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Factors of Workplace Violence among Nurses at Tertiary Level Hospital in Bangladesh

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Abstract:
Background: *Workplace violence is a significant problem for clinical nurses, as it leads to adverse effects on healthcare and the quality of nursing care.*
Objective: *The objective of this study was to identify the factors of workplace violence among nurses in tertiary level hospital in Bangladesh.*
Methods: *A descriptive cross-sectional study design was used. A total of 153 nurses were included from Dhaka Medical College Hospital. A convenient sampling technique was used to select the study sample. The data was collected by using self-administered questionnaires including socio-demographic data forms, forms of violence, and risk factors related to incidents of workplace violence. Both descriptive and inferential statistics were used to analyze the data.*
Results: *The results of the study revealed that nearly one-third (29.4%) of nurses experience verbal altercations almost every day, and (20.3%) of nurses experience physical violence once a year. There was significant positive correlation between the total score of workplace violence and factors of workplace violence, including poor communication skills (r=.21, p=.01), overcrowding (r=.18, p=.03), long waiting times (r=.21, p=.00), inadequate security arrangements (r=.17, p=.04), and lack of the provision of harsh punishment for aggressors/offenders (r=.19,p=.02). Furthermore, the results of the study also revealed that monthly family income (F=3.00, p=.05) and age (F=3.11, p=.03) had a statistically significant relationship with workplace violence.*
Conclusion: *This study provides significant baseline in formation to hospital administrators related to factors of workplace violence. The study recommends developing and implementing a violence prevention program for nurses to improve the safety and security of the workplace to enhance the safety and quality of patient care. Further studies should be conducted to reduce the identified risk factors and to find strategies to solve this issue.*
Keywords: *Nurses, Workplace, Violence, Factors.*

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I. Introduction

Workplace violence (WPV) is an alarming issue all over the world. Globally, around 1.6 million people die every year due to WPV (Fute, Mengesha, Wakgari, & Tessema, 2015)[1]. WPV is the act or threat of violence, including verbal abuse or physical assaults directed toward people at work. Healthcare organizations are a place of more violence than any other organization, and nurses are often more victimized than other healthcare workers (Zainal, Rasdi, & Saliluddin, 2018) [2]. Universally, 70% to 80% of the nursing teams are experienced by WPV (Spector, Zhou, & Che, 2014) [3]. The worldwide prevalence of WPV in healthcare settings is estimated to be up to 80 % (Reddy, Ukrani, Indla, & Ukrani, 2019)[4].

A systematic review reported that the prevalence of workplace violence in healthcare personnel in Australia (70.9%), North America (67.3%), Asia (64.9%), Africa (59.2%), and Europe (48.1%) (Liu et al., 2019) [5]. In a previous study conducted in China, it was reported that healthcare professionals' prevalence of WPV ranged from 31% to 87.8% (Lu et al., 2020)[6]. In Brazil, the prevalence of physical violence among nurses is 20.2%, verbal abuse is 59.1%, and sexual harassment is 12.8% (Tsukamoto et al., 2019) [7]. In recent years, the prevalence of WPV among nurses has been increasing (Zhaoetal, 2018)[8].

In both developed and developing countries, the experience of WPV in health care personnel was >50%, of which >60% was non-physical violence, but it ranged from 36.0% to 92.0% among nurses (Pandey,

Bhandari, & Dangal, 2017[9]; Berlanda, Pedrazza, Fraizzoli, & de Cordova, 2019[10]; Shi et al., 2017) [11]. About91% of violence occurred in public healthcare settings and more than one-third (39%) of the violent cases happened at tertiary level hospitals (Hasan, Hassan, Bulbul, Joarder, & Chisti, 2018)[12].In Bangladesh, 64.2% of nurses experienced non-physical WPV(Alam, Latif, Mallick, & Akter, 2019)[13].

According to the World Health Organization (WHO), workplace violence can be categorized a physical, psychological (emotional), sexual, or racial (Ray, 2007)[14].Work-related violence is physical assault. Non-physical violence includes threats, psychological harassment, verbal abuse, and more recently, non-physical violence includes verbal and psychological assaults rather than physical assaults (Alam et al., 2019; Zainal et al., 2018)[13,2].WPV actions are generally classified as 1) physical, 2) psychological, 3) verbal abuse and threats, and 4) sexual violence (Cohen, West, & Aiken, 2014)[15].WPVcan be classified as internal when it occurs within the employers of an organization and external when it occurs by clients or patients who are outside of the organization (Zainal et al., 2018)[2].

