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RESEARCH ARTICLE

WORKPLACE VIOLENCE TOWARD NURSES IN KHARTOUM STATE HOSPITALS
CROSS-SECTIONAL STUDY

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Abstract

Introduction: Workplace violence is a severe problem globally. Nurses face violence in the workplace more frequently than in other occupations, which will negatively affect the health care system. The aim of this study was to investigate workplace violence toward nurses in Khartoum state hospitals, Sudan. **Method:** A descriptive cross-sectional study design. A self-reported electronic questionnaire designed using Google forms was distributed via an online link. The study population was 473 nurses affiliated in Khartoum state governmental hospitals . Data were coded, entered, and analyzed using SPSS version 26. The Chi-square test was used to analyze data. P.value set as <0.05. **Results:** The existent study revealed that 396 (83.7%) of nurses were exposed to verbal violence, and 204 (43.13) experienced attacks from patient companions. The most common cause of the violence was due to Lack or shortage in hospital facilities and supplies 259 (54.8%), (64.5 %) of violence incidence occurs at night shift. (84.4%) of the study, the population mentioned that there were no clear policies within the department or hospital to be followed when violent situations arise. There was a significant correlation between the working units of the study population and had nurses ever been subjected to different types of violence. **Conclusion:** Several complex factors are associated with a risk of workplace violence, including work settings, work environments. Researchers recommend that nursing leaders provide clear policies regarding the incidence of violence, improve hospital services and facilities to protect nurses from workplace violence.

Key Words: workplace, violence, Nurses.

Introduction

Violence is a universal phenomenon that breaks away the foundation of Societies and threatens the satisfaction and well-being of All(Zhang et al., 2017). Workplace violence (WPV) defined as physical aggression (i.e. aggression requiring physical harm, such as puncturing, kicking, punching, and stabbing), verbal harassment (word or tone harassment, such as contempt and disrespect), threats (promise use of physical or psychological force), sexual harassment and coercion (Boyle & Wallis, 2016). The World Health Organization found out that WPV encompasses cases in which employees are harassed, intimidated or attacked in job-related situations, like commuting to and from work, which include an overt or implied challenge to their life, well-being or health (Liu et al., 2019). The most prominent causes of violence against nurses are patients, family members of the patients, visitors, doctors, and other staff in the health care sector (Spector et al., 2014). WPV adversely impacts employees ' productivity and raises fatigue, absenteeism, turnover, managerial distrust, and animosity. It affects negatively all the health care system. The delivery of successful healthcare care and patient welfare is affected by abuse in the health sectors (Liu et al., 2019). It was observed that nurse-reported WPV was specifically correlated with higher burnout incidences, less work satisfaction, poorer patient safety and more adverse injuries. WPV can create stress in nurses-patient relationships and negative results for patients(Roche et al., 2010).

Many causes contribute to occupational violence, including situational and environmental variables such as critical care services (e.g. Ambulance or intensive Care), lengthy turnaround periods, repeated interruptions, confusion regarding medical attention and large workloads, lack of dispute resolution processes , mistrust among colleagues, shortage of staff Weak safety measures, direct physical interaction with patients, stressful workload in an atmosphere that is emotionally charged, and highly open work conditions with little to no privacy(Gallagher et al., 2014)(Park et al., 2015)(Pich et al., 2011). Individual characters as being young, inexperienced, have no awareness with aggression and lack of coping mechanisms or knowledge about how to perceive violent scenarios(Duan et al., 2019)(Li et al., 2017)(Campbell et al., 2011). In general human and environmental influences are major contributors to the rise of violence(Abdellah & Salama, 2017). Empathic communication skills are a particularly important individual feature which refers to the needs, pains and concerns of the nurses 'capacity to consider patients.' High empathy among nurses and in workplace has been shown to correlate with improved patient satisfaction, collaboration and adherence to treatment(Caro et al., 2017).

