



Original Article

Characteristics of Workplace Violence on Doctors and Nurses at the Accident and Emergency Department in a Southern State of Nigeria

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Abstract

Background: Violence against healthcare workers is a menace ravaging the health sector and staff of the accident and emergency department are the worst affected. As a consequence, this violence puts health-care provision at risk and compromises the quality of care. This study aimed to determine the prevalence, type, sources and risk factors of violence against doctors and nurses in the emergency department.

Methodology: This is a cross-sectional study conducted in March-April 2022 amongst doctors and nurses in the ED using a self-administered questionnaire on the staff.

Result: There were 51 respondents in this study comprising 35.3% doctors and 64.7% nurses. Most (72.5%) of the respondents have been victims of workplace violence and 86.2% experienced verbal abuse. Patient relatives make up a majority (83.8%) of the perpetrators of the violence, with lack of communication (41.2%) making up the majority of the perceived reason for the assault. Most of the victims did not make any report about the incident (86.5%). There was a significant relationship between the occurrence of workplace violence and the category of healthcare professionals.

Conclusion: Workplace violence is common in the accident and emergency department and nurses are the worst affected. Most victims do not report the incident. Hospital administrators and managers should put policies, deterrents and strategies, such as training on communication skills and an improved reporting system to prevent violence against healthcare workers.

Keywords: Workplace Violence; Healthcare Workers; Victim; Perpetrators.

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How to cite this article: Ikpa EB, Buowari DY. Characteristics of Workplace Violence on Doctors and Nurses at the Accident and Emergency Department in a Southern State of Nigeria. Niger Med J 2023;64(3):398-407

Quick Response Code:



Introduction

In general, the hospital environment is not considered a place where health care workers are at particular risk of violence, however, in the healthcare system, workplace violence is a very common occurrence especially those who work in emergency departments (EDs) in public hospitals.^{1,2} The World Health Organization (WHO) defined violence as “The intentional use of physical force or power, threatened or actual, against another person or against oneself or a group of people that results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation”.³ The potential for violence especially in the high-risk emergency department exist given stressful environment, patient population, and accompanying visitors leading many emergency health care workers to believe that the threat of workplace violence is “part of the territory” of working in the emergency department.⁴

Several studies conducted globally, indicate that physicians, nurses and other hospital staff in the emergency department are frequently assaulted while at work.⁵⁻¹⁰ however, its prevalence varies between countries, Shafran-Tikva and co-workers in an Israeli study found a high prevalence of violence in the Emergency department in a single Israeli hospital (74%).¹¹ while in a Pakistani study, Hamdan and co-worker obtained a prevalence of 76%.¹² Studies done in Sudan and Egypt found prevalence of 50% and 59.7% respectively.^{13,14} In a Nigerian study⁷ 56.1% was found while Ogundipe et al in a multi-center survey noted a prevalence of 88.2% and 65.0% among nurses in their study.¹⁵

Healthcare personnel exposure to workplace violence have indicated that nurses experience the most violence, various studies have recorded 90%, 53.5%, 54%, 67%, nurses’ exposure to workplace violence respectively.^{11,16,17,18} The most frequent type of violence displayed towards staff is verbal and this finding has been obtained consistent in several studies.^{17,19-21} The perpetrators of the assault on healthcare providers in the emergency department are patient’s relatives, the patients and sometimes other staff of the hospital.²²⁻²⁴ Several studies have found patient’s relatives to be the major perpetrators of workplace violence.^{21,24,25} The perceived reasons and risk factors of workplace violence include long waiting hours of patients, dissatisfaction with behavior of health workers, delayed medical provision, overcrowded hospitals, shortage of medicines, and poor working condition of healthcare workers.^{6,26-29}

Different emergency departments have developed different strategies for combating the menace of assault on their personnel.¹⁰ Workplace violence is rife in this study center, however, prior to the current study, there was little empirical evidence on these issues. It is therefore necessary that the occurrence of violence in the emergency department be explored to find out its characteristics so that appropriate preventive measures and programs can be developed by hospital administrators and managers. Hence this study investigated the characteristics of workplace violence in emergency department of a tertiary hospitals in Port Harcourt, Nigeria.

Methodology

This cross-sectional study was conducted in the emergency department of University of Port Harcourt Teaching Hospital. This 782- bed capacity tertiary care hospital located in the Southern state of Nigeria provides emergency care for the general population.

