Violence against Physicians and Nurses in a University Hospital's Emergency Departments in Egypt: A Cross - Sectional Study

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Abstract

Background: Violence against health care workers negatively affects their performance and the quality of care provided to the patients. **Objective:** To measure the prevalence of workplace violence against a sample of physicians and nurses in the emergency departments, to identify the victims' responses and measures taken by the employee, and the available safety measures. **Methods:** A cross sectional study was carried out in a university hospital in Egypt using a modified version of the workplace violence in the health sector survey developed by ILO/ICN/WHO/PSI. A convenience sample of 178 physicians and nurses were included in the study. SPSS version 23 was used for statistical analysis. **Results:** 178 physicians and nurses participated in the study (16.3% nurses, 39.3% interns, 44.4% physicians), 57.5% of them were females and 76.1% were single. During the 12 months before the survey, 62.4 % of the participants faced verbal violence, followed by physical violence (19.7 %) and sexual harassment (10.7%). The main perpetrator in all three types of violence was the patients' relatives. The main response to physical and verbal violence was calling the security (55.2% and 38.0% respectively) while in sexual violence was telling the person to stop (36.8%). The main procedures available to protect against violence were the presence of security measures (74.9%) and the presence of special equipment or clothing (79.4%). Physicians and nurses of older age and longer duration of work were at higher risk to physical and verbal abuse. Nurses were at higher risk of being attacked physically while physicians were at higher risk of verbal Violence. **Conclusion:** Violence against health care workers is prevalent in emergency departments**.** This research data highlight that there is an urgent need for more effort and policies to protect the emergency staff.

Keywords: Workplace violence - Emergency department- Egypt- Physicians-Nurses
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Introduction

Occupational Safety and Health Administration (OSHA) defines work place violence as: "any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site". (1)Healthcare workers are among the most who are liable to workplace violence. According to the WHO about 8-38% of the healthcare personnel face physical violence throughout their career, a lot more face threatening or verbal abuse and emergency personnel found their place between the health workers at highest risk.(2) This is may be due to the fact that they are facing a large number of patients all through the day, the stressful environment they endure and the shortage of security staff which put them at high incidence of risk.(3) In a study conducted in Germany in 2009, 70.7% of healthcare workers reported

exposure to physical violence, while 89.4% encountered verbal violence and the authors said that the often occurrence of incidents and insufficient social aid increased the stress.(4) In another study in the US about 25% of the nurses working in the emergency departments faced more than 20 physical violence incidents and 20% faced more than 200 verbal violence incidents in the period from 2006 till 2009. Those who faced physical and/or verbal violence frequently pointed out their fear of counterattack and the shortage of hospital administration support and ED management's obstacles to violence reporting. (5)In Egypt, in a study performed in Ismailia Governorate , the prevalence of verbal and physical abuse in nurses was 69.5% and 9.3% respectively.(6)Also a study in Mansoura university emergency hospital found that only 7.4% of physicians didn't face any violence. Verbal violence was the most prevalent with 76.5% followed by physical violence 60.3% and sexual harassment 30.9%. Most of the physical and verbal aggressors are the Patient's relatives/visitors. Hospital measures for safety are not available and there is neither reporting system nor victim support to any kind of violence.(7) In another study conducted in Ismailia in an emergency department, 59.7% is the percentage of HCWs who reported violence. Verbal violence was reported the most (58.2%), while 15.7% reported physical violence. The authors found that the failure to fulfill the expectations of the patient and his family, and the long time they wait are the main causes of violence. (3)

Due to the sensitivity of this issue and its impact on the performance of health care workers and the impact on the patients safety , more studies are needed to explore the magnitude of the problem and the underlying risk factors to find the suitable solutions, Therefore, this study is performed to measure the prevalence of workplace violence against a sample of physicians and nurses in the emergency departments, to identify the victims' responses, measures taken by the employee, and the available safety measures.

Material and Methods

A cross-sectional study was conducted in the emergency departments of a university hospital in Cairo, Egypt between July 2018 and January 2019. We approached nurses, physicians and interns in the following emergency departments (ED) in the hospital: the surgery ED; the internal medicine ED; the gynecology ED; the psychiatry ED; the pediatrics ED; the toxicology ED; and the burns ED.

