

Original Article



Prevalence, Risk Factors and Perceived Effects of Workplace Violence on Nurses

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Abstract

Background: Workplace violence (WPV) in healthcare settings is a significant global occupational and mental health concern, which is a major stressor for nurses, particularly in middle-income and low-income countries. It has serious negative consequences for the physical and mental well-being of healthcare workers and threatens the workplace environment for providing healthcare services.

Objective: To determine the prevalence, risk factors, and perceived effects of workplace violence on nurses in a purposively selected medical college hospital situated in the Dhaka, Bangladesh.

Materials and Methods: A hospital-based cross-sectional study was initiated to determine the prevalence, risk factors, and perceived effects of workplace violence among the 220 nurses working in the Shaheed Suhrawardy Medical College Hospital.

Results: Most of the nurses (50.5%) faced violence in their workplace, or outside of the workplace or both. Among them 45.9% faced violence in their workplace alone, 38.8% faced violence in both places and 15.3% faced violence on the way to their workplace in terms of violence outside the workplace alone. Regarding the type of WPV and violence outside the workplace (VOW), the majority of the nurses experienced psychological violence (93.6% and 81.7%, respectively). Nurses' age, marital status, work experiences, and workplace distance from residence all had a statistically significant ($p < 0.05$) relationship with their experience of violence. The sex of the nurses and the distance of their workplace from their residence were similarly statistically significant ($p < 0.05$) about the place of occurrence of the incident. In addition, Nurses' age and marital status were statistically related ($p < 0.05$) to different types of workplace violence.

Conclusion: Workplace violence has a negative impact on both the health and productivity of nurses. Workplace regulations and protocols focusing on safety in the workplace, reporting and surveillance, and education for all employees and management on how to avoid and handle violence are required. The hospital administration has also prioritized initiatives to minimize violence.

Key words: Workplace violence, Prevalence, Risk factors, Perceived effects, Bangladesh.

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Introduction

The medical and health service infrastructure of Bangladesh is continuously being developed. The nurses are one of the strongest pillars of the healthcare delivery system in providing safe, affordable, and quality services to patients.¹ Globally, healthcare professionals are becoming more concerned about WPV in terms of emerging health felony.² This prevalence of WPV among healthcare workers is highly increasing. Nurses are more

vulnerable to violence than other healthcare personnel since they interact with almost every single patient and spend more time with them.¹ According to the World Health Organization (WHO), WPV against healthcare workers is a global issue that accounts for approximately one-fourth of all workplace violence. It is very common among healthcare workers in Asian countries; with prevalence rates of 51.0% in Pakistan³, 62.0% in

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China⁴ and 63.0% in India.⁵ In low-and middle income countries, healthcare workers experience some sort of physical or psychological violence every day. In Bangladesh, violence against healthcare workers is not a recent issue. The majority of the time, nurses is anxious and scared of being exposed to abuse, both physically and verbally.⁶ Stereotypically, physical violence is less frequent than verbal or other types of violence among them.⁷ In the course of their duties, they encountered complex challenges. These include accidents, deaths, waiting to see a doctor, and transfers of patients to wards or other hospitals. These situations expose nurses to significant abuse from patients or their relatives on top of the verbal and non-verbal abuse, they occasionally also face abuse from other hospital employees.⁸ According to many studies, 52.0% of violent incidents that were observed took place in emergency departments, 91.0% of which were physical and occurred in public healthcare facilities.⁹⁻¹¹

Psychological violence critically affects the personal and professional well-being of nurses, even if no physical injury has occurred.^{12,13} It causes absenteeism, impaired work performance, less contentment, depression, post-traumatic stress disorder, insomnia, etc.¹⁴⁻¹⁶