Data Collection

Based on an updated list of the doctors and nurses currently working in the emergency department obtained from the department secretariat, the researchers approached potential study participants. Participants that enrolled after consent filled out the anonymized questionnaire which was distributed during the monthly departmental meetings March- May 2022. Questionnaires were distributed using purposive sampling to fifty-six participants who met the eligibility criteria, fifty-one questionnaires were returned (response rate of 91.0%).

Data Analysis

Data analysis was performed using SPSS 25.0 for windows. Descriptive statistics, including frequency distribution and percentages were made for most variables. Chi-Square test was used to examine the relationship between variables, P-values of less than 0.05 of the test measures were considered statistically significant.

Study Population

All doctors and nurses working at the accident and emergency department that meet the eligibility criteria.

Eligibility Criteria

The study participants were only doctors and nurses who have worked in the emergency department for a period of at least twelve months, other health workers who have contact with patients but are not directly involved in patient management were excluded.

Study Instrument

A closed structured questionnaire explained the nature and purpose of the study and a consent form. It was a 16-item questionnaire divided into 2 sections. Section A comprised 6 questions related to socio-demographics. These are age, sex, marital status, highest educational level, category of the healthcare worker, and the duration of employment of the participant in the health facility where the study was conducted. Section B was related to questions on WPV comprising 10 questions. These are exposure, type of WPV and the number of attacks in the last 12 months before when the study was carried out, the identity of the perpetrator, immediate reaction to the attack, the action that was taken, cause of the attack and if the study participant has received any training on WPV.

Results

There were 51 respondents in this study comprising emergency physicians and nurses, the age range of the study participants was from 20 years to above 60 years. A majority (47.1%) of the study participants were between 30-39 years while the least (3.9%) were older than 60 years. Majority of the participants 35(68.6%) are females while 16 (31.4%) of the study participants being males, 51(100%) had tertiary education, 33(64.7%) of the participants were nurses while 18 doctors made up 35.3% of the participants, 19 (37.3%) of participants which made up the majority had worked less than five years (Table 1)

Table 1: Demographic and occupational characteristics

| Variable | Frequency N=51 | Percent |
|--|----------------|---------|
| Age Group (Years) | | |
| 20-29 | 3 | 5.9 |
| 30-39 | 24 | 47.1 |
| 40-49 | 13 | 25.5 |
| 50-59 | 9 | 17.6 |
| ≥60 | 2 | 3.9 |
| Sex | | |
| Male | 16 | 31.4 |
| Female | 35 | 68.6 |
| Highest Educational Qualification | | |
| Tertiary education | 51 | 100.0 |
| Category of HealthCare Worker | | |
| Medical doctor | 18 | 35.3 |

| | | |
|------------------------------------|----|------|
| Nurse | 33 | 64.7 |
| Employment Duration (Years) | | |
| <5 | 19 | 37.3 |
| 5-10years | 9 | 17.6 |
| 11-15 years | 11 | 21.6 |
| 16-20 years | 6 | 11.8 |
| >20 years | 6 | 11.8 |

Prevalence and Pattern of Workplace Violence

The majority 37 (72.5%) of the participants have been exposed to violence at the workplace and verbal abuse was the commonest (86.5%) type of abuse experienced. The majority of the participants (32.4%) have twice been exposed to workplace violence in the past one year, while 13.5% had been exposed more than five times in the past one year. The relatives of the patients in most of the cases (83.8%) were the perpetrators of the violence. Majority of the participants 32(86.5%) did not make any formal report to the management of the hospital. (Table 2)

Table 2: Prevalence and Pattern of Workplace Violence

| Variable | Frequency N=51 | Percent |
|-------------------------------------|----------------|---------|
| Exposed to Violent Incidence | | |
| Yes | 37 | 72.5 |
| No | 14 | 27.5 |
| Type of Violence N=37 | | |
| Verbal | 32 | 86.5 |
| Physical | 5 | 13.5 |
| Times of Exposure N=37 | | |
| Once | 6 | 16.2 |
| Twice | 12 | 32.4 |
| Three times | 7 | 18.9 |
| Four times | 7 | 18.9 |
| ≥ five times | 5 | 13.5 |
| Source of Violence N=37 | | |
| Patient | 5 | 13.5 |
| Relatives of patients | 31 | 83.8 |
| Supervisor | 1 | 2.7 |
| Reaction to Violence N=37 | | |
| Took no action | 7 | 18.9 |
| Pretended it never happened | 4 | 10.8 |
| Told the person to stop | 8 | 21.6 |
| Try to defend self physically | 3 | 8.1 |
| Sought counselling | 2 | 5.4 |
| Told a colleague | 2 | 5.4 |
| Reported to a senior staff | 11 | 29.7 |

