Diseases and Hospital, Dhaka
[2]Department of Nursing Management, National Institute of Advanced Nursing Education and Research, Dhaka
[3] Faculty of Women's Health and Midwifery Nursing, National Institute of Advanced Nursing Education and Research, Dhaka
[4]Faculty of Mental Health and Psychiatric Nursing, National Institute of Advanced Nursing Education and Research, Dhaka
*Corresponding Author
Md. Kawsar Alam   email: - Alam201712@gmail.com

Abstract: Background: Workplace violence (WPV) is a significant issue in healthcare settings all over the world, and nurses are more vulnerable than other members of any clinical care setting. About 1.6 million of people died around the world due to WPV, and many more became injured or suffered from physical and non-physical health problems. Study found that the prevalence of WPV in healthcare was >50% and it was ranged 36.0% to 92.0% among nurses in developed and developing countries. The WPV is not only affecting the health care providers or nurses; it is also affecting the patients' psychology, quality of care and organizational management structure. **Objective:** To describe the workplace violence experienced by nurses at a tertiary level in the public hospitals in Bangladesh. **Methods:** A descriptive study design was employed using 120 nurses choosen by simple random sampling. The data was collected by self-administered questionnaire that consists of socio demographic data and information about workplace violence. **Results:** The prevalence of WPV was 64.2%" and all cases were experienced with non-physical WPV. There was significant association between age, working experience, and marital status with WPV. Nurses aged below 35 years (39.324, p=.000) and having the working experience of below 12 years (29.32, p=.000) had significantly higher exposed to WPV. Married nurses (8.851, p=.003) also had significantly high experience of WPV than others. **Conclusion:** The results reveled that there was a high prevalence of WPV experienced by nurses in the public hospitals in Bangladesh. It is expected that this study will provide primary information about the degree of workplace safety for nursing practice and the authorities can take steps to prepare a safety measures for nurses to prevent WPV.
Keywords: Nurses, Workplace, Violence.

BACKGROUND

Workplace violence (WPV) can happen anywhere at any time. It is a significant issue for the healthcare providers throughout the world (Bashtawy, 2013). WPV refers to any harmful act including physical assault and non-physical behavior that occurs inside the work stations during the working period of the employee (Korashy & Moalad, 2016; Pai & Lee, 2011). According to Fute, Mengesha, Wakgari and Tessema (2015), more than 1.6 million people died per year around the world due to WPV, and also many more became injured and suffered from physical and non-physical health problems. Recently a study reported that WPV occurred approximately 24,000 per year on average and among which nearly three fourth episodes happened at healthcare settings in U.S (Jatic *et al.,* 2019). Although, the prevalence of WPV in healthcare setting was >50%, but it was high ranged as 36.0% as high to 92.0% among nurses in both developed and developing countries (Alshehri, 2017; Shi *et al.,* 2017; Pandey, Bhandari & Dangal, 2018; Ahamad, Al-Rimawi, Masadeh, & Atoum, 2015). A recent study was conducted to explore the magnitude of workplace violence against healthcare worker in general and reported that about 91% violence took place in public healthcare settings and more than one-third (39%) of the violence cases occurred at tertiary level hospital (Hasan, Hassan, Bulbul, Joarder, & Chisti, 2018). Typically, clinical nurses have experienced more violence during their work sites that varied on it's nature and severity.

Workplace violence may be categorized based on the nature of the behavior of the perpetrators which may consist of physical and non-physical violence such as threat, verbal abuse, bullying, and sexual harassment.

Data showed that nurses are most commonly and frequently encountered on verbally across the worldwide (Pandey *et al.,* 2018; Cheung & Yip, 2017; Bashtawy, 2013; Shi *et al.,* 2017). Although, physical assault is very dangerous than other violence which may result in minor injury to death (Boafo & Hancock, 2017 & Bashtawy, 2013); but non-physical violence is also harmful for psychological stability of the victims. Study revaled that the female nurses have less experience on physical violence, but have more experience on non-physical violence (verbal abuse) than male nurses (Omari, 2015). According to Pai & Lee (2011), the WPV is not only affecting the health care providers or nurses; but it is also a safety issue for patients as well for healthcare environments.