A convenience sample of 252 nurses, physicians and interns working in the emergency departments during the time of data collection were approached, and 178 valid questionnaires were returned (response rate 70.6%)

A modified version of the workplace violence in the health sector survey tool developed by ILO/ICN/WHO/PSI(8) was used after obtaining permission for usage and modification from the WHO. The questionnaire was translated to Arabic by a professional translator and compared to two previous Arabic translations(6,9) and then back translated to English by a second translator for comparison. The translation was then revised and improved. A pilot study was conducted on 9 participants from 4 EDs (which were excluded from the analysis of the study) to test the Arabic questionnaire and modifications were made to clarify some questions.

The final self-administered questionnaire consisted of five sections: social and professional data; physical violence; verbal violence; sexual harassment; and the available systems and means of protection.

Statistical Package for Social Sciences (SPSS) version 23 was used to enter and analyze the data. We used descriptive statistics represented in percentages and frequencies to describe the data. Chi square test was used to show the relation between different categorical variables.

Ethical considerations

The Participation in the study was voluntary and the participants were assured confidentiality of their responses. The benefits of the study were explained to the participants. Approval of the participating hospital's board and ethical committee were obtained.

Results

Among the approached 252 nurses, physicians and interns, 178 responded with a 70.6% response rate. Table 1 describes the participants' demographic characteristics. 57.6% of the participants were females, 76.1% were single and 62.4% work with 1-5 staff members. 26.7% worked in the internal medicine ED, 21.6% worked in the surgery ED, while 19.9% reported working in more than one type of ED in the past 12 months. About forty percent of the participants (n = 72) reported being moderately worried about violence in the ED while 19.1% (n=34) reported being a little worried, 18.0% (n = 32) reported being very worried, 11.2% (n=22) reported being extremely worried and another 11.2% reported not being worried at all (not present in a [table]).

Around sixty six percent (n=118) of the participants encountered at least one incident of violence in the 12 months before the survey. Table 2 shows the frequency and percentage of each type of violence separately (physical, verbal and sexual). It also shows who was the attacker and when did the incident occur. The majority faced verbal violence (62.4%), the main attackers in all three types of violence were the patient's relatives (physical 84.4%, verbal 92.2%, and sexual 64.7%) and the incidents occurred mainly during examination (physical 59.4%, verbal 39.3%, and sexual 68.4%).

Figure 1 describes the percentage of violence faced by the participants in the different emergency departments. All the participants working in the burns and psychiatry ED faced violence while those in the gynecology department faced violence the least. 60% (n=3) of the participants who worked in the Psychiatry ED faced physical violence followed by the surgery ED (26%, n=10). All three who worked in the burns ED faced verbal violence followed by the psychiatry ED (80%, n=4) and the toxicology ED (78.6%, n=11).The toxicology ED workers faced sexual harassment more than other departments (21.4%) while the emergency staff in the gynecology and the burns departments didn't face any sexual harassment.

The victims' reactions explained in Table 3 shows that the victims of physical and verbal violence mainly called the police or the security (55.2% and 38.0% respectively) while 36.8% of the sexual harassment victims told the abuser to stop.

The employer took action in 50% of the physical violence incidents while no action was taken in most of the verbal violence and sexual harassment incidents (78.2% and 83.3% respectively) as described in Table 4. The action was taken mainly by the police in physical violence (53.8%) while in verbal violence the hospital management staff was the main action taker (61.5%). A verbal warning was the main consequence to the abuser in both physical and verbal violence (43.8% and 57.1% respectively).

Most of the victims were very dissatisfied with the handling of the incidents (physical 68.3%, verbal 67.3%, and sexual 66.7%) and the underreporting was mainly because it was useless to report and in sexual harassment they also felt ashamed to report the incident (Table 5).

Table 6 shows the availability of measures to deal with violence where the majority reported most of the measures as not existing except for the security measures (74.9% reported it exists) and the presence of special equipment or clothing(79.4% reported it exists).