One literature review of the overall vulnerability to violence by nurses found a rate of 57.3 percent, varying from 24.7 percent in the last years to 88.9 percent(Medina-Maldonado et al., 2019). In comparison, the actual prevalence of workplace violence varied by country and department; for example, the prevalence of workplace violence in the United States , the United Kingdom and Ethiopia was 3.9%, 36% and 29.9% respectively(Mitra et al., 2018). WPV has been investigated in primary healthcare in Saudi Arabia and studies have shown a broad range of WPV prevalence (28-67.5 percent in 12 months)(Basfr et al., 2019). The prevalence was marginally higher for nurses working in emergency rooms, varying from 55.5 to 81%. Geriatric and psychiatric hospitals have established the incidence among maltreatment among nurses (H.-L. Lee et al., 2020). At present, nursing staff undergoes job harassment more frequently than other occupations. Due to the nature of their jobs, nurses are at the front line and thus at an elevated risk of suffering WPV.

Rationale of study

Patient care quality is directly linked to the nurse's achievement and relies on the setting in which they work. It is important that they have a clean , safe and stable working climate to increase the work efficiency, which would eventually enhance the work environment and improve quality of patient care.(Maaari et al., 2017).

From what has been noticed recently that nurses in Sudan are constantly exposed to violence, and there are no previous studies in Sudan that have been conducted on this topic, which encouraged researchers to conduct this study to know the causes of violence, its types and to put some

recommendations to confront this problem that negatively affects health services, directly and indirectly.

Objectives

This study aimed to

1- Clarify the type of workplace violence against nurses
2- Identify the source and the most common reasons of violence
3- Determine the dealing with the incidence of violence
4- Identify level of nurses satisfaction regarding hospitals polices and strategies related to WPV

Methodology

Study Design

A descriptive, cross-sectional study design.

Participants, setting and data collection

In this study, 3660 nurse who members of the Nursing Association was working in Khartoum state governmental Hospitals (Khartoum state, Sudan) affiliated with more than 15 Hospitals. The sample size was calculated using calculator.net software; it was 473 participants with a confidence level of 98%, 5% margin error, and 50% of the population proportion. A self-reported electronic questionnaire with approval forms was distributed via an online link which was distributed as a message through e-mails and WhatsApp applications.

Inclusion criteria

- Being a registered nurse
- Officially employed in the Khartoum state hospitals hospital

Exclusion criteria

- Nurses how are not willing to participate

Measurement

An electronic questioner used for data collection. The questionnaire contained 29 questions, 28 closed questions, and one open-ended question. It consisted of two parts. Part one intended to collect the characteristics of the study sample. Part two was design to determine the types, source, time of workplace violence, factors that lead to violence, vulnerable group, the consequences of violent incidents, and level of nurse's satisfaction regarding hospitals policies and strategies related to WPV. The questionnaire was adopted and modified by the researchers and validated on a panel of five expert nursing staff who reviewed the instruments for clarity, relevance, comprehensiveness, understanding, application, and easiness to collect the necessary data. A pilot study was conducted on 10% of nurses to test the feasibility and reliability of tools. The data was collected from June 2020 till the end of August 2020. The analysis was carried out on the perceived task values scale using compressed 6 items. Cronbach's alpha showed the questionnaire to reach acceptable reliability $\alpha = 0.750$. Simple modifications were made to some items of the questionnaire that were not consistent with this study. Pilot study participants were included in the research sample.

Data management

The collected data coded and entered into the statistical package of social sciences (SPSS) version 26. After complete entry, data were explored for detecting any error and tested for normality by the Kolmogorov-Smirnov test. After data analysis, variables were expressed as frequencies, percentages, and chi-square test. The statistical significance set as p. values<0.05, 95% Confidence interval, and 80% power.

Statement of Ethics

Before the conduction of the pilot study as well as the actual study, ethical approval was obtained from the research ethical committee of Khartoum State Ministry of Health . The protocol

was approved by pertinent research and ethics committees .Informed consent was taken from the participant after explaining the nature of the Study. Nurses were informed that participation was nameless and voluntary.