Materials and Methods

This is a cross-sectional study that was commenced to determine the prevalence, risk factors, and perceived effects of workplace violence on nurses in a purposively selected medical college hospital named Shaheed Suhrawardy Medical College Hospital, Dhaka 1207, Bangladesh. Participants were 220 nurses from different departments at Shaheed Suhrawardy Medical College Hospital who had been working there for at least a year at the time of data collection. Nurses who worked in the ICU, CCU, and NICU were excluded from this study. Nurses who worked in the ICU, CCU, and NICU were excluded from this study. Based on the participant's convenience, the study nurses were interviewed using a pretested semi-structured questionnaire through face-to-face interviews from January 2018 to December 2018. The questionnaire consists of questions on the socio-demographic characteristics of the nurses; the prevalence of violence, factors related to the violence, and its perceived effects on nurses. The data were checked and cleaned, followed by making a template, categorizing the data, coding, and recoding into IBM SPSS v25. Descriptive statistics such as mean, standard deviation, and percent were computed for the continuous variables of the participants. The Chi-square and Fisher's exact tests were used to assess the significance of associations between two nominal variables and a p-value of <0.05 at a 95% confidence interval was taken as significant. The results were presented in different types of tables. Informed written consent was obtained from each participant. Confidentiality of data was ensured, and unauthorized access to data was not allowed. Ethical approval was obtained from the

Institutional Review Board (IRB) of the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka 1212, Bangladesh. (Reference: NIPSOM/IRB/2018/471)

Results

Table I characterizes the socio-demographic characteristics of nurses. The mean age of the participants was 33.8 ± 7.0 years and about half of them (48.2%) were from the age group 30-39 years. The majority of the nurses were female (91.4%) and married (87.7%). The mean duration of work experience was 5.8 ± 3.6 years and the mean distance from the workplace to their residence was 1.1 ± 0.9 km. The average monthly household income was $62,704.6 \pm 12,287.6$ taka and three-fourths of the nurses' (74.5%) monthly income was >50,000 taka.

Table II demonstrates the prevalence of violence among nurses. Half of the participating nurses (50.5%) faced violence in their workplace or outside of the workplace or both. Among them 45.9% faced violence in their workplace alone, 38.8% faced violence in both places and 15.3% faced violence on the way to their workplace in terms of violence outside the workplace alone. Regarding the type of WPV and violence outside the workplace (VOW), the majority of the nurses experienced psychological violence (93.6% and 81.7%, respectively).

Table III describes the factors that influence psychological workplace violence and its perceived effects on nurses. Regarding the factors that influence the incidence of psychological violence, most of the time violence occurred by the patient's attendants (79.1%), the male perpetrator (71.4%), the frequency of incidences was ≥ 2 times (65.9%), and at night shift (42.9%). Factors related to the organization that influence violence, the most prevalent factors were high workload (83.5%), and lack of workforce (52.7%). Factors related to the perpetrator that initiated violence, the most prevalent factors were mental stress (63.7%), low satisfaction (57.1%), long waiting times (49.5%), and patient death (35.2%). Regarding the perceived effects on nurses, the most prevalent effects were lack of concentration (68.1%), anxiety (56.0%), fear (42.9%), and reduced work efficiency (41.8%). Occasionally, they were distressed with reminiscences of the incidence (62.6%). The majority of the nurses (92.3%) knew about reporting procedures to the concerned authority and in most of the reported cases (86.8%) authorities did not take any action against the occurrence.

Table IV describes the factors that influence physical workplace violence and its perceived effects on nurses. Regarding the factors that influence the incidence of violence, most of the time violence occurred by the patient's attendants (83.3%), the male perpetrator (100%), the frequency of incidences was ≥ 2 times (16.7%), and at morning shift (66.7%). Factors related to the organization that influences violence, the most prevalent factors were lack of workforce (100%), high workload (83.3%), and lack of security (33.3%). Factors related to the perpetrator that initiated violence, the most prevalent factors were mental stress (83.3%), and low educational level (33.3%). Regarding the perceived effects on nurses, the most prevalent effects were fear (100%), anxiety (100%), depression (83.3%), and lack of concentration (66.7%). Sometimes they were distressed with reminiscences of the incidence (50.0%). The majority of the nurses (83.3%) knew about reporting procedures to the

concerned authority and in most of the reported cases (66.7%) authorities did not take any action against the occurrence.

Table V describes the factors that influence violence outside the workplace and its perceived effects on nurses. Regarding the factors influencing the incidence of violence, most of the time violence occurred by the general public (76.7%), male perpetrators (88.3%), and frequency of incidences was ≥ 2 times (78.3%). Regarding the perceived effects on nurses, the most prevalent effects were fear (78.3%), anxiety (70.0%), and reduced work efficiency (63.3%). Occasionally, they were distressed with reminiscences of the incidence (68.3%). Injuries due to physical violence occurred among 18.2% of nurses.