Submitted Incidence Report N=37

| | | |
|-----|----|------|
| Yes | 5 | 13.5 |
| No | 32 | 86.5 |

Management of Workplace Violence

The result shows that 17 (53.1%) of the participants who did not submit any written report felt that it was not important, while 5 (13.5%) submitted a written report about the incident, 21 (41.2%) participants reported that the perceived lack of communication by the relatives was the reason for the assault on healthcare workers. Also, 34 (66.7%) of the participants had not received training on workplace violence. Majority of the perpetrators 17 (45.9%) were verbally warned (Table 3).

Table 3: Management of Workplace Violence

| Variable | Frequency N=51 | Percent (%) |
|--|----------------|-------------|
| Submitted Incidence Report N=37 | 5 | 13.5 |
| Yes | 32 | 86.5 |
| No | | |
| Reasons for not Submitting Report N=32 | | |
| It was not important | 17 | 53.1 |
| Nothing would be done | 11 | 34.4 |
| Did not know how to report it | 2 | 6.3 |
| Felt ashamed | 1 | 3.1 |
| Afraid of negative consequences | 1 | 3.1 |
| Perceived Reasons for the Assault on Healthcare Workers | | |
| Perceived lack of communication by relatives | 21 | 41.2 |
| Loss of patients | 15 | 29.4 |
| Non-availability of equipment | 13 | 25.5 |
| In patients not been attended to | 11 | 21.6 |
| Perceived intuitive approach | 4 | 7.8 |
| Personality of perpetrator | 4 | 7.8 |
| Non-availability of healthcare workers | 4 | 7.8 |
| Received Training on Workplace Violence | | |
| Yes | 17 | 33.3 |
| No | 34 | 66.7 |
| Consequences for the Attacker N=37 | | |
| None | 13 | 35.1 |
| Verbal warning issued | 17 | 45.9 |
| Reported to the police | 3 | 8.1 |
| Care discontinued | 1 | 2.7 |
| Don't know | 2 | 5.4 |

Demographics and occupational characteristics with Workplace Violence exposure

Demographic and occupational features of those who did and did not experience violence are shown in Table 4. The category of the healthcare worker was significantly associated with violence with violence being more frequent with nurses (n=28, 84.8%) than doctors (n=9,50.0%). Age, Sex, marital status, duration of employment, and training did not have any significant relationship.

Table 4: Demographic and occupational characteristics with Workplace Violence exposure

| Variable | Violence exposure | | X ² (p-value) |
|--|-------------------|----------|--------------------------|
| | Yes N (%) | No N (%) | |
| Age Group | | | |
| ≤40 | 20(74.1) | 7(25.9) | 0.067(0.796) |
| >40 | 17(70.8) | 7(29.2) | |
| Sex | | | |
| Male | 13(81.3) | 3(18.8) | 0.886(0.346) |
| Female | 24(68.6) | 11(31.4) | |
| Marital Status | | | |
| No partner | 12(85.7) | 2(14.3) | 1.679(0.195) |
| Have partner | 25(67.6) | 12(32.4) | |
| Category of Healthcare Worker | | | |
| Doctor | 9(50.0) | 9(50.0) | 7.102(0.008) |
| Nurses | 28(84.8) | 5(15.2) | |
| Duration of Employment | | | |
| ≤10 years | 22(78.6) | 6(21.4) | 1.131(0.288) |
| >10 years | 15(65.2) | 8(34.8) | |
| Received Training on Workplace Violence | | | |
| Yes | 13(76.5) | 4(23.5) | 0.197(0.657) |
| No | 24(70.6) | 10(29.4) | |

Demographic and occupational characteristics with type of Workplace Violence

There was no statistical relationship between the type of workplace violence and age, marital status, category of the healthcare worker, duration of employment and receiving training on workplace violence. (Table 5)