There are several factors that contribute to workplace violence, including person related factors like misunderstandings between both parties, mistakes during medication, over patients' visitors, and the impact of diseases or pain (Berlanda et al., 2019; Zainal et al., 2018) [10,2]. Situational factors such as shift work, department, long waiting times for service, unavailability of needed medication, and lack of security, among others, increase workplace violence (Pandey, Bhandari, & Dangal, 2017; Sun et al., 2017) [9,16]. Emergency departments are the services with the maximum risk of violence for nurses (Timmins et al., 2022) [17]. In addition, factors related to gender, age, work experience, and nursing shifts played an important role in the distribution of workplace violence (Dehghan-Chaloshtari & Ghodousi, 2020)[18].Workload factors were found to be directly related to workplace violence in health care settings (Havaei & MacPhee, 2020) [19]. A recent study found that one in five health care professionals experienced workplace physical violence perpetrated by patients or visitors annually (Li, Li, Qiu, & Xiao, 2020)[20].

The previous study revealed so many factors behind WPV, such as unrealistic expectations of patients/attendants, inappropriate knowledge about the disease/health condition, poor communication skills, lack of resources (equipment and medicines, doctor-patient ratio), overcrowding, long waiting time , inadequate security arrangements, inadequate action on receiving complaints of WPV, lack of respect for the authority of doctors/healthcare workers, negative and inappropriate media reporting, lack of the provision of harsh punishment for aggressors/offenders, and lack of a redressal system (Kumari et al., 2020; Lindquist et al., 2019; Kumar et al., 2016)[21,22,23].

There has been a limited amount of available scientific evidence to understand the factors that lead to workplace violence among nurses. The result of this study will provide an understanding of risk factors related to workplace violence among nurses in health care settings in Bangladesh. Since no previous studies have been conducted to identify the factors of workplace violence among nurses in Bangladesh, this study will focus on exploring the factors of workplace violence. It would also provide valuable information for hospital administrators to improve the hospital's working environment and the quality of nursing care. Therefore, it is necessary to conduct a study to determine the factors of workplace violence among nurses at a tertiary level hospital in Bangladesh.

General Objective

To identify the factors of workplace violence among nurses at the tertiary level hospital in Bangladesh

Specific Objectives

To describe the socio-demographic characteristics of nurses

To determine the factors and workplace violence among nurses

To examine the relationship among socio-demographic characteristics, factors and workplace violence among nurses

II. Methodology

This chapter describes the methodology of the study, which includes a description of the study design, participants, instruments, data collection method, and data analysis.

Study Design: This study used a descriptive cross-sectional design.

Study Location: This study done at Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. Dhaka Medical College Hospital is a tertiary level hospital. This hospital is equipped with 2700 beds. The total number of nurses in this hospital was 2,647.

Study Duration: From July 2021 to June 2022.

Samplesize: 153 Nurses.

Sample size Calculation: The sample was recruited by a convenient sampling technique. The sample size was estimated by using G*power analysis with an accepted level of significance (α)0.05, power(1-β)0.80,

and effect size (γ) 0.15. The actual sample size was 123, with a 20% attrition rate, the estimated sample size was 153 (N/1-d) (Kang,2021)[24].The participants were included in this study by using the following inclusion criteria: 1) Nurses have been employed in DMCH for at least one year.2) Nurses who were providing direct care for hospitalized patients. 3) Nurses voluntarily agree to participate in the study. Exclusion criteria: Nurses who were sick or absent from work for a long time.

Instrument:

The research instruments were divided into three parts: socio-demographic data forms; forms of violence; and risk factors related to incidents of workplace violence. The socio-demographic data form was used to assess the study participants' characteristics. The Workplace Violence in Health Care Questionnaire (WPVHC) was developed by Kumari et al. (2021) to assess the frequency, forms, impact, and risk factors related to workplace violence, which includes 37 items divided into 5 domains. With the permission of the authors, two domains, including forms of violence and risk factors related to incidents of workplace violence were used to measure types and factors of violence.