In order to take preventive initiative, it is important to identify the greater causes which may lead to WPV in health care setting. Numerous study concluded that the contributing factors like providing care around the clock, increasing the stress of the patients' relatives, long time waiting for treatment, shortage of manpower, work overload, a crowded working environment, solitary shift work, clinical position, lack of education in coping with violence, and lack of security staffing and personal characteristics of perpetrators and victims are responsible for WPV. (Cheung & Yip, 2017; Zhang *et al.,* 2017; Alshehri, 2017). However, patients are the largest sources of WPV for the nurses and their relatives are common perpetrators followed by colleagues, physician, administrators, supervisor, and security guard (Cheung & Yip, 2017; Boafo & Hancock, 2017; Bashtawy, 2013).

It is commonly accepted that nurses are the frontline workforce in the hospital setting and the quality of patients' care solely depends on the quality of nursing workforce and the quality of working environment in the hospital but several earlier studies reported that WPV was the found as an important predictor that affects the working environment of the hospital settings (Zainal, Rasdi, & Saliluddin, 2018; Rayan, Qurneh, Elayyan, & Baker, 2016; Cheung & Yip, 2017). Even though, nurses would not be expected to victims of violence by patients, family members or visitors or co-workers; but many times they are facing to the violence in their workplace that affects nurses emotional, physical and normal life leading (Korashy & Moalad, 2016; Pai & Lee, 2011). An earlier research conducted by Hassan *et al.,* (2018) showed that WPV is an epidemic health problem in the Bangladesh but unfortunately due to lack of study, in Bangladesh, this issue is almost ignored. Thus, the researcher was interested to conduct the present study to explore the 149 revalent condition and the nature of WPV commonly experienced by nurses in Bangladesh.The

result of the study would help the health care administrators to establishe guideline and that could increase the security of the work place of the nurses and thereby increase job satisfaction, quality care and patients' safety.

2. OBJECTIVES
General Objective
To explore the workplace violence among the nurses at the public hospital in Bangladesh.

Specific Objectives
➢ To explore the socio-demographic characteristics of the nurses.
➢ To assess the prevalence of workplace violence and its types among nurses.
➢ To examine the relationship between nurses' socio-demographic characteristics and prevalence of workplace violence.

METHODS
Study Design
The descriptive exploratory study was conducted at Dhaka Medical College and Hospital, Dhaka (DMCH) from July, 2018 to June 2019.

Sampling and Procedures
The simple random sampling technique was used in the current study. A total of six major units were involved in this study.The inclusion criteria for the study were as follows: (1) Registered Nurses, who was working at special units (emergency department, ICU, CCU & OT), medical units, surgical units, gynaecology units, pediatric units and heamodialysis units in the selected hospital, (2) Who had at least 1 year working experience at that selected hospital and minimum 2 years service experience in government hospital, and (3) Nurses who agreed to participate in the study.

The researcher used a simple random sampling technique to collect data from subjects who met the inclusion criteria. The researcher assigned a numerical label to every subject from the list of the nurses. Then, the researcher wrote the numerical labels on slip of paper; place them in a box and mixed up. After that, the researcher drew out one at a time until the desired sample size was not selected from each department. 120 study participants were included in this study using simple random sampling technique. The sample size was calculated using G*power analysis with an accepted minimum level of significant (α) alpha of 0.05, expected power 0.80 (1-β) and an estimated effect size of 0.30(ϒ). The calculation yielded at least minimum sample size was 117 and by adding 10% extra with an assumption of possible attrition, the total sample size was 130.

1. Data Collection Instruments

The instrument was developed by the researcher based on review the exsisting literature (Alyaemni & Alhudaithi., 2016; Alshehri, 2017; Shi *et al.,* 2017; Pandey *et al.,* 2018; & Ahamad *et al.,* 2015). This questionnaire consists of two sections including; Section-1: Socio-demographic data questionnaire including age, gender, religion, marital status, professional education, current position, current working department, monthly income, working experience and training, and section-2: "Workplace Violence Survey Questionnaire" (WPVSQ) consist of 10 items in which, 6 item was multiple response question with a response from of yes=1 and no=0.