Results

Table 1: Characteristics of Study Population (N=473)

Participants characteristics	**N (%)**
Age	
18- 25	102 (21.6)
26 – 35	247 (52.2)
36- 45	95 (20.1)
46- 55	25 (5.3)
56 – 65	2 (0.4)
More than 65	2 (0.4)
Gender	
Male	116 (24.5)
Female	357 (75.5)
Marital status	
Single	216 (45.7)
Married	241 (51.0)
Divorce	14 (3.0)
Widowed	2 (0.4)
Educational level	
Diploma	51 (10.8)
bachelor degree	292 (61.7)
Master	113 (23.9)
PhD	17 (3.6)
Years of experience	
From 1 to less than 5 years	176 (37.2)
From 5 to 10 years	147 (31.1)
More than 10 years	150 (31.7)
Working unit	
Nursing administration	63 (13.3)
Triage and emergency department	65 (13.7)
Out patients	22 (4.7)
Inpatient	51(10.8)
Specialized units and intensive care units	178 (37.6)
Theater room	31 (6.6)
Other	63 (13.3)

(Table1). Showed that a sample of 473 nurses participated in this study, more than half of the 52.2% of nurses age group between (26-35) years old, 75.% were female, 51% were married, 61.7% of the participants have a bachelor degree. About 37.2% of their work experienced less than five years, and 37.6% worked in a specialized unit and intensive care unit.

Table 2 : Types of violence (N=473)

Types of violence	Yes	No
	N (%)	N (%)
Verbal	396 (83.7)	77 (16.3)
Physical	62 (13.1)	411 (86.9)
Threatened	248 (52.4)	225 (47.6)
Tribal or ethnic	135 (28.5)	338 (71.5)
Bullied or attacked	263 (55.6)	210 (44.4)
Sexual harassment	48 (10.1)	425 (89.9)

(**Table 2)** demonstrate that 396 (83.7%) of participants exposed to verbal violence, while 263 (55.6%) experienced an attack or bullied, 248 (52.4%) threatened, only 62 (13.1%) and 48 (10.1%) suffered from physical and sexual harassment respectively (Table 2).

Table 3 : last time of exposure to WPV , causes and time the violence (N=473)

Item	N(%)
last time of exposure to WPV	
last 3 months	120 (25.4%)
Last 6 months	59(12.5%)
Last 9 months	65 (13.7%)
Last year	229(48.4%)
The most often causing WPV	
Patient	59 (12.5)
Patient companion	204 (43.1)
Patient family	140 (29.6)
Staff members	9 (1.9)
Management / supervisor	61 (12.9)
Causes of WPV	
Lack of communication and misunderstanding	7 (1.5)
Lack or shortage in hospital facilities and supplies	259 (54.7)
medical staff provide improper medical care	24 (5.1)
Delayed or disappointment to provide patient care and service	151 (32)
Patient or companions were aggressive	32 (6.8)

exposed to WPV because of a medical error, what was the type of medical error(N=264)	
The patient falls down	25 (9.5)
Error in medication administration	53 (20.1)
Delayed in giving medication	166 (62.9)
Others	20 (7.6)
Time of WPV incident	
Morning shift	107(22.6)
Afternoon shift	61(12.9)
Night shift	305(64.5)

(Table 3) Near to half of nurses exposed to WPV during last year, patient companion was the source of violence in(38.3%) of the nurses . Regarding the causes of WPV 259(54.8%) face violence due to lack or shortage in hospital facilities and supplies. While 166 (62.9%) exposed to violence because of a medical error as delayed in giving medication, (64.5 %) of violence occur at night shift.

Table 4: Dealing with WPV incident (n=473)

Dealing with Violent Incident	**Yes**	**No**
	N (%)	**N (%)**
When exposed to violence, is the incident recorded and reported	231 (48.8)	242 (51.2)
Is there any encouragement to record and report the incidence of work place violence	87 (18.4)	386 (81.6)
Are there clear policies within the department or hospital to be followed when violent situations occur	74 (15.6)	399 (84.4)
Is there a law in the health institution where you work to protect the health practitioner from the work place violence	75 (15.9)	398 (84.1)
The incident of violence is fairly viewed	382(80.8)	91 (19.3)

Nearly a total of participants 398 (84.1) said that no law in the health institution was working to protect the health practitioner from workplace violence **(Table 4).**