Part I: Socio-demographic Data Form

The socio-demographic data form is developed by the researcher from the literature review. This part consists of 10 items which include age, gender, religion, marital status, professional education, current position, and current working department, monthly income, working experience, and training.

Part II : Forms of Violence

The forms of the violence questionnaire were developed by Kumari et al. (2021). The forms of violence questionnaire were used to assess the frequency of various forms of violence experienced by nurses in healthcare setting. It consists of two items. Items rated on 5 points Likert scale, ranged from (1-5), where nearly daily=1, about once a week=2, about once a month=3, about once every six months=4, and about once a year or less=5. It is a valid instrument.

Part III: Risk Factors related to Incidents of Workplace Violence

The risk factors related to incidents of workplace violence questionnaire was developed by Kumari et al. (2021). The risk factors related to incidents of workplace violence questionnaire was used to assess the various risk factors associated with violence in healthcare settings. It consists of 12 items and items rated on

3 points Likert scale, ranging from (1-3), where very important=1, somewhat important= and not important= 3. It is a valid instrument. The reliability of the instruments was tested and Cronbach's Alphawas.80.

Data Collection:

Prior to collecting the data, IRB approval was obtained from the Institutional Review Board of the National Institute of Advanced Nursing Education and Research (NIANER), Mugda, Dhaka, Bangladesh, and the Institutional Review Board (IRB) of BSMMU, Shahbag, Dhaka, Bangladesh (IRB No. Exp.NIA-S-2020/131). A letter from the director of NIANER was sent to the director of Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh, to get permission for data collection. After obtaining permission from the director of Dhaka Medical College Hospital, the researcher met with the nursing superintendent and briefly explained the purpose of the study. The researcher communicated to the nurses and explained the objectives, benefits, and methods of data collection and asked for their voluntary participation in this study. It took approximately 15-20 minutes to complete the questionnaire. The researcher kept the 153 questionnaires with an information sheet regarding the study, informed consent form in an open envelop for all participants on the desk in front of the supervisor's office. The participants were requested to return the questionnaire within 3 days in closed envelopes in a designed box that was placed on the desk in front of the supervisor's office. All questionnaires were collected by the researcher from the box. The researcher checked for the completeness of the questionnaire for the data analysis. All incomplete questionnaires were excluded.

Statistical Analysis:

Data was analyzed by using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, mean, and standard deviations were used to describe the sample characteristics. Inferential statistics, including Pearson correlation, independent two-samplet-test, and ANOVA, were used to compare and examine the relationships among socio-demographic characteristics, factors of workplace violence, and workplace violence among nurses.

III. Results

1: **Socio-demographic Characteristics of the Participants:**

Socio- demographic characteristics of the nurses were presented by frequency, percentage, mean (M), range, and standard deviation (SD) in Table1. The total number of participants was 153 nurses, with an age ranging from 26 to 59 years, with a mean age of 35.64 (SD=8.23).One-third of nurses (65.4%) were female. The

majority of nurses (82.4%) were Muslim and (90.2%) were married.

For professional education, more than half of the nurses (62.1%) had a Diploma in Nursing degree, and about 37.9% of nurses had a bachelor's degree or above. Among all of the nurses, 90.2% of the nursing positions were senior staff nurses, and 9.8% of the nurses nursing positions were ward in-charge. Regarding the working unit, a number of nurses (17.6%) were working in the surgical unit, (34.6%) were working in the medical unit, 22.3% in specialty units (ICU, CCU, Cabin, OT), and (25.5%) in emergency units. The monthly family income of the nurses ranged from 28,000 to 1, 00,000Bangladeshi Taka (BDT), with an average of 52,000 BDT. The average working experience was 10.51 (SD=8.800) years as a nurse. The majority of the nurses (92.8%) had not received training on workplace violence (Table 1).