The instruments of applicability indicators were assessed for the content validity index by four experts. 5 experts from NIANER and one from college of nursing, Shaheed Sohrawardi Medical College and hospital, Dhaka, Bangladesh. The experts were asked to assess the degree of releveance and appropriateness of the instruments in terms of construct and culture of Bangladesh context. The reliability of the instrument was tested for internal consistency by cronbanch's alpha coefficient it was yielded at .94. The orginal instruments was developed in English and it was translated in to a Bengali version and then the back translated into English was done by 2 bilingual translators.

Data Collection

Permission was obtained from the Institutional Review Board (IRB), National Institute of Advanced Nursing Education and Research (NIANER) and Bangabandhu Sheikh Mujib Medical University (BSMMU). A formal permission for data collection also obtained from the director of the hospital as study setting. Permission was obtained from nursing superintendent and ward in-charge. Written and verbal consent was taken from each participant after explaining the nature and purpose of the study prior to data collection to ensure their voluntary. Researcher enlisted the name of all nurses and arranged a simple lottery for selecting the study sample with the help of ward incharge. Data was collected by a self administered questionnaire. Participants were informed by the researcher*;* they have right to withdraw from this study at any time. Participants were informed by the researcher that strict confidentiality would be maintained at all times and for that no name was collected and that questionnaire was identified by serial numbers. After getting permission from the study subjects the researcher handed over 130 set Bangla version questionnaire to in-charge of the selected units. After seven days researcher was collected 126 questionnaires, and 120 were used for data analysis after cleaning the answered questionnaire. The response rate was 96.92%. The duration of data collection was from January 2019 to February 2019.

5. Data Analysis

All collected data were analyzed using specially designed computerized "Statistical Package" (SPSS). Both descriptive and inferential statistics were used for data analysis. Descriptive statistics (univariate analysis) such as frequencies, percentages, mean, and standard deviation was used to describe the socio-demographic characteristics. Prevalence of WPV was described in terms of frequencies, percentages, mean, and standard deviation and inferential statistics such as: chi-squire test was used to examine the relationship between the socio-demographic characteristics of the nurses and prevalence of workplace violence.

Ethical Consideration:

Before the study, written ethical consent was obtained from the ethical boards and hospital. Moreover, all of the participants gave written consent prior to participating in the study.

RESULT
1. Socio-Demographic Characteristics Of Nurses

Table 1 shows the distribution of socio-demographic characteristics of the participants of the study by frequency, percentages, mean (M) and standard deviation (SD). The result revealed that among 120 the participant, the average age was 35.33(±8.20) years and age ranged from 23 to 55 years. Majority of them (78.3%) were female and rest of 21.7 were male. The participants were mostly (79.2%) muslim and married (88.3%). Majority of the nurses (57.5%) had diploma in nursing followed by 35.8% B. Sc in nursing and 6.7% had master degree. Around 97.5% nurses' position were as senior staff nurse and only 2.5% as ward in charge. Among all of the participants 33.3% were working in specialty units (ICU, CCU, OT, POW & ED) followed by 25.0% in surgical unit, 20.0% in medical unit, 10.0% in pediatric unit, 6.7% in gynecology unit and 5.0% worked in emergency. The monthly income of the responded was in range from 20000 to 200000 taka with mean of 47100(±24554.7). The range of working experience was 2 to 33 years. The average working experience was 8.98(±7.80) years and of them 71.7% had 2 to 12 years and 28.3% had more than 12 years. Mostly 95.8% of the nurses had not received training on workplace violence.