Table I: Socio-demographic characteristics of the participants (n=220)

Characteristics		Frequency (n)	Percentage (%)
Age groups (years)	20-29	72	32.7
	30-39	106	48.2
	>40	42	19.1
	Mean \pm SD		33.8 \pm 7.0
Sex	Male	19	8.6
	Female	201	91.4
Marital status	Married	193	87.7
	Single (Unmarried and widowed)	27	12.3
Education	Graduation	185	84.1
	Post-Graduation	35	15.9
Work experiences (years)	<5	123	55.9
	5-10	49	22.3
	>10	48	21.8
	Mean \pm SD		5.8 \pm 3.6
Distance of workplace from residence (km)	≤ 1	100	45.5
	>1	120	54.5
	Mean \pm SD		1.1 \pm 0.9
Average monthly household income (taka)	$\leq 50,000$	56	25.5
	>50,000	194	74.5
	Mean \pm SD		62,704.6 \pm 12,287.6

Table II: Prevalence of violence (n=220)

Variables of violence		Frequency (n)	Percentage (%)
Experience of violence (n=220)	Yes	111	50.5
	No	109	49.5
Place of occurrence (n=111)	In workplace	51	45.9
	Out of Workplace	17	15.3
	In both places	43	38.8
Types of WPV (n=94)	Psychological	88	93.6
	Physical	3	3.2
	Both	3	3.2
Types of VOW (n=60)	Psychological	49	81.7
	Physical	6	10.0
	Both	5	8.3

Table III: Workplace psychological violence on Nurses (n=91)

		Frequency (n)	Percentage (%)
Factors influencing the incidence of violence			
Perpetrator's status	Patient himself/ herself	19	20.9
	Patient 's attendant	72	79.1
	Doctor	5	5.5
	Colleagues	13	14.3
	Supervisor	12	13.2
*Multiple responses			
Perpetrator's sex	Male	65	71.4
	Female	26	28.6
Frequency of incidences	1 time	31	34.1
	≥2 times	60	65.9
Time of occurrence	Morning shift	16	17.6
	Evening shift	36	39.6
	Night shift	39	42.9
Factors related to the organization that influence violence	High workload	76	83.5
	Lack of workforce	48	52.7
	Long waiting times	17	18.7
	Lack of security	14	15.4
	Denied personal request	26	28.6
*Multiple responses			
Factors related to the perpetrator that initiated violence	Mental stress	58	63.7
	Low satisfaction	52	57.1
	Long waiting times	45	49.5
	Patient's death	32	35.2
	Low educational level	27	29.7
*Multiple responses			
Perceived effects of workplace psychological violence on nurses			
Effects after incidence	Fear	39	42.9
	Anxiety	51	56.0
	Depression	11	12.1
	Lack of concentration	62	68.1

Table IV: Workplace physical violence on nurses (n=6)

		Frequency (n)	Percentage (%)
Factors influencing the incidence of violence			
Perpetrator's status	Patient him self/ herself	1	16.7
	Patient's attendant	5	83.3
Perpetrator's sex	Male	6	100
	Female	0	0.0
Frequency of incidence s	1 time	5	83.3
	≥2 times	1	16.7
Time of occurrence	Morning shift	4	66.7
	Evening shift	1	16.7
	Night shift	1	16.7
Factors related to the organization that influence violence	Lack of workforce	6	100
	High workload	5	83.3
	Lack of security	2	33.3
	Long waiting times	1	16.7
	Denied personal request	1	16.7
			*Multiple responses
Factors related to the perpetrator that initiated violence	Mental stress	5	83.3
	Low educational level	2	33.3
	Long waiting times	1	16.7
	Patient's death	1	16.7
			*Multiple responses
Perceived effects of physical violence on nurses			
Effects after incidence	Fear	6	100
	Anxiety	6	100
	Depression	5	83.3
	Lack of concentration	4	66.7
	Sleep disturbance	3	50.0
	Reduce work efficiency	2	33.3
			*Multiple responses
Distressed with reminiscence of the memories of incidence	Occasionally	1	16.7
	Sometimes	3	50.0
	Frequently	2	33.3
	Yes	5	83.3

Table V: Violence outside the workplace (n=60)