Table 5:Cross Tabulation between Working Units and Types of WPV

Working unites* types of violence								
Working unit of study population * they faced violence	**Nursing administration**	**Triage and emergency department**	**Out patient**	**Inpatient**	**Specialized units and intensive care units**	**Theater room**	**Other**	**Chi-square P. V**
	freq %	**freq %**	**freq %**	**freq %**	**freq %**	**freq %**	**freq %**	
Verbal	59(12.5%)	48(10.1%)	14(3.0%)	40(8.5%)	163(34.5)	27(5.7)	45(9.5)	.000
Physical	17(3.6%)	11(2.3%)	2(0.4%)	2(0.4%)	19(0.4%)	4(0.8%)	7(1.5%)	.010
Threatened	45(9.5%)	35(7.4%)	7(1.5%)	16(3.4%)	106(22.4%)	13(2.7%)	26(5.5%)	.000
Tribal	38(8.0%)	16(3.4%)	7(1.5%)	9(1.9%)	49(10.4%)	9(1.9%)	7(1.5%)	.000
Attacked	43(9.1%)	28(5.9%)	8(1.7%)	23(4.9%)	114(24.1%)	13(2.7%)	34(7.2%)	.002
Sexual harassment	8(1.7%)	3(0.6%)	3(0.6%)	4(0.8%)	14(3.0%)	8(1.7%)	8(1.7%)	.043

The **table** shows the aggregate values of the chi-square and its p.value to test the relationship between Working unites and types of violence, as it shows the occurrences of the observations that show exposure to violence of various type compared with Working unites, as all the p. values were less than the value of alpha, for verbal, physical, threatened, tribal, attacked and sexual harassment.

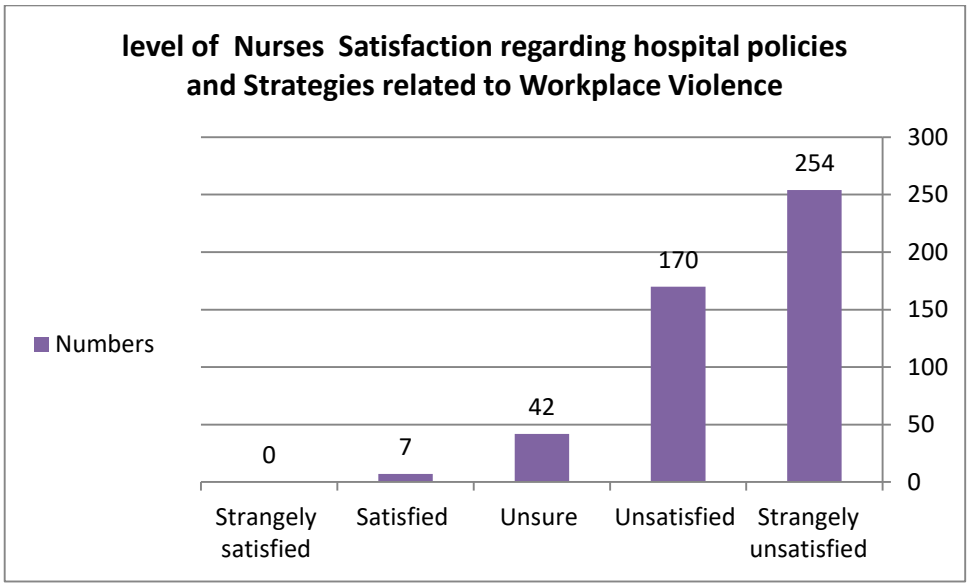

Figure 1: level of nurses satisfaction regarding hospital polices and strategies related to WPV

Discussion

Workplace violence in healthcare settings has in recent years gained greater attention from health policy studies. This study aimed to investigate the workplace violence practicing against nurses working in Khartoum state hospitals. Regarding the study population, more than half of the nurse's age group was between (26-35) years old, three-quarters of them were female; more than half were married, and have a bachelor's degree. About 37.2% of their work experienced less than five years, and 37.6% worked in a specialized unit as an intensive care unit. The current study revealed that most nurses were exhibited verbal violence rather than other types of violence. This finding, similar to

study done in Saudi Arabia, showed that exposure to verbal violence is higher than physical violence(Alyaemni & Alhudaithi, 2016). Systemic analyses of WPV globally found that the Prevalence of verbal abuse was 55% to 72.8%, sexual assault was 7% to 29.7%, and physical violence was 20% to 55% among nurses(Spector et al., 2014). In another study done in Turkey, they observed that verbal violence was recorded slightly more often than physical violence(Pinar et al., 2017). In this study, the authors show that the most 204 (43.13%) and frequent violence came from the patient companion. This finding agreed with studies done showed that violence against nurses perpetrated by patients or family members(Ramacciati et al., 2019b). The researcher thinks that the reason for the violence in the patient's disease ,participants highlighted how patients' and visitors' emotional conditions, such as fear, insecurity, and uncertainty of their situation, aggravated by poor communication skills and inadequate care, can trigger aggressive responses(Ramacciati et al., 2019a).