Table 5: Demographic and occupational characteristics with type of Workplace Violence

| Variable | Type of Violence | | | X ² (p-value) |
|-----------------------|------------------|----------------|--------------|--------------------------|
| | Verbal N (%) | Physical N (%) | Sexual N (%) | |
| Age Group | | | | |
| ≤40 | 17(85.0) | 3(15.0) | 0(0%) | 0.082(0.954) |
| >40 | 15(88.2) | 2(11.8) | 0(0%) | |
| Sex | | | | |
| Male | 11(84.6) | 2(15.4) | 0(0%) | 0.06(0.970) |
| Female | 21(87.5) | 3(12.5) | 0(0%) | |
| Marital Status | | | | |

| | | | | |
|--------------------------------------|----------|---------|-------|--------------|
| No partner | 11(91.7) | 1(8.3) | 0(0%) | 0.408(0.815) |
| Have partner | 21(84.0) | 4(16.0) | 0(0%) | |
| Category of Healthcare Worker | | | | |
| Doctor | 8(88.9) | 1(11.1) | 0(0%) | |
| Nurses | 24(85.7) | 4(14.3) | 0(0%) | 0.05(0.970) |
| Duration of Employment | | | | |
| ≤10 years | 20(90.9) | 2(9.1) | 0(0%) | |
| >10 years | 12(80.0) | 3(20.0) | 0(0%) | 0.908(0.685) |
| Received Training on Violence | | | | |
| No | 21(87.5) | 3(12.5) | 0(0%) | |
| Yes | 11(84.6) | 2(15.4) | 0(0%) | 0.06(0.970) |

Discussion

Health care workers especially those that working in the accident and emergency are increasing bearing the brunt of workplace violence that has unfortunately become more pervasive in the hospitals.^{17,19,20} In our study 72.5% of the participants have experienced workplace violence which is comparable to findings obtained from other studies worldwide.^{7,11,12,15,19} Factors such as high patient volumes, lack of communication, long wait times, lack of equipment's have all been linked to increases in workplace violence in the ED.³⁰ The majority (84.8%) of the victims of workplace violence in this study were nurses which is in consonance with findings obtained from other studies¹⁶⁻¹⁸ Nurses are usually first contact health care personnel to observe and triage patients hence may be more prone to workplace violence, the nurses also make up majority of the participants in most studies.

Verbal abuse which is easy to perpetuate and could not be controlled by any sort of security measures was the commonest (86.5%) type of violence experienced by the healthcare workers in this study, this is similar to results obtained in several studies.¹⁷⁻²¹ but contrast findings obtained from a Saudi and an Egyptian study which found physical and sexual violence as the predominant violence experienced in their studies respectively.^{31,32} The work environment and security may account for this difference.

In our study, majority (83.8%) of the perpetrators of violence were relatives of patients, while 13.5% were the patients, this is similar to findings obtained from other studies.^{8,16,21} this however contrast findings from studies where patients perpetrated most of the violence.^{33,34} As a result of shortage of manpower patients are permitted to bring in relatives to assist in their care this might be account for the higher percentage obtained in this study.

Regarding victim's responses to incidences of violence, most of the victims of workplace violence did not make a formal report about the incident, this finding was obtained in our study as majority of the participants 32(86.5%) did not report the incidents with 53.1% of the participants feeling it was not important. Similar findings were reported in previous studies.^{14,35,36} The lack of a reporting system, lack of confidence in getting redress and the health care workers perception that violence is part of the working terrain may underpin the underreporting observed in this study.

Limitations

This study was limited by its observational nature and small sample size that limits its generalizability. However, the present study explored the views of healthcare workers toward the characteristics of workplace violence in similar settings.

The current study included only nurses and physicians, the role and perceptions of other health care workers needs to be addressed.

Conclusion

Violence against healthcare workers is a menace ravaging the health sector and staff of the accident and emergency department are the worst affected as they are exposed to it in the course of their work. This study investigated the correlates of workplace violence of healthcare workers in the accident and emergency department in a tertiary Nigerian hospital. Emergency nurses were the worst affected and about a third of the respondents have been victims of workplace violence. Companions of patients were the majority of the perpetrators followed by the patients themselves. Verbal abuse was the commonest type of violence experienced by the victims and they experienced at least two episodes of assault in the past year. Most of the victims did not make any report about the incident.

Health administrators and managers need to put measures in place which include policies to prevent violence against healthcare workers. All categories of healthcare workers must be trained in how to prevent and manage aggressive patient's relatives especially improving communication. There should be a reporting system in place as this will encourage the victims to continue to carry out their work diligently providing quality medical care to the sick, this will, in turn, improve the medical healthcare that is been delivered.

Conflict of Interest

The authors have no competing interest to declare.