Table 7 shows that the participants older than 25 years of age encounter physical and verbal violence more often where 31.2% reported facing physical violence and 75% reported facing verbal abuse (p-value $\leq$ 0.001). Nurses are at higher risk of encountering physical violence -34.5% - (P-value$\leq$0.001). In verbal violence, physicians are the ones at higher risk -73.4% reported being verbally abused-(p-value<0.05). Those who worked in the emergency department more than 5 years encounter physical and verbal violence more often, where 53.3% reported being physically attacked and 80.0% reported being verbally abused (p-value$\leq$0.001).

Discussion

The shadow of workplace violence haunts the health care personnel especially those working in high risk environments like the emergency department(ED). There is a lack in studying the problem in the developing world and a lack of documentation.

In our study we found that about two thirds of physicians and nurses encountered violence of any type at least once in the 12 months prior to the survey. About two thirds of the participants faced Verbal violence, this is to say three times more than physical violence encounters and six times more than sexual harassment. Our findings are similar to other studies that showed that verbal violence is the most common to happen followed by physical violence (10–15).

The patient relatives abuse physicians and nurse the most in all three types of violence followed by the patients themselves. This is consistent with other previous researches (7,12–14). Violence, in all three types, happen the most during examination or treatment.

We found that all the participants from the psychiatry ED & the burns ED faced violence. This may be explained by the low number of participants & also the aggressive nature of psychiatric patients. The surgery ED comes in the 2nd place regarding physical violence as the emergency staff deals with victims of different types of serious accidents every day where both the patients and their relatives are very anxious, also the staff is always under stress which affects their responses & actions. Gynecology ED staff faced violence the least. This may be because of the strong restriction of public access. Also, the patients are females so the absence of sexual harassment is expected.

When we asked about the victims' response to the incidents, we found that it depends on the type of violence. Regarding physical violence, victims mostly ask for support from others to overcome the situation; about half of them called the police\security, one third reported it to a senior staff member, one third tried to defend themselves physically and others sought help from the hospital's administration.

The response of victims to verbal violence is less than physical violence, mostly because it doesn't threat their lives or because it is a

recurrent incident in the workplace so they are used to it. About one third of victims took no action, others only told the person to stop and only 38% called the security. Our results regarding physical and verbal response are different from a study conducted in Saudi Arabia where they found that the most common responses are: telling a colleague, pre-tending that the incident did not happen, telling family/friends about the incident, and trying to forget the event.(9) The vast majority of the participants in that study suggested that more security staff should be available and that co-operation with the police should be established. This shortage of security staff and police may explain the difference in the victim responses.

Regarding sexual violence, the mutual factor in response of victims is to keep it secret and trying to deal with the situation by themselves. Most of victims just told the harasser to stop, others tried to pretend it never happened. Only 21% called the security, 5 %(n=1) reported it to a senior staff and 5 %(n=1) sought the hospital administration's help.

The victims who have pursued prosecutions are few and only in physical and verbal violence (6.9%, 1.9% respectively). This may be because they think it's not effective or the issue takes a long time to be determined by the court. No one reported that he sought counseling, asked to be transferred to another position, sought help from the syndicate or completed a compensation claim in response to any type of violence.

Investigating the violent incidents happens only in half of the physical attacks, mainly by the police.(16,17) On the other hand, investigating verbal and sexual incidents is rare and the hospital's management is responsible for most of the investigations. Even when investigations happen, perpetrators mostly either get a verbal warning or no action is taken towards them.(16) This is very frustrating to the victims and doesn't ensure their rights, and as a consequence about fourth of the victims reported that they were dissatisfied with the way the incidents were handled and two thirds reported that they were very dissatisfied.(16,18,19)

We found that the main reasons for not reporting a physical or verbal incident or telling anyone about it is that the victims finding that useless followed by believing that the incident is not important and not knowing who to report the incident to.(16,18) The sexually harassed mainly underreported or didn't tell others because they found it useless as well as they felt ashamed.

