VIOLENCE AMONG FEMALE HEALTH CARE WORKERS

By

El sharkawy SA and Mondoor WR

Department of Community Medicine and Occupational Health, Faculty of
Medicine for Girls, Al Azhar University, Cairo, Egypt

Corresponding author: El sharkawy SA. Email: safaa.abdelfattah@azhar.edu.eg

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Abstract

Introduction: Healthcare workers (HCWs) are at risk for workplace violence (WPV). It is a serious problem in both developed and developing countries and has a great negative impact on the well-being of HCWs and on the quality of the health system. **Aim of Work:** To determine the prevalence, pattern, associated factors and impacts of WPV among female HCWs at Al-Zahraa University Hospital and to detect the causes and seek out suggestions to prevent such incident. **Materials and Methods:** A cross-sectional study was conducted over 4 months from September to December 2019 at Al-Zahraa University Hospital using a standardized questionnaire. The sample size was 312 physicians and nurses. **Results:** The prevalence of violence was 66.3% among the studied HCWs with statistically significant higher prevalence among nurses (72.5%) than physicians (61.9%). Verbal violence was the most recurrent type (62.3%) followed by the physical type (19.8%). Patient relatives and friends were the most frequent perpetrators (63.3%). Emergency room was the most common place for violence (42.5%). Violent incidents result in physical, psychological impacts and job dissatisfaction. There was significant association of violence with the marital status and the work shift (p value <0.05) with no significant association of violence with age, occupation and duration of employments (p value >0.05). Low socioeconomic status of patients, shortage of medical equipment and medicine and inadequate security were the most frequently suggested causes of violence. **Conclusion and Recommendations:** WPV is highly prevalent among the studied HCWs particularly the verbal one and resulted in physical, psychological and work related effects; that highlights the need to develop management strategy to overcome WPV against HCWs. Provision of medical equipment, medicine, security measures, legislation and to restrict public access to examination rooms were the most frequently suggested preventive measures.

Key words: Work place violence, Physicians, Nurses, Health care workers, Al-Zahraa University Hospital.

Introduction

Workplace violence (WPV) was defined as “incidents where staff are abused, threatened or assaulted in circumstances arising out of, or in the course of their employment; (ILO, ICN, WHO and PSI, 2003). Workplace violence may be physical and non-physical. Physical violence is harsh and painful action against others that lead to physical harm. It involves pushing, beating, biting, slapping, stabbing, kicking and strangling (Pandey et al., 2018). Non-physical violence includes verbal abuse, threats, intimidation and sexual harassment (Alkorashy and Al Moalad, 2016).

Healthcare workers are at an increased risk for workplace violence. Violence in the health care setting occurs four times more often than violence in any other private-sector industry. It is a serious problem in both developed and developing countries and has a great negative impact on the well-being of HCWs and on the quality of the healthcare service provided to the patients (Cheung and Yip, 2017).

Patients and their relatives are the most common perpetrators of violence in health care settings. They may behave aggressively either because of illness,

unsatisfied treatment plan, or availability of weapons among patients or relatives. They may feel frustrated and angry as a result of the patient's circumstances (Hamdan and Hamra, 2015). There are other perpetrators of violence in health care settings as colleagues (e.g. staff member, administrators and supervisor). These could be attributed to negative communication of HCWs with their colleagues due to competition, long working hours and intensity of psychosocial situation (Yigitbas and Genc, 2019).

There are many contributing factors that affect the prevalence of violence among HCWs. These factors may be related to patients or HCWs as age, gender, marital status, job category and their work experiences or related to the workplace environment as overcrowded and unsuitable waiting halls, improper environmental design and inadequate security (Abdellah and Salama, 2017).

Health care workers who are exposed to violence may suffer from impairment of physical and mental well-being which leads to decreased job satisfaction, loss of confidence, absenteeism, and burnout with negative consequence on work productivity, patient safety and overall quality of

patient care (Basilua et al., 2015).