Acknowledgements

The authors thank the participants of this study, the hospital staff, and administrators for their assistance in undertaking this study.

Funding

This study is self-funded research study.

References

1. Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers (EPUB | MOBI). OSHA Publication 3148, (2016) <https://www.osha.gov/sites/default/files/publications/osha3148.pdf>
2. Alzahrani TY, Almutairi AH, Alamri DA, Alamri MM and Alalawi YS. Violence and aggression toward health care professionals in emergency departments in Tabuk, Saudi Arabia. *Eur J Pharm Med Res.* 2016, **3**:5–11.
3. Krug EG, Mercy JA, Dahlberg LL and Zwi AB. The world report on violence and health. *The Lancet.* 2002 Oct 5; **360**:1083–8
4. Kowalenko T, B L. Walters, R K. Khare, S Compton. Workplace Violence: A Survey of Emergency Physicians in the State of Michigan. *Annals of Emergency Medicine.* 2005; **46**:142-7.
5. Wayward JS, Junk E, Kang CS, Heiner JD. Security, violent events and anticipated surge capabilities of emergency department in Washington State. *Western J Emerg Med.* 2017; **18**:466-473
6. Turgut K, Yavuz E, Yildiz MK, Poyraz MK. Violence towards emergency physician: a prospective-descriptive study. *World J Emerg Med.* 2021; **12**:111-116
7. Uzobo E, Oriye BE, Omu RE. Violence in the health industry: an analysis of violence against healthcare professionals in Yenagoa, Bayelsa State. *Studies Soc Sci.* 2020; **1**:76-90

8. Yenealem DG, Woldegebriel MK, Olana AF, Mekonnen TH. Violence at work: determinants and prevalence among healthcare workers, North West Ethiopia: an institutional-based cross-sectional study. *Ann Occup Env Med.* 2019; **31**:1-7.
9. Hameed AT, Sachit AA, Dabis HA. Workplace violence against healthcare providers in emergency departments: an underrated problem. *Indian J Forensic Med Toxic.* 2020; **14**:1509-1515
10. Spetten E, Vuuren J, O'Meara P, Thomas B, Greener M, Ferron R et al. Workplace violence against emergency healthcare workers? What strategies do workers use? *BMC Emerg Med.* 2022; **22**:78. <https://doi.org/10.1186/s12873-022-00621-9>
11. Shafran-Tikva, S., Zelker, R., Stern, Z. et al. Workplace violence in a tertiary care Israeli hospital - a systematic analysis of the types of violence, the perpetrators and hospital departments. *Isr J Health Policy Res* 2017; **6**:43. <https://doi.org/10.1186/s13584-017-0168-x>
12. Hamdan M, Hamra AA. Workplace violence towards workers in the emergency departments of Palestinian hospitals: a cross-sectional study. *Hum Resources Health.* 2015; **13**:28. [Doi.10.1186/s12960-015-0018-2](https://doi.org/10.1186/s12960-015-0018-2)
13. Elamin MM, Hamza SB, Abbasher K, Idris KE, Abdallah YA, Abdalmaqasid KA et al. Workplace violence against doctors in Khartoum State, Sudan. 2020. *Sudan J Med Sci.* 2021; **16**(2): 301-319.
14. Abdellah RF, Salama KM. Prevalence and risk factors of workplace violence against healthcare workers in emergency department in Ismailia, Egypt. *Pan Afr Med J* 2017; **26**:21. [Doi.11604/pamj.2017.26.21.10837](https://doi.org/10.11604/pamj.2017.26.21.10837)
15. Ogundipe KO, Etonyeaku AC, Adigun I, Ojo EO, Aladesanni T, Taiwo JO et al. Violence in the emergency department: a multicentre survey of nurses' perception in Nigeria. *Emerg Med J.* 2013; **30**:758-762.
16. Abodunrin OL, Adeoye OA, Adeomi AA, Akande TM. Prevalence and forms of violence against health care professionals in a southwestern city, Nigeria. *Sky J Med Medic Sci.* 2019; **2**:067-072.
17. Harthi M; Olayan M; Abugad H; Abdel Wahab M. Workplace violence among health-care workers in emergency departments of public hospitals in Dammam, Saudi Arabia. *East Mediterr Health J.* 2020; **26**:1473–1481.
18. Douglas KE, Enikaroselu OB. Workplace violence among nurses in general hospitals in Osun State, Nigeria. *Nig J Med.* 2019; **28**:510-621
19. Musengamana V, Adejumo O, Banamunana G, Mukagendaneza MJ, Twahirwa TS, Mumyaneza E et al. Workplace violence experience among nurses at a selected University Teaching Hospital in Rwanda. *PanAfric Med J.* 2022; **41**:6:10.11604/jamj.2022.41.64.30865
20. Serdar ZMZ, Ataibi MMS, Alwuthaynani AA, Turkstani HA, Barahim SM, Alotaibi HH et al. Assessment of prevalence of workplace violence among nurses and physicians at the emergency department in Primary Healthcare Centers Makkah 2019. *Europ J Molec Clin Med.* 2019; **6**:354-362.
21. El-Sallamy R, Kabbash IA. Violence against health care workers in the emergency hospital, Tanta University, Egypt. *Egypt J Occup Med.* 2019; **43**:215-228.
22. Njaka S, Edeogu OC, Oko CC, Gomi MD, Nkadi N. Workplace violence (WPV) against healthcare workers in Africa: a systematic review. *Heliyon.* 2020; **6**:e04800. <https://doi.org/10.1066/j.heliyon.2020.e04800>
23. World Health Organization. Violence against health workers. Retrieved from https://www.who.int/violence_injury_prevention/violence/workplace/en/ accessed September 20, 2022
24. Ogbonnaya GU, Ukegbu AU, Aguwa EN, Emma-Ukaegbu U. A study on workplace violence against healthcare workers in a Nigerian tertiary hospital. *Nig J Med.* 2021; **21**:174-179
25. Assil, A.O., Salem, A.A., Mokhtar, O.A., Taha O, Ramadan A.M, Mansour A.E, et al. Workplace violence at emergency departments, Ain Shams University Hospitals, Cairo, Egypt. *BMC Health Serv Res* 2022; **22**:1437. <https://doi.org/10.1186/s12913-022-08867->
26. Lenaghan PA, Cirrincione NM, Henrich S. Preventing emergency department violence through design. *J Emerg Nurs.* 2018; **44**:7-12