Table1. Distribution of nurse's socio-demographic characteristics, (N=120)

Characteristics		n(%)	Mean(SD)
Age (years)	<35Years	71(59.2)	35.33(±8.20)
	35-44Years	24(20.0)	
	>44Years	25(20.8)	
Gender	Male	26(21.7)	
	Female	94(78.3)	
Religion	Muslim	95(79.2)	
	Others	25(20.8)	
Marital status	Married	106(88.3)	
	Unmarried	14(11.7)	
Professional Education	Diploma in nursing	69(57.5)	
	B.Sc in nursing	43(35.8)	
	MSc in nursing / MPH	8(6.7)	
Current position	Senior staff nurse/ staff nurse	117(97.5)	
	Ward in charge	3(2.5)	
Current working units	Specialty Units	40(33.3)	
	General medical	24(20.0)	
	General Surgical	30(25.0)	
	Gynecology ward	8(6.7)	
	Pediatric ward	12(10.0)	
	Haemodialysis	6(5.0)	
Monthly family income	<40,000 Taka	66(55.0)	47100 (±24554.65)
	40000-79000 Taka	36(30.0)	
	>79000 Taka	18(15.0)	
Work experience (year)	2-12 Years	86(71.7)	8.98 (±7.80)
	>12 Years	34(28.3)	
Training on workplace violence/safety	Yes	5(4.2)	
	No	115(95.8)	

2. The Prevalence and Types of Workplace Violence

Table 2 shows the distribution of dependent variables "prevalence and types of workplace violence" by items, frequency, percentages, mean and standard deviation. The result revealed that among the 120 participants "the prevalence of workplace violence was 64.2%", where all cases were seen as non-physical violence. The average exposed was 2.14 with SD=±1.13 times. Most of the nurses (36.3%) were seen to be the victim of violence at least onetime, 33.7% exposed two times followed by 20.9% in four times and 9.1% of nurses exposed three times in the preceding year. The result finds that verbal abuse 38.2% was the most common form of violence, while 23.6% was threat, 20.0% was related to aggressive behavior and 18.2% was in the form of bullying. All most 35.0% of the nurses commonly encountered violence in every shift, while 23.4% in both morning and evening shift and 18.2% in night shift. The most common perpetrators of WPV 47.7% were patient's visitors' 24.8% were physician followed by 16.1% were patient and 11.4% were nursing personnel.

Table 2. Distribution of prevalence and types of workplace violence by frequency and percentage, (N=120).

Characteristics		n (%)	Mean(SD)
Exposed to violence events in workplace during last 12 months	Yes	77(64.2)	
Number of occurrence during the last 12 months, (n=77)	Once time	28(36.3)	2.14 (±1.13)
	2 times	26(33.7)	
	3 times	7(9.1)	
	4 times	16(20.9)	
Type workplace violence*	Threat	39(23.6)	
	Verbal abuse	63(38.2)	
	Bulling/mobbing	30(18.2)	
	Aggressive behavior	33(20.0)	
Violence in shift*	Morning shift	18(23.4)	
	Evening shift	18(23.4)	
	Night shift	14(18.2)	
	Every shift	27(35.0)	
Violence occurred by*	Patient	24(16.1)	
	Patient's relative / Visitor	71(47.7)	
	Physician	37(24.8)	
	Nursing personnel	17(11.4)	

*Multiple responses

3. Relationship between Socio-Demographic Characteristic and Prevalence of Workplace Violence.

Table3. Represents that the relationship between nurses' socio demographic characteristics and prevalence of workplace violence among nurses by chi-squire test where significance level is measured by <.05. This table showed that there was significant association between age, working experience, and marital status with WPV. Nurses age below 35 years (39.324, p=.000) and having the working experience of below 12 years (29.320, p=.000) had significantly higher victim of WPV. Married nurses (8.851, p=.003) also had significantly high experience of WPV than others.

Table-3 Relationship between prevalence of workplace violence and socio-demographic characteristics of the participants, (N=77).