The employers are not very supportive to the victims. Only around a third of the physically attacked get the chance to speak about the incidence or offered counseling and even less offered any other support. Supporting the verbally abused is even less while the least support is offered to the sexually harassed victims.

At the end participants were asked about the procedures present to protect them. One of the available means of protection is the presence of security measures .This is consistent with other researches(7,9,12,20), another significant measure reported to be present by more than three quarters of the participant was the presence of special equipment or clothing. Although training is an effective way to avoid and reduce workplace violence, only about one third of the participants reported receiving training(21), this percentage reflects the importance of providing training for staff in improving their communication skills and handling aggression through safety training.

Also improvement in the hospital system is needed as about 76 % of participants reported the absence of public access restriction which contributes to the occurrence of violence for we found that most of attacks took place by the patient relatives.

We found that older healthcare providers and the ones with more working experience in the ED are at higher risk of exposure to both physical and verbal violence. This is similar to the results found by F. Şenuzun Ergün et al. (22) We think that the older and more experienced health workers may have the audacity to engage in squabbles or may be more tense due to more responsibility than the other subgroups.

Study limitations

We used convenience sample and this limits the external validation of our results. Additionally, due to the small number of participants and since our study was done in only one tertiary hospital, our results cannot be generalized, but be beneficial for further researches.

Conclusion

Violence is a significant problem faced by the majority of emergency department healthcare providers. Verbal violence happen the most but physical violence and sexual harassment are not rare either. Also, the safety means and systems are deficient.

Recommendations

There should be policies and procedures to manage any violence act and reliable reporting system should exist. Also rapid access to trained security and law enforcement personnel should be ensured at all times and appropriate investigations of violent incidents should be carried out.

We recommend establishing training programs for the healthcare providers on how to deal with violent events and improve their communication skills. The security system should be improved and public access should be restricted. Finally, further research is required to get a better view of the problem's magnitude.

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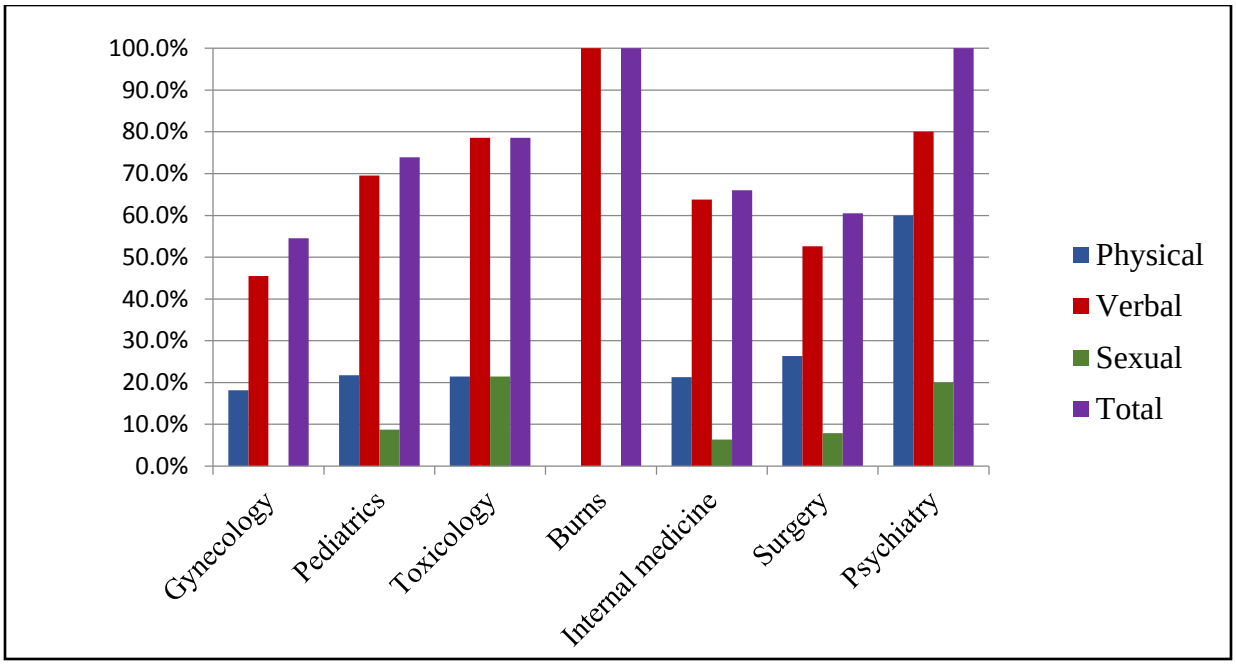