Table1: Distribution of Socio-demographic characteristics of nurses (N=153)

Characteristics	Categories	Frequency (n)	Percentage (%)	M(SD)
Age(years)Range(26-59)	<30yrs.	37	24.2	35.64(8.232)
	30-40yrs.	83	54.2	
	41-50yrs.	19	12.4	
	>50yrs.	14	9.2	
Gender	Male	53	34.6	
	Female	100	65.4	
Religion	Muslim	126	82.3	
	Hindu	22	14.4	
	Christians	5	3.3	
Marital status	Married	138	90.2	
	Unmarried	15	9.8	
Professional Education	Diploma in Nursing	95	62.1	
	B.Sc. in Nursing	35	22.9	
	MSc in Nursing/MPH	23	15.0	
Current position	Senior Staff Nurse/ Staff Nurse	138	90.2	
	Ward in charge	15	9.8	
Current working units	Emergency	39	25.5	
	Specialty (ICU, CCU, Cabin, OT)	34	22.3	
	Surgical	27	17.6	
	Medical	53	34.6	
Monthly family income (Taka), Range (28000-100000Tk.)				52717.54 (21418.981)
	<40000	56	36.6	
	40000-80000	87	56.9	
	>80000	10	6.5	
Work experience Range (2-35 yrs.)				10.51(8.800)
	≤10year	103	67.6	
	>10	50	32.4	
Training on workplace violence/safety	Yes	11	7.2	
	No	142	92.8	

2. The distribution of factors of workplace violence among Participants

Regarding the risk factors for workplace violence, the most commonly reported risk factors for workplace violence were overcrowding 133(86.9%), followed by poor communication skills 123(80.4%), inappropriate knowledge about disease/health conditions 122(79.7%), lack of respect for the authority of doctors/healthcare workers 116 (75.8%), lack of resources (equipment and medicines, doctor-patient ratio)116 (75.8%), lack of the provision of harsh punishment for aggressors/offenders 114 (74.5%), inadequate security arrangements 111(72.5%), lack of redressal system 110 (71.9%), long waiting time 109(71.2%),unrealistic expectations of patients/attendants 107(69.9%), and inadequate action on receiving complaints of WPV 107(69.9%) as risk factors for workplace violence. However, negative and in appropriate media reporting accounted for approximately 60.1% of the risk factors for workplace violence (Table 2).

Table2: The distribution of factors of workplace violence among nurses (N=153)

Risk factors	Very important		Somewhat important		Not important	
	(n)	(%)	(n)	(%)	(n)	(%)
Unrealistic expectations of patients/attendants	107	69.9	32	20.9	14	9.2
Inappropriate knowledge about the disease/health condition	122	79.7	23	15.0	8	5.2
Poor communication skills	123	80.4	24	15.7	6	5.2
Lack of resources (equipment and medicines, doctor-patient ratio)	116	75.8	33	9.8	4	3.3
Overcrowding	133	86.9	15	9.8	5	3.3
Long waiting time	109	71.2	37	24.4	7	4.6
Inadequate security arrangements	111	72.5	39	25.5	3	2.0
Inadequate action on receiving complaints of WPV	107	69.9	45	29.4	1	7
Lack of respect for the authority of doctors/healthcare workers	120	78.4	29	19.0	4	2.6
Negative and in appropriate media reporting	92	60.1	52	34.0	9	5.9
Lack of the provision of harsh punishment for aggressors/offenders	114	74.5	35	22.9	4	2.6
Lack of redressal system	110	71.9	40	26.1	3	2.0

3. Workplace violence among Participants

Regarding the forms of workplace violence among nurses, these were shown by frequency and percentage. Nurses experienced two forms of violence in their workplace, including verbal altercations and physical violence. The results of the study revealed that approximately one-third of nurses (29.4%) experienced verbal altercations nearly daily, followed by 40 (26.1%) experienced about once a month, 23 (15.0%) about once a year or less, and 19 (12.4%) about once every six months.

In terms of physical violence, the study found that one-fifth of nurses 31(20.3%) experienced physical violence about once a year, followed by 24(15.7%) of nurses less than once a year, 9 (5.79%) of nurses about once every six months, and 4(2.6%) of nurses about once a month or more experienced physical violence. However, more than fifty percent of 85(55.6%) of the nurses had never experienced physical violence (Table-3).