Name of Variables	Catagories	N (%) Yes	χ^2(P)
Age	<35 years	61(79%)	39.324(.000)
	35-44 Years	11(14%)	
	>44Years	5(7%)	
Marrital Status	Married	63(81.8%)	8.851(.003)
	Unmarried	14(18.2%)	
Professional Educational	Diploma in Nursing	48(62.3%)	3.605(.165)
	Bachelor in Nursing	26(33.8%)	
	MPH/MSN	3(3.9%)	
Current working place	Specialty	28(36.3%)	8.907 (.179)
	Medicine unit	17(22.1%)	
	Surgery unit	17(22.1%)	
	Gaynicology unit	3(3.9%)	
	Pediatric unit	6(7.8%)	
	HD	6(7.8%)	
Working experience	2-12 years	68(88.3%)	29.320(.000)
	> 12 Years	9(11.7%)	

DISCUSSION
CHAPTER V. DISCUSSION

The aim of this study was to determine the prevalence of workplace violence among nurses and to examine the relationships between prevalence of workplace violence and demographic characteristics of nurses.

1. Methodological Issue

In this study the researcher used descriptive exploratory study design to determine the prevalence of workplace violence among nurses. From the review of existing study it was found that many researchers were also conducted descriptive cross-sectional study to describe the prevalence of workplace violence (Zainal *et al.,* 2018; Alshehri, 2016; Mishra *et al.,* 2018; Banda, Mayers, & Duma, 2016).

2. Scio-demographic characteristics of nurses

The finding of this study shows that the average age of the nurses was 35.33(SD; ±8.20) years, with age ranged from 23-55 years, where most (59.2%) of the participants' age was below 35 years; majority of them (78.3%) were female, (79.2%) of them were muslim and (88.3%) of them were married. Data also showed that, most of the nurses were young and newly appointed and as like as other countries in Bangladesh, it is considered that the nursing is a female oriented profession.

3. The prevalence of workplace violence among nurses

In Bangladesh, considerably the highest prevalence of WPV may be due to lack of adequate safety measure in the public hospitals to prevent violence. Moreover, uncontrolled visitors, high patients workload and workplace stress for nurses, high shortage of supplies might be the influential factors for high percentage of WPV in healthcare.

This study result showed that among all cases near about two third nurses had experienced verbal abuse, that means it was the common form of WPV among nurses in Bangladesh. This study agrees with the study conducted in India, Korea, China, Iran and Malaysia where verbal abuse was as high as 75.9% (Mishra *et al.,* 2018); 63.8% (Park *et al.,* 2015), 64.9% (Shi et al 2017), 83.1% (Sohrabzadeh *et al.,* 2014); and 70.6% respectively.

The results of the present study showed the percentage of the perpetrators of violence. Mainly 47.7% relatives of the patients followed by 24.8% physician 16.1% patients and 11.4% perpetrators of nursing personnel were responsible for WPV respectively. This study agrees with the several earlier studies in India (Mishra *et al.,* 2018), in Egypt (Abdellah & Salama, 2017), in Ethipia (Tiruneh *et al.,* 2016), in Iran (Sohrabzabed *et al.,* 2014), in Saudi

Arabia (Alyaemni & Alhudaithi, 2015) where it was found that most of the WPV events are orginated from patients' relatives. This might be due to feeling excessive tension for patients, not obeying the visiting time by the attendants and weak security system. Besides, in South Korea (Park *et al.,* 2015), a study found that physicians were second most frequent perpetrators based on the verbal abuse that are similer with current study report.

4.Relationship Between Prevalence Of Workplace Violence And Socio-Demographic Characteristics Of Nurses.

The current study found that the prevelance of WPV is significantly different between different age groups. It has also a significant relation with the working experience of the nurses. The study has shown that aged and experienced nurses faced less WPV. This finding is similer in Ethiopia (Fute *et al.,* 2015). This might be due to young nurses' lack of experience in dealing with violence, inadequate safety measures, and work with stress. In addition, this might be partly explained by fact that over patients visitors, long time waiting for receive treatments, work load, shortage of needed medicine. Marital status is also associated with workplace violence.

The Possible Limitation Of This Study

Several limitations were inherent in the methodology used in this study. Firstly, the sample was recruited from 6 departments of one hospital in Bangladesh and used a self administered questionnaire that may not reflect the actual scenario of WPV in Bangladesh. Due to lack of limited study in Bangladesh it was difficult to make comparison. Therefore, generalization that can be made from the study is limited.