		Frequency (n)	Percentage (%)
Factors influence the incidence of violence			
Perpetrator 's status	General public	46	76.7
	Helper	11	18.3
	Driver	3	5.0
Perpetrator's sex	Male	53	88.3
	Female	7	11.7
Frequency of incidence	1 time	13	21.7
	≥2 times	47	78.3
Perceived effects on nurses			
Effects after incidence	Fear	47	78.3
	Anxiety	42	70.0
	Depression	17	28.3
	Lack of concentration	20	33.3
	Sleep disturbance	25	41.7
	Reduce work efficiency	38	63.3
*Multiple responses			
Injuries due to incidence (n=11)	Yes	2	18.2
	No	9	81.8
Distressed with reminiscence of the memories of incidence	Occasionally	41	68.3
	Sometimes	16	26.7
	Frequently	3	5.0

Table VI interprets the association of socio-demographic factors with experience of violence. Nurses' age (p=0.002), marital status (p=0.027), work experiences (p=0.011), and distance of workplace from residence (p=0.002) were statistically significant with their experience of violence. Experienced violence was more prevalent among the nurse's age group of 20-29 years (62.5%), single (70.4%), working for 5-10 years (57.1%), and distance of workplace from residence >1 km (60.0%).

Table VII interprets the association of socio-demographic factors with the place of incidence. Nurses' sex (p=0.005) and distance of workplace from residence (p=0.005) were statistically significant with the place of incidence.

Table VI interprets the association of socio-demographic factors with types of WPV. No significant association was revealed within socio-demographic factors with types of workplace violence.

Table IX interprets the association of socio-demographic factors with types of violence outside the workplace. Nurse's age (p=0.000), and marital status (p=0.000) were statistically significant with types of violence outside the workplace. Psychological type VOW was more prevalent among nurse's age group of 30-39 (100%) and married persons (92.0%).

Table VI: Association of socio-demographic factors with experience of violence

Traits		Experienced of violence			χ^2 value	p-value
		Yes	No	Total		
		n(%)	n(%)	n(%)		
Age groups (years)	20 -29	45(62.5)	27(37.5)	72(100)	12.235	*0.002
	30 -39	54(50.9)	52(49.1)	106(100)		
	>40	12(28.6)	30(71.4)	42(100)		
Sex	Male	12(63.2)	7(36.8)	19(100)	1.342	0.247
	Female	99(49.3)	102(50.7)	201(100)		
Marital status	Married	92(47.7)	101(52.3)	193(100)	4.88 3	*0.027
	Single	19(70.4)	8(29.6)	27(100)		
Education	Graduation	91(49.2)	94(50.8)	185 (100)	0.7 45	0.388
	Post -Graduation	20(57.1)	15(42.9)	35 (100)		
Work experiences (years)	<5	68(55.3)	55(44.7)	123 (100)	†9.107	*0.011
	5 -10	28(57.1)	21(42.9)	49 (100)		
	>10	15(31.3)	33(68.8)	48 (100)		
Distance of workplace from residence (km)	≤1	39(39.0)	61(61.0)	100 (100)	9.623	*0.002
	>1	72(60.0)	48(40.0)	120 (100)		

Fisher's exact test value, *Statistically significant value

Table VII: Association of socio-demographic factors with place of incidence

Traits		Place of incidence			Total	χ^2 value	p-value
		WP	VOW	Both			
		n(%)	n(%)	n(%)			
Age groups (years)	20 -29	23(51.1)	6(13.3)	16(35.6)	45(100)	3.988	0.408
	30 -39	22(40.7)	11(20.4)	21(38.9)	54(100)		
	>40	6(50.0)	0(0.0)	6(50.0)	12(100)		
Sex	Male	11(91.7)	0(0.0)	1(8.3)	12(1 00)	†10.312	*0.005
	Female	40(40.4)	17(17.2)	42(42.4)	99(100)		
Marital status	Married	42(45.7)	15(16.3)	35(38.0)	92(100)	0.420	0.810
	Single	9(47.4)	2(10.5)	8(42.1)	19(100)		
Education	Graduation	41(45.1)	17(18.7)	33(36.3)	91(100)	4.622	0.099
	Post - Graduation	10(50.0)	0(0.0)	10(50.0)	20 (100)		
Work experiences (years)	<5	32(47.1)	11(16.2)	25(36.8)	68(100)	3.794	0.435
	5 -10	11(39.3)	6(21.4)	11(39.3)	28(100)		
	>10	8(53.3)	0(0.0)	7(46.7)	15(100)		
Distance of workplace from residence (km)	≤1	26(66.7)	4(10.3)	9(23.1)	39 (100)	10.430	*0.005
	>1	25(34.7)	13(18.1)	34(47.2)	34(100)		