Table3: Distribution of workplace violence among nurses (N=153)

Characteristics	Categories	Frequency (n)	Percentage (%)
Experience of verbal altercations	Nearly daily	45	29.4
	About once a week	26	17.1
	About once a month	40	26.1
	About once every six months	19	12.4
	About once a year or less	23	15.0
Experience of physical violence	About once in a month or more	4	2.6
	About once every six months	9	5.8
	About once a year	31	20.3
	Less than once a year	24	15.7
	Never	85	55.6

4. Relationship between socio-demographic characteristics and factors of workplace violence among Participants

The current study found that monthly family income had a statistically significant relationship with workplace violence factors among nurses (f=3.00, p=.05). The nurses whose monthly family income was less than 40,000TK were more influenced by the factors of workplace violence 16.36 (3.59) compared to the other income groups. The rest of the demographic characteristics had no significant relationship with factors of workplace violence for nurses (Table4).

Table4: Relationship between socio-demographic characteristics and factors of workplace violence of nurses (N=153)

Characteristics	Factors of Workplace Violence	Relationship	
	M(SD)	F/*t*/r	*p*-value
Age(years)		1.55	.20
<30yrs.	16.05(3.63)		
30-40yrs.	15.71(3.72)		
41-50yrs.	14.05(2.12)		
>50yrs.	15.07(3.34)		
Gender		.48	.63
Male	15.72(3.49)		
Female	15.43(3.56)		
Religion		.85	.43
Muslim	15.63(3.59)		
Hindu	14.73(3.27)		
Christians	16.60(3.05)		
Marital status		-1.63	.11
Married	15.38(3.42)		
Unmarried	16.93(4.27)		

5. Relationship among socio-demographic characteristics, factors of workplace violence and workplace violence among Participants

Relationship among socio-demographic characteristics, factors of workplace violence, and workplace violence of nurses. The results showed that age had a statistically significant relationship with workplace violence of nurses (F=3.11, p=.03). The nurses whose age was between 30 and 40 years old said their experience of workplace violence was 7.07(1.91) more than the other age groups. Furthermore, workplace violence among nurses was significantly associated with inappropriate knowledge about the disease/health condition (r=.19,p =.02), poor communication skills (r=.21,p=.01), overcrowding (r=.18,p=.03), long waiting time (r=.21, p=.00), inadequate security arrangements (r=.17, p=.04), and a lack of provision of harsh punishment for aggressors/offenders (r=.19, p=.02) [Table5].

Table5: Relationship among socio-demographic characteristics, factors of workplace violence and workplace violence among nurses (N=153)

Factors	Workplace Violence	Relationship	
	M(SD)	F/*t*/r	*p*-value
Age(years)		3.11*	.03
<30yrs.	6.70(1.87)		
30-40yrs.	7.07(1.91)		
41-50yrs.	7.00(2.03)		
>50yrs.	5.43(1.65)		
Gender		-1.20	.23
Male	6.57(1.86)		
Female	6.96(1.97)		
Religion		.34	.71
Muslim	6.86(1.95)		
Hindu	6.55(1.92)		
Christians	7.20(1.64)		
Marital status		-.65	.52
Married	6.79(1.89)		
Unmarried	7.13(2.39)		
Professional Education		1.29	.28
Diploma in Nursing	6.84(1.93)		
B.Sc.in Nursing	6.57(1.96)		
MSc in Nursing/MPH	7.33(1.68)		
Current position		.09	.93
Senior Staff Nurse/Staff Nurse	6.82(1.96)		
Ward in charge	6.87(1.73)		
Current working units		1.33	.27
Emergency	6.69(1.92)		
Specialty(ICU, CCU, Cabin, OT)	6.94(1.69)		
Surgical	6.26(2.12)		
Medical	7.13(1.97)		
Monthly family income(Taka),		1.18	.31
<40000	6.98(1.80)		
40000-80000	6.64(1.98)		

>80000	7.50(2.17)		
Work experience		.82	.42
≤10year	6.91(1.92)		
>10	6.64(1.97)		
Training on workplace violence/safety		1.95	.05
Yes	7.91(1.56)		
No	6.74(1.94)		
Unrealistic expectations of patients/attendants	1.39(.65)	.12	.13
Inappropriate knowledge about the disease/health condition	1.25(.54)	.19*	.02
Poor communication skills	1.24(.51)	.21*	.01
Lack of resources (equipment and medicines, doctor patient ratio)	1.27(.50)	.06	.49
Overcrowding	1.16(.45)	.18*	.03
Long waiting time	1.33(.56)	.21**	.00
Inadequate security arrangements	1.29(.49)	.17*	.04
Inadequate action on receiving complaints of WPV	1.31(.48)	.13	.12
Lack of respect for the authority of doctors/healthcare workers	1.24(.49)	.11	.18
Negative and inappropriate media reporting	1.46(.61)	.04	.66
Lack of the provision of harsh punishment for aggressors/offenders	1.28(.51)	.19*	.02
Lack of redressal system	1.30(.50)	.06	.45