CONCLUSION AND RECOMMENDATION
1. CONCLUSION:

WPV is an alarming problem among nurses at the workplaces in Bangladesh and various types of violence are seen at healthcare settings in Bangladesh. The nurses are the most vulnerable whose age is below 35 years and clinical experience is less than 12 years. So should give the special attention to the newly appointed nurses and provide facilities to Policy makers and other stakeholders should focus on the provision of appropriate strategies on WPV prevention.

2. Recommendation:
- The nurses should be encouraged to report the violence episode to the administrators.
- A counselling session should be conducted or display a documentary short flim on WPV at every hospital on regular basis

- This study finding will contribute to the nursing education, nursing practice, administration and also in future research in Bangladesh.
- The further study should consider comperative study between risk factors related to WPV.
- A large number of nurses should be included from many hospital to generalize the result to the whole nurses of Bangladesh.

REFERENCES
1. Abdellah, R. F., & Salama, K. M. (2017). Prevalence and risk factors of workplace violence against health care workers in emergency department in Ismailia, Egypt. *Pan African Medical Journal*, *26*(1), 1-8.
2. Ahmad, M., Al-Rimawi, R., Masadeh, A., & Atoum, M. (2015). Workplace violence by patients and their families against nurses: literature review. *International Journal of Nursing and Health Science*, *2*(4), 46-55.
3. Albashtawy, M. (2013). Workplace violence against nurses in emergency departments in J ordan. *International Nursing Review*, *60*(4), 550-555.
4. Alkorashy, H. A. E., & Al Moalad, F. B. (2016). Workplace violence against nursing staff in a Saudi university hospital. *International Nursing Review*, *63*(2), 226-232.
5. Al-Omari, H. (2015). *Physical and verbal workplace violence against nurses in Jordan*. International Nursing Review, 62(1),111e118.
6. Alsaleem, S. A., Alsabaani, A., Alamri, R. S., Hadi, R. A., Alkhayri, M. H., Badawi, K. K., ... & Al-Bishi, A. M. (2018). Violence towards healthcare workers: A study conducted in Abha City, Saudi Arabia. *Journal of family & community medicine*, *25*(3),188.
7. Alshehri, F. A. (2017). *Workplace violence against nurses working in emergency departments in Saudi Arabia: a cross-sectional study* (Doctoral dissertation).
8. Banda, C. K., Mayers, P., & Duma, S. (2016). Violence against nurses in the southern region of Malawi. *health sa gesondheid*, *21*(1), 415-421.
9. Boafo, I. M., & Hancock, P. (2017). Workplace violence against nurses: a cross-sectional descriptive study of Ghanaian nurses. *Sage open*, *7*(1), 2158244017701187.
10. Cevik Akyil, R., Tan, M., Saritaş, S., & Altuntaş, S. (2012). Levels of mobbing perception among nurses in Eastern Turkey. *International nursing review*, *59*(3), 402-408.
11. Cheung, T., & Yip, S. F, P., (2017). *Workplace violence towards nurses in Hong Kong:prevalence.* Public Health 17:196 DOI 10.1186/s12889-017-4112-3.

12. Choi, S. H., & Lee, H. (2017). Workplace violence against nurses in Korea and its impact on professional quality of life and turnover intention. *Journal of nursing management*, *25*(7), 508-518.

13. Fallahi-Khoshknab, M., Oskouie, F., Najafi, F., Ghazanfari, N., Tamizi, Z., & Afshani, S. (2016). Physical violence against health care workers: A nationwide study from Iran. *Iranian journal of nursing and midwifery research*, *21*(3), 232.

14. Fujita, S., Ito, S., Seto, K., Kitazawa, T., Matsumoto, K., & Hasegawa, T. (2012). Risk factors of workplace violence at hospitals in Japan. *Journal of hospital medicine*, *7*(2), 79-84.

15. Hasan, M. I., Hassan, M. Z., Bulbul, M. M. I., Joarder, T., & Chisti, M. J. (2018). Icebergof workplace violence in health sector of Bangladesh. *BMC research notes*, *11*(1), 702.