Figure 1 Prevalence of violence in different ED types

Table1 : Key demographic and occupational characteristics of the respondents (n=178)

Variables	N	%*
Age(years)		
≤25	81	46.6
>25	93	53.4
Gender		
Male	75	42.4
Female	102	57.6
Marital status		
Single	134	76.1
Married	40	22.7
Separated/Divorced	1	0.6
Widow/Widower	1	0.6
Occupation		
Nurse	29	16.3
Intern	70	39.3
Physicians	79	44.4
Experience working in ED		
<1	79	45.1
1-5	81	46.3
>5	15	8.6
Number of staff in the same work setting		
0-5	104	63.0
6-10	56	33.9
>10	5	3.0
Department		
Gynecology Ed	11	6.3
Pediatrics Ed	23	13.1
Toxicology Ed	14	8.0
Internal Medicine Ed	47	26.7
Surgery Ed	38	21.6
Burns Ed	3	1.7
Psychiatry Ed	5	2.8
More Than One Department	35	19.9
Non responses are excluded from the computations of percentages*		

Table 2: Prevalence of physical and Verbal violence and sexual harassment

	Physical		Verbal		Sexual	
	N	%	N	%	N	%
Attacked						
Yes	35	19.7	111	62.4	19	10.7
No	143	80.3	67	37.6	159	89.3
Who attacked*						
Patient	10	30.3	30	27.5	9	52.9
Relatives of patient	28	84.4	101	92.7	11	64.7
Colleague/worker	0	0	10	9.2	2	11.8
When*						
While the patient is being admitted	5	15.6	31	17.4	3	15.8
During examination/ treatment/ physical care	19	59.4	70	39.3	13	68.4
At conclusion of examination treatment	10	31.3	20	11.2	3	15.8
During patient transport	2	6.3	20	11.2	3	15.8
While patient is being discharged	4	12.5	26	14.6	4	21.1
Other	2	6.3	8	7.3	3	15.8

*multi-selected items, sum of percentages may exceed 100%

Table 3: Immediate response of victims in the last violent incident experienced in the ED

	Physical		Verbal		Sexual	
	N	%	N	%	N	%
Victim response*						
Took no action	2	6.9	30	27.3	4	21.1
Tried to pretend it never happened	2	6.9	12	11.1	5	26.3
Told the person to stop	5	17.2	32	29.6	7	36.8
Called the police/security	16	55.2	41	38.0	4	21.1
Tried to defend myself physically	8	27.6	9	8.3	3	15.8
Told friends/family	1	3.4	8	7.4	2	10.5
Sought counseling	0	0.0	0	0.0	0	0.0
Told a colleague	2	6.9	9	8.3	1	5.3
Reported it to a senior staff member	10	34.5	12	11.1	1	5.3
Transferred to another position	0	0.0	0	0.0	0	0.0
Sought help from hospital administration	8	26.7	17	15.7	1	5.3
Sought help from the syndicate	0	0.0	0	0.0	0	0.0
Completed incident form/ pursued prosecution	2	6.9	2	1.9	0	0.0
Completed a compensation claim	0	0.0	0	0.0	0	0.0
Other	0	0.0	1	0.9	1	5.3

*multi-selected items, sum of percentages may exceed 100%

Table 4: Measures taken in response to last act of violence as reported by the victims