IV. Discussions

This chapter describes the significant results of the study. The results are discussed under the following heading:

Socio-demographic characteristics of Participants

A descriptive cross-sectional study was carried out to identify the risk factors of workplace violence. A total of 153 nurses participated in this study voluntarily. This chapter discusses the major findings on socio-demographic characteristics, a form of workplace violence, factors of workplace violence, and the relationship between socio-demographic characteristics, factors, and workplace violence among nurses.

In terms of socio-demographic data of nurses, this study showed that the average age of nurses was 35.64 years. More than half (54.2%) of nurses were found to be from a younger age group, ranging from 30 to 40 years (See Table1). The study findings were consistent with the previous study conducted at Shahrekord's Hajar, Kashani, and Social Security branch hospitals in Iran (Dehghan-Chaloshtari & Ghodousi, 2020) [18]. It can be explained by the fact that younger nurses were at a high risk of exposure to workplace violence.

In this study, the majority of nurses were female and married. This finding is consistent with the previous studies (Zainal et al., 2018; Dehghan-Chaloshtari & Ghodousi, 2020; and Fu et al., 2021) [2,18,1]. It can be concluded that in Bangladesh, nursing is a predominantly female dominated profession. The ratio of male to female nursesis10:90.

Regarding professional education, this study illustrated that the highest number of nurses had a diploma in nursing degree. This result was consistent with the previous studies conducted at tertiary care hospitals in upper Northern Thailand (Chaiwuth et al., 2019; Ali & Mohamed, 2021)[25,26]. It can be explained that the highest number of diploma in nursing may be due to fewer opportunities for nurses to receive higher education in Bangladesh. As of 2006, Bangladesh had only one post-basic nursing college and the MSN program started in 2016 in only one government institute.

In terms of nursing positions, most of the nurses were working as senior staff nurses. In Bangladesh, the first entry position for nurses into the government sector is as a senior staff nurse. Nurses work at all levels in health care organizations and work in a position at the medical college (tertiary) hospital as senior staff nurses or staff nurses.

The study found that the majority of nurses had no training in workplace violence management training. This study's results were supported by the findings of previous studies (Alam et al., 2019; Ali & Mohamed, 2021) [26,13]. This study's findings indicated that most of the nurses did not attend any violence management training courses. The studyresultsshowedthatthelackoftrainingmakesnursesmorelikelytobe exposed to workplace violence.

The distribution of factors of workplace violence among Participants

In terms of factors of workplace violence, the results of this study showed that the most frequently reported risk factors of workplace violence were overcrowding, followed by poor communication skills, inappropriate knowledge about the disease/health condition, lack of respect for the authority of doctors/healthcare workers, lack of resources (equipment and medicines, doctor-patient ratio), lack of the provision of harsh punishment for aggressors/offenders, inadequate security arrangements, lack of redressal system, long waiting time, unrealistic expectations of patients/attendants, inadequate action on receiving complaints of WPV. It may be due to before knowledge of workplace violence where all of these factors were act as precipitating factors to the frequency of violence. This study's results were consistent with the findings of the recent study conducted by Ali & Mohamed., (2021)[26] who indicated that the most frequent risk factors for

workplace violence against nurses include inadequate action on receiving complaints of WPV, overcrowding, long waiting time, poor communication skills, and inadequate security arrangements.

On the other hand, negative and inappropriate media reporting was reported as a least frequently risk factor of workplace violence. These important factors obtained were consistent with the findings of the recent study conducted by Ali & Mohamed., (2021)[26] who indicated that the most frequent risk factors for workplace violence against nurses include inadequate action on receiving complaints of WPV, overcrowding, long waiting time, poor communication skills, and inadequate security arrangements.