Fisher's exact test value, *Statistically significant value

Table VIII: Association of socio-demographic factors with types of WPV

Traits		Types of WPV				χ^2 value	p-value
		Psychological	Physical	Both	Total		
		n(%)	n(%)	n(%)	n(%)		
Age groups (years)	20 -29	36(92.3)	1(2.6)	2(5.1)	39 (100)	†2.448	0.665
	30 -39	41(95.3)	1(2.3)	1(2.3)	43 (100)		
	>40	11(91.7)	1(8.3)	0(0.0)	12 (100)		
Sex	Male	10(83.3)	1(8.3)	1(8.3)	12 (100)	†3.512	0.166
	Female	78(95.1)	2(2.4)	2(2.4)	82 (100)		
Marital status	Married	73(94.8)	2(2.6)	2(2.6)	77 (100)	†2.008	0.300
	Single	15(88.2)	1(5.9)	1(5.9)	17 (100)		
Education	Graduation	71(95.9)	2(2.7)	1(1.4)	74 (100)	†4.163	0.114
	Post -Graduation	17(85.0)	1(5.0)	2(10.0)	20 (100)		
Work experiences (years)	<5	54(94.7)	2(3.5)	1(1.8)	57 (100)	†3.922	0.266
	5-10	20(90.9)	0(0.0)	2(9.1)	22 (100)		
	>10	14(93.3)	1(6.7)	0(0.0)	15 (100)		
Distance of workplace from residence (km)	≤1	33(94.3)	2(5.7)	0(0.0)	35 (100)	†2.521	0.349
	>1	55(93.2)	1(1.7)	3(5.1)	59 (100)		

Fisher's exact test value, *Statistically significant value

Table IX: Association of socio-demographic factors with types of violence outside the workplace

T traits		Types of VOW				χ^2 value	p-value
		Psychological	Physical	Both	Total		
		n(%)	n(%)	n(%)	n(%)		
Age groups (years)	20 -29	11(50.0)	6(27.3)	5(22.7)	22 (100)	†20.307	*0.000
	30 -39	32(100)	0(0.0)	0(0.0)	32(100)		
	>40	6(100)	0(0.0)	0(0.0)	6(100)		
Sex	Male	1(100)	0(0.0)	0(0.0)	1 (100)	†1.753	1.000
	Female	48(81.4)	6(10.2)	5(8.5)	59(100)		
Marital status	Married	46(92.0)	2(4.0)	2(4.0)	50 (100)	†17.502	*0.000
	Single	3(30.0)	4(40.0)	3(30.0)	10 (100)		
Education	Graduation	41(82.0)	5(10.0)	4(8.0)	50 (100)	†0.509	1.000
	Post -Graduation	8(80.0)	1(10.0)	1(10.0)	10 (100)		
Work experiences (years)	<5	26(72.2)	5(13.9)	5(13.9)	36 (100)	†4.051	0.346
	5-10	16(94.1)	1(5.9)	0(0.0)	17 (100)		
	>10	7(100)	0(0.0)	0(0.0)	7(100)		
Distance of workplace from residence (km)	≤1	8(61.5)	3(23.1)	2(15.4)	13 (100)	†4.769	0.073
	>1	41(87.2)	3(6.4)	5(8.3)	47 (100)		

Fisher's exact test value, *Statistically significant value

Discussion

The mean age of the nurses was 33.8 ± 7.0 years and about half of them were from the age group 30-39 years. The mean duration of work experiences was 5.8 ± 3.6 years and the mean distance from the workplace to their residence was 1.1 ± 0.9 km. The average monthly household income was $62,704.6 \pm 12,287.6$ taka. These findings were almost similar to those of the study in Saudi Arabia, Nigeria and Jordan.¹⁷⁻¹⁹