16. Jatic, Z., Erkocevic, H., Trifunovic, N., Tatarevic, E., Keco, A., Sporisevic, L., & Hasanovic, E. (2019). Frequency and forms of workplace violence in primary health care. *Medical Archives*, *73*(1), 6.

17. Lee, H. E., Kim, H. R., & Park, J. S. (2014). *Work-related risk factors for workplace violence among Korean employees. Journal Of Occupational Health*, *56*(1), 12-20.

18. Mishra, S., Chopra, D., Jauhari, N., Ahmad, A., & Kidwai, N. A. (2018). Violence against health care workers: a provider's (staff nurse) perspective. *International Journal of Community Medicine And Public Health*, *5*(9), 4140-4148.

19. Moghadam, M. F., Pazargadi, M., & Khoshknab, M. F. (2013). Iranian nurses' experiences of aggression in psychiatric wards: A qualitative study. *Issues in mental health nursing*, *34*(10), 765-771.

20. Pai, H. C., & Lee, S. (2011). Risk factors for workplace violence in clinical registered nurses in Taiwan. *Journal of clinical nursing*, *20*(9-10), 1405-1412.

21. Pandey, M., Bhandari, T. R., & Dangal, G. (2018). Workplace violence and its associated factors among nurses. *Journal of Nepal Health Research Council*, *15*(3), 235-241.

22. Park, M., Cho, S. H., & Hong, H. J. (2015). Prevalence and perpetrators of workplace violence by nursing unit and the relationship between violence and the perceived work environment. *Journal of nursing scholarship*, *47*(1), 87-95.

23. Rayan, A., Qurneh, A., Elayyan, R., & Baker, O. (2016). Developing a policy for workplace violence against nurses and health care professionals in Jordan: A plan of action. *American journal of public health research*, *4*(2), 47-55.

24. Shahzad, A., & Malik, R. K. (2014). Workplace Violence: An Extensive Issue for Nurses in Pakistan— A Qualitative Investigation. *Journal of Interpersonal Violence*, *29*(11), 2021-2034.

25. Shi, L., Zhang, D., Zhou, C., Yang, L., Sun, T., Hao, T., ... & Han, Y. (2017). A cross–sectional study on the prevalence and associated risk factors for workplace violence against Chinese nurses. *BMJ open*, *7*(6), e013105.

26. Shoghi, M., Sanjari, M., Shirazi, F., Heidari, S., Salemi, S., & Mirzabeigi, G. (2008). Workplace violence and abuse against nurses in hospitals in Iran. *Asian Nursing Research*, *2*(3), 184-193.

27. Sohrabzadeh, M., Menati, R., & Tavan, H. (2014). Workplace violence against female nurses: a survey in critical care units. *International Journal of Hospital Research*, *3*(2), 55-62.

28. Spector, P. E., Zhou, Z. E., & Che, X. X. (2014). Nurse exposure tophysical and nonphysical violence, bullying, and sexualharassment: a quantitative review. *International Journal of Nursing Studies, 51*(1), 72e84.

29. Tiruneh, B. T., Bifftu, B. B., Tumebo, A. A., Kelkay, M. M., Anlay, D. Z., & Da. (2016). Prevalence of workplace violence in Northwest Ethiopia: a multivariate analysis. *BMC nursing*, *15*(1), 42.

30. Xing, K., Jiao, M., Ma, H., Qiao, H., Hao, Y., Li, Y., et al. (2015). *Physical violence against general practitioners and nurses inChinese township hospitals:* a cross-sectional survey.

31. Zhang, L., Wang, A., Xie, X., Zhou, Y., Li, J., Yang, L., & Zhang, J. (2017). Workplace violence against nurses: A cross-sectional study. *International Journal of Nursing Studies*, *72*, 8-14.

32. Zainal, N., Rasdi, I., & Saliluddin, S. M., (2018). The Risk Factors of Workplace Violence among Healthcare Workers in Public Hospital.