Workplace violence among Participants

In terms of forms of violence, results of the present study revealed that nearly one thirds of nurses understudy experienced workplace violence mostly for verbal violence including exposure to shouting, yelling, swarming, and using derogatory language, threats, abuse, exaggerated arguments, offensive comments, and putdowns nearly daily. Additionally, about 85% of nurses have experienced it almost once within six months. These results were consistent with many of those observed in earlier studies (Pandey et al., 2017; Shi et al., 2017; Tsukamoto et al., 2019; Zainal et al., 2018) [9,11,7,2]. Verbal alterations were more common violence than others because it is an initial phase of physical violence. Verbal alterations could be more dangerous and damaging than other forms of violence.

About once a year, physical violence was also reported among around one-fifth of nurses under study in the form of hitting, slapping, choking, kicking, grabbing, throwing, burning, hair pulling, twisting arms, tripping, confinement, use of weapons or devices, and punching. These findings were supported by the previous study conducted in the southern region of Brazil (Tsukamoto et al., 2019) [7] and were higher than previous studies (Zainal et al., 2018; Pandey et al., 2017; Liu et al., 2020)[2,9,5].

This finding can be due to the nature of patients' illness, e.g., delusions, hallucinations, etc., and a long period of patient stay in hospitals, in addition to strict compliance with healthcare policies and legal responsibilities that raise the conflict between the nurses and patients, relatives, and other healthcare providers. These results were supported by Yosep et al. (2019), who established that verbal violence was the most frequent type of violence aligned with nurses working in hospital facilities due to patients' mental status, severe psychotic symptoms (e.g., delusions, hallucinations, self-defense), challenging to leave, experiencing pain, long waiting time for receiving treatment, and lack of communication as contributing factors to violent behavior.

Relationship between socio-demographic characteristics and factors of workplace violence among Participants

The relationship between socio-demographic characteristics and workplace violence factors, the study results showed that the monthly family income had a statistically significant relationship with the factors of workplace violence among nurses. An employee's economic and salary status is always linked to their job satisfaction and performance. In the current study, the nurses who had a monthly family income had comparatively less than the other groups; they were more influenced by the factors of workplace violence. These results were supported by the previous studies (Zainal et al., 2018; Liu et al., 2020)[2,5].

Relationship among socio-demographic characteristics, factors of workplace violence and workplace violence among Participants

In this study, the relationship among socio-demographic characteristics, factors of workplace violence, and workplace violence among nurses was examined. The results showed that there was a significant relationship between age and workplace violence. These results revealed that comparatively young nurses had more experience of workplace violence. It explained as follows: young nurses typically have lower capacity in terms of illness support, general assistance, and critical care aspects. However, young nurses have a higher rate of workplace violence due to a lack of job experience and a lack of professional education, resulting in less ability to deal with violence. This result was supported by the previous study in a public hospital in Kuala Lumpur, Malaysia (Zainal et al., 2018)[2]. Also, in South Korea, workplace violence was found to be experienced mostly by young nurses (Chang & Cho, 2016)[27].

In this study the relationship among socio-demographic characteristics, factors of workplace violence and workplace violence among nurses study results showed that there was a significant relationship between age and workplace violence. These results revealed that comparatively young nurses had more experience of workplace violence. It may be explained that usually the young nurses have lower capacity in the level of support during illness, general assistance, critical care aspects, etc. However, young nurses higher rate of workplace violence due to lack of job experience and lack of professional education, resulting in less ability to dealing with violence. This result was supported by the previous study in a public hospital in Kuala Lumpur, Malaysia (Zainal et al., 2018)[2].Also, in South Korea, workplace violence was found to be experienced mostly by young nurses (Chang & Cho, 2016)[27].

There was a positive correlation between workplace violence and factors of workplace, the factors of workplace violence includes inappropriate knowledge about the disease/health condition, poor communication skills, overcrowding, long waiting time, inadequate security arrangements, and lack of the provision of harsh punishment for aggressors/offenders. This study's results were consistent with the results of previous studies (Ali & Mohamed., 2021; Kumari et al., 2021)[26,21].

Additionally, there was a positive correlation between workplace violence and patient's inappropriate knowledge about the disease/health condition. In this regards, patient's inappropriate knowledge about the disease/health condition may produce dissatisfaction about hospital care. To cure some disease conditions needed to be more times to stay in hospital but patients want to be cure from the diseases rapidly, for these patients dissatisfaction grow about health care services and then create violence. These findings were consistent with the previous study conducted in 116 hospitals in 14 provinces of China (Zhou et al., 2019)[8].