Regarding the prevalence of violence among nurses, half of the participating nurses (50.5%) faced violence in their workplace, or outside of the workplace, or both. Among them 45.9% faced violence in their workplace alone, 38.8% faced violence in both places and 15.3% faced violence on the way to their workplace in terms of violence outside the workplace alone. Regarding the type of WPV and violence outside the workplace (VOW), the majority of the nurses experienced psychological violence (93.6% and 81.7%, respectively). According to a hospital-based survey in Nepal, the majority of nurses (64.5%) reported experiencing any type of violence at work, with most of them (93.6%) experiencing psychological violence.²⁰

Regarding the factors that influence the incidence of psychological violence, most of the time violence occurred by the patient's attendants (79.1%), the male perpetrator (71.4%), the frequency of incidences was ≥ 2 times (65.9%), and at night shift (42.9%). Factors related to the organization that influence violence, the most prevalent factors were a high workload (83.5%), and lack of workforce (52.7%). Factors related to the perpetrator that initiated violence, the most prevalent factors were mental stress (63.7%), low satisfaction (57.1%), long waiting times (49.5%), and patient death (35.2%). Regarding the perceived effects on nurses, the most prevalent effects were lack of concentration (68.1%), anxiety (56.0%), fear (42.9%), and reduced work efficiency (41.8%). Occasionally, the nurses suffered from distressing reminiscences of incidence (62.6%). The majority of the nurses (92.3%) knew about reporting procedures to the concerned authority and in most of the reported cases (86.8%) authorities did not take any action against the occurrence. Other studies with comparable findings revealed that most of the perpetrators of violence were the patient's relatives (51.9%) and the majority of perpetrators were male (88.9%).^{21,22}

Regarding the factors that influence the incidence of violence, most of the time violence occurred by the patient's attendants (83.3%), the male perpetrator (100.0%), frequency of incidences was ≥ 2 times (16.7%), and at morning shift (66.7%). Factors related to the organization that influences violence, the most prevalent factors were lack of workforce (100.0%), high workload (83.3%), and lack of security (33.3%). Factors related to the perpetrator that initiated violence, the most prevalent factors were mental stress (83.3%), and low educational level (33.3%). Regarding the perceived effects on nurses, the most prevalent effects were fear (100.0%), anxiety (100.0%), depression (83.3%), and lack of concentration (66.7%) in work. Sometimes they suffered from distressing reminiscences of the incident (50.0%). Studies in Bangladesh found that 90.0% of incidents occurred when nurses worked alone.²³ The majority of the nurses (83.3%) knew about reporting procedures to the concerned authority. In most reported cases (66.7%) authorities

did not take any action against the occurrence, similar to the study in Ghana.¹⁶

Regarding the factors influencing the incidence of VOW, most of the time violence occurred by the general public (76.7%), male perpetrators (88.3%), and frequency of incidences was ≥ 2 times (78.3%). Regarding the perceived effects on nurses, the most prevalent effects were fear (78.3%), anxiety (70.0%), and reduced work efficiency (63.3%). Occasionally, they suffered from distressing reminiscences of the incidence (68.3%). Injuries due to physical violence occurred among 18.2% of nurses. Workplace violence is an ongoing problem for nurses and is directly associated with feelings of negative stress, reduced productivity, and poor quality of patient care.^{5,14,24}

Nurses' age, marital status, work experiences, and workplace distance from residence all had a statistically significant ($p < 0.05$) relationship with their experience of violence. The sex of the nurses and the distance of their workplace from their residence were similarly statistically significant ($p < 0.05$) with regard to the place of occurrence of the incident. In addition, Nurse's age and marital status were statistically related ($p < 0.05$) to different types of workplace violence.

Conclusion

Violence against nurses at work is a serious problem and a source of concern in the healthcare sector. It causes short- and long-term absenteeism, as well as degradation in the work environment and morale of healthcare workers. Most of the nurses were middle-aged and married. The majority of nurses were confronted with psychological violence in the workplace, even on their way from home to work. Most of the perpetrators were patients' relatives and male. The majority of psychological violence endured during the night shift and physical violence was encountered during the morning shift. The nurses' age, marital status, and workplace distance from their residence were all significantly related to violence against nurses. Nurses must self-report any violent incidents that occur in the workplace. The general public, health-care administrators, and nurses must be more aware of the issues.

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