27. Usman NO, Dominic BO, Nwankwo B, Nmadu AG, Omole NV, Usman OA. Violence towards health workers in the workplace: exploring findings in secondary health facilities in Kaduna metropolis, northern Nigeria. *Babcock Univ Med J*. 2022; **5**:28-36.
28. Albashtawy M, Al-Azzam M, Rawashda A, Batiha A, Bashauteli I, Sulaiman M. Workplace violence toward emergency department staff at Jordanian hospitals: a cross-sectional study. *J Nurs Res*. 2015; **23**:75-81
29. Rajesh R, Meenakshi, Mitasha S, Ranabir P, Das Jayanta K, Sanja G. Epidemiology of violence against medical practitioners in a developing country (2006-2017). *J Health Res Rev* 2018; **5**:153-160.
30. Behnam M, Tillotson RD, Davis SM, Hobbs GR. Violence in the emergency department: a national survey of emergency medicine residents and attending physicians. *J Emerg Med*. 2011; **40**:565–79.
31. Alsheri A, Almutairi N, Ahmed A. Violence directed towards nurses working at Al-Medina hospitals. *Adv Biosci Clin Med*. 2017; **10**:24. Doi.10.7575/aiaic.abcmcd
32. Abo Ali EA, Saied SM, Elsabagh HM, Zayed HA. Sexual harassment against nursing staff in Tanta University Hospitals. *Egypt J Egypt Public Health Assoc*. 2015; **90**:94–100.
33. AbdulahiIH, Thomas K, Sanusi FF. Violence against nurses in the workplace: who is responsible? *Inter J Sci Tech Mgt*. 2018; **7**:1-7.
34. Banda C.K., Mayers P., Duma S. Violence against nurses in the southern region of Malawi. *Health SA Gesondheid*. 2016; **21**:415–421.
35. Salem H, Nafad R, Taha S. Legal response of physicians towards Workplace Violence during COVID-19 pandemic in Egypt: a cross sectional study. *Zagazig J Forensic Med Toxicol*. 2022; **20**:29–46.
36. Abou-ElWafa HS, El-Gilany AH, Abd-El-Raouf SE, Abd-Elmouty SM, El-Sayed HE. Workplace violence against emergency versus nonemergency nurses in Mansoura University Hospitals, Egypt. *J Interpers Violence*. 2015; **30**:857–72.