Concerning the cause of violence more than half of the studied population refers to the cause of violence due to lack or shortage of hospital facilities and supplies. The researchers attribute this result because the study was conducted in government hospitals and most of these hospitals suffer from the scarcity of capabilities, equipment, and services in addition to that they suffer from overcrowding. This result differs from the result of a similar study conducted in Saudi Arabia, where the cause of violence among nurses is due to misunderstandings, language barriers, and a lack of clearly specified patient rights. This difference is the result due to a difference in the study population, as most of the nurses participating in their study are non-Saudis and non-Arabic speakers which may lead to communication barriers (Alyaemni & Alhudaithi, 2016).On the other hand qualitative study conducted by Salvador JT, et al, concluded that Three trends evolved from the participants' experiences regarding violence "Co-workers become unjust and violent; sociocultural divergence towards healthcare workers; and violence affecting the workplace from outside influences."(Salvador et al., 2020)

More than half of our study population faced violence due to delay in giving medication, as the researcher mentioned that this study was conducted in governmental hospitals, and most of these hospitals were overcrowded, and there is a shortage in nursing staff Participants of the present sample were subject to violence; mainly during the night shift 305 (64.5 percent). This is consistent with other study that revealed a high level of verbal violence and physical violence against healthcare workers at night (H.-E. Lee et al., 2013). Another research found that night shift health workers were considerably sleepier, less productive, and less clear-thinking These causes may explain the high risk of workplace violence faced by night shift health workers(Wu et al., 2012). And more than two-thirds of nurses 386 (81.6%) said no law or policies from the ministry of health or hospitals. This finding supported by the study found that a lack of strategies and tools for preventing violence is a risk factor of abused cases. Also, workplace design could be improved to minimize close contact between patients and relatives of patients waiting to be treated. The staff is supposed to treat them(Xu et al., 2019)(Hasan et al., 2018). Lack of policies and assertive workplace violence laws has put Sudanese nurses at regular risk of workplace violence that is why the majority of nurses with their different category positions are strongly unsatisfied regarding hospital and ministry of health policies and regulation regarding WPV the lack of consistent policy on violent activities has increased the rise in the phenomena. These results are similar to the results of a study conducted in Jordan, which concluded that WPV was encountered by Jordanian nurses and they were very dissatisfied with the way the cases were treated. In comparison, most of the respondents suggested that the incidence was not recorded because they felt it was pointless. With respect to WPV, few employees have set clear policies(Al-Shiyab & Ababneh, 2018). As the causes for repeated violent incidents are known and required policies are created, the recurrence of this occurrence can be reduced.

Conclusion

Nurses are regularly vulnerable to occupational abuse. This thesis is conducted to evaluate the types and causes of workplace violence and policies regarding the incidence of violence in a Khartoum state government hospital. The findings indicate that the ministry of health had to improve facilities and supply equipment, Apart from establishing protective services and formulating policy

and procedures for the prevention of abuse, compulsory steps are also required in hospitals to increase community awareness of the essential role of the nursing profession.

Recommendations

1. There must be clear policies within hospitals to be followed upon exposure to an incident of violence.
2. Hospital administrations have to improve services and provide equipment and supplies to protect nurses from exposure to violence
3. Increasing the employment of nurses in government hospitals to reduce work pressure and avoid delays in providing services
4. Develop security systems, limit public access and track visitor times
5. Enhance awareness within the community of the important role of the nursing profession.

Limitations

However, this study has some limitations. Participants' responses were subjective and all data in the questionnaire were self-report and therefore, accurate, and reliable information as the participants in the sample. The study did not involve private hospitals which limited the magnitude of the WPV.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

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There was no financial support and sponsorship.

Author's contribution

SAS: Developed the protocol and involved in the design, AMH, NAM: Collected the data and developed the initial drafts of the manuscript. AA, EME and EAO: Involved in data extraction, quality assessment, statistical analysis, and revising. AAH: prepared the final draft of the manuscript, SAH: language editing. All authors read and approved the final draft of the manuscript.

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