Workplace violence had a positive statistically significant correlation with long waiting time. In details, long waiting time for the hospital services have more chance to exposure with workplace violence among nurses because patients and patient's parties lose their patience. These findings were relevant with the previous studies (Mento et al., 2019; Mayhew & Chappell, 2001; Pandey et al, 2017; Sun et al., 2017)[28,29,9,16,].

Poor communication skills were significantly correlated with workplace violence. It indicated that poor communication skills among nurses tend to increase exposure to workplace violence. These results were consistent with the previous study (Berlanda et al., 2019)[10]. Effective communication skills, including active listening, presentation skills, patient education, compassion, cultural awareness, personal connections, trust, etc., are essential for improving therapeutic communication. Providing quality care is not possible without communication skills. Misunderstandings grow among nurses, patients, and patients' relatives due to poor communication. Due to poor communication, patients may lack enough knowledge of their disease, the cost of care, and information on the effects or side-effects of medicine. This can result in misunderstandings concerning treatment, which is a source of complaints and disputes (Lin & Liu, 2005; Jiao et al., 2015)[30,31.]

Furthermore, there was a statistically significant correlation between overcrowding and workplace violence. Quality nursing care cannot be possible due to overcrowding. It may be due to the high nurse-patient ratio in the hospitals of Bangladesh. High patient numbers and unrestricted patient parties create overcrowding in the hospital and, ultimately, create poor quality of care and patient dissatisfaction. Overcrowding destroys the safe environment for nurses. For this reason, nurses are more exposed to workplace violence. These results were supported by previous studies (Berlanda et al., 2019; Zainal et al., 2018)[10,2].

Inadequate security arrangements had significant correlation with workplace violence. Inadequate security arrangements in the hospital create an unsafe environment for service system. Physical assaults, sexual harassment, crime, and etc. occur due to inadequate security arrangements in the hospital. Nurses were more exposure with workplace violence in the insecure environment. These results were consistent with the recent study (Hossain, 2020)[32.].

There was a positive correlation between workplace violence and a lack of provision of harsh punishment for aggressors and offenders. A proper punishment system should be applied to reduce the violence in the hospital. The safety environment can improve nursing care. The prevalence of workplace violence among nurses can be reduced by the provision of harsh punishment for aggressors and offenders. These findings are consistent with the previous studies (Kumari et al., 2020; Lindquist et al., 2019; Kumar et al., 2016)[21,22,23].

This study has some limitations. The study was conducted in a single setting in one tertiary level hospital in Bangladesh, which may not represent all of the tertiary level hospitals in Bangladesh. The study was conducted with a small number of samples. The sample was recruited by a convenient sampling technique, which might be another limitation of this study. The data was collected through self-administered questionnaires, which may have resulted in information bias.

V. Conclusion

A descriptive cross-sectional design was used to explore the factors of workplace violence among nurses. The findings of the current study revealed that both forms (verbal alterations and physical violence) of WPV were experienced by nurses in tertiary level hospitals in Bangladesh. The findings of the present study identified some important risk factors for workplace violence, including overcrowding, poor communication skills, inappropriate knowledge about the disease or health conditions, and lack of respect for the authority of doctors or healthcare workers. Moreover, this study determined some factors in the workplace which positively influence workplace violence; these were inappropriate knowledge about the disease or health condition, poor communication skills, overcrowding, long waiting time, inadequate security arrangements, and lack of provision of harsh punishment for aggressors or offenders that increase the frequency of workplace violence among nurses. This study also confirmed that low-income nurses were more influenced by the factors of workplace violence than high-income nurses. In addition, comparatively young nurses had more experience of workplace

violence.

There are some recommendations based on the current study findings. This study was conducted in a single setting with a small sample size. Therefore, further studies should be conducted in multiple settings with a large number of participants to allow for the generalization of the findings. Further studies should also be conducted by using a simple random sampling technique to reduce selection bias. Developing and implementing a violence prevention program for nurses to improve their professional safety and security and to enhance the patient safety and quality of patient care. Hospital administrators should develop and strictly enforce violence-related policies, procedures, and regulations to maintain a safe working environment, free from harm and unnecessary danger or stress.

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