	Physical		Verbal		Sexual	
	N	%	N	%	N	%
Employer action						
Yes	17	50.0	15	13.6	2	11.1
No	16	47.1	86	78.2	15	83.3
Don't know	1	2.9	9	8.2	1	5.6
Who took action?						
Management	6	46.2	8	61.5	1	50
Syndicate	0	0.0	0	0.0	0	0.0
Police	7	53.8	5	38.5	0	0.0
Other	0	0.0	0	0.0	1	50
Consequences to perpetrator/ abuser						
None	4	25.0	3	21.4	1	50.0
Verbal warning issued	7	43.8	8	57.1	0	0.0
Care discontinued	1	6.3	2	14.3	0	0.0
Reported to police	4	25.0	1	7.1	0	0.0
Aggressor prosecuted	0	0.0	0	0.0	0	0.0
Other	0	0.0	0	0.0	1	50.0
Don't know	0	0.0	0	0.0	0	0.0

Table 5: Support given to the victims and reason for not reporting the act of violence

	Physical		Verbal		Sexual	
	N	%	N	%	N	%
Support by employer						
Counseling offered	10	32.3	21	20.6	2	11.8
Opportunity to speak	12	38.7	20	20.0	3	17.6
Other	6	19.4	12	12.1	2	11.8
Victim satisfaction with handling of incident						
1 Very dissatisfied	22	68.8	68	67.3	8	66.7
2	8	25.0	18	17.8	3	25.0
3	0	0.0	11	10.9	1	8.3
4	1	3.1	2	2.0	0	0.0
5 Very satisfied	1	3.1	2	2.0	0	0.0
Reasons for underreporting*						
It was not important	1	20	15	36.6	1	9.1
Felt ashamed	0	0.0	1	2.4	6	54.5
Felt guilty	0	0.0	0	0.0	0	0.0
Afraid of negative consequences	0	0.0	1	2.4	0	0.0
Useless	4	80.0	22	53.7	6	54.5
Did not know who to report to	1	20.0	3	7.3	2	18.2
Other	0	0.0	1	2.4	0	0.0

*multi-selected items, sum of percentages may exceed 100%

Table 6 Existing measures to deal with violence

	Yes		No		Don't know		Total	
	N	%	N	%	N	%	N	%
Security measures e.g. guards, alert	131	74.9	39	22.3	5	2.9	175	100
Improve surroundings	45	25.4	125	70.6	7	4.0	177	100
Restrict public access	36	20.6	133	76.0	6	3.4	175	100
Registration of the patients, relatives/ friends who enter the work place	59	33.3	106	59.9	12	6.8	177	100
Special equipment or clothing	139	79.4	33	18.9	3	1.7	175	100
Reduced periods of working alone	35	20.1	123	70.7	16	9.2	174	100
Training on the procedures that should be followed	37	21.1	128	73.1	10	5.7	175	100
Training on how to deal with others in the work place	38	21.7	124	70.9	13	7.4	175	100
Changed shifts or rotas	66	37.3	97	54.8	14	7.9	177	100
Increased staff numbers	23	13.9	125	75.8	17	10.3	165	100

Table 7: Factors associated with different types of violence

	Physical			Verbal			Sexual		
variable	N	%	p-value	N	%	p-value	N	%	p-value
Age									
≤25	5	6.2	0.000**	41	50.6	0.001**	7	8.6	0.491
>25	29	31.2		70	75.3		11	11.8	
Gender									
Male	15	20.0	0.948	44	58.7	0.340	6	8.0	0.314
Female	20	19.6		67	65.7		13	12.7	
Occupation									
Nurse	10	34.5	0.000**	19	65.5	0.007*	2	6.9	0.672
Intern	3	4.3		34	48.6		7	10.0	
Physician	22	27.8		58	73.4		10	12.7	
Experience working in the ED									
<1	4	5.1	0.000**	38	48.1	0.001**	8	8.1	0.872
1-5	21	25.9		60	74.1		9	11.1	
>5	8	53.3		12	80.0		1	6.7	
Number of staff in the same work setting									
0-5	24	23.1	0.272	68	65.4	0.101	13	12.5	0.664
6-10	7	12.5		31	55.4		5	8.9	
>10	1	20.0		5	100.0		1	20	

*p-value <0.05
**p-value < 0.001