The incidence and prevalence of violence against HCWs were considered by several studies worldwide. In the USA, it was found that 74% of HCWs experienced violence occasionally, 19% frequently, and 2% always in a workplace violence survey done in most regions of the US (Boafo and Hancock, 2017). In Japan, the prevalence of workplace violence was 36% (Park et al., 2015). The prevalence was 28% among nurses working in public hospitals and primary health care centres in Iran (Fallahi-Khoshknab et al., 2016). Many studies were conducted in the Arabic region to investigate the workplace violence among HCWs. In Jordan, the prevalence was 76% among nurses working in Emergency departments (Fujita et al., 2012). In a study conducted in Palestine, about 80% of the HCWs were exposed to at least one type of violence (Hasan et al., 2018). In Egypt, the prevalence varied. Abdellah and Salama (2017) found that 59.7% of HCWs in Emergency department in Ismailia were exposed to WPV during the preceding year.

In spite of some studies conducted in different areas in Egypt like Ismailia, Tanta and Mansoura, there is still need to

study this alarming hazard particularly in Cairo, the capital of Egypt. So, the current study was conducted.

Aim of Work

To determine the prevalence, pattern, associated factors and impacts of work place violence among female health care workers at Al-Zahraa University Hospital and to detect the causes and seek out suggestions to prevent such incident.

Materials and Methods

Study design: It is a cross-sectional analytical study.

Place and duration of the study: This study was conducted over 4 months from September to December 2019 at Al-Zahraa University Hospital which located in Al- Abbasya district in Cairo. The hospital staff was nearly 1630 physicians and nurses distributed in various surgical and medical units, out-patient clinics and the emergency department.

Target population: The target group was female physicians and nurses who were working in the Emergency department, different inpatient departments, outpatient clinics and special units in the studied hospital and who worked at least for six months and agreed to participate in the study.

Administrative employees, labourers and male HCWs were excluded from the study as many of the questionnaire items did not apply to their jobs.

Sample size: the sample size was calculated according to certain statistical formula (Roasafot, Inc., 2004) with 95% confidence limit, 5% confidence interval and expected prevalence of violence 50 %. It was found to be 312 participants. They were selected by proportional allocation from the main list of hospital employees by systematic random sampling.

Study methods: An English version of a standardized questionnaire sheet (ILO, ICN, WHO and PSI, 2003) regarding WPV in the health sector was used for collecting data in English through personal interview with each participant to guarantee high response. It included:

- General data as age, marital status, detailed occupational history including work experience, job title and direct physical contact (e.g. washing, turning and lifting) with patient or not.
- Information related to exposure to violence in the preceeding 12 months and its frequency at the work place, types

of violence, reactions to violence and the impact of the accident on the victims.

- Information related to response, reporting and modified questions about the causes and preventive suggestions.

Consent

Verbal consent was obtained from participants of the study after clarification of the aim of the study and ensuring confidentiality of data.

Ethical Approval

All the necessary approvals for conducting the research obtained from the Ethical Committee, Faculty of Medicine for girls, Al - Azhar University.

Data Management

Statistical analyses were carried out by using SPSS version 16. Descriptive statistics as mean, standard deviation and range were used to describe quantitative data while frequency and percentage were used for qualitative one. The association of socio-demographic characteristics of the participants and workplace violence were investigated by using Chi-square test. p value of <0.05 was considered to be statistically significant.

Results

Table (1): Socio demographic data of the studied female HCWs and exposure to violence.

Characteristics	Total = 312 No	%
Age group/ years		
20 - 24	64	20.5
25 – 29	132	42.3
30 - 35	71	22.8
>35	45	14.4
Mean ± SD	29.0 ± 6.1	
Range	20 – 49	
Marital status		
Single	165	52.9
Married	147	47.1
Occupation and job title		
Nurse / Nursing specialist	131	42.0
House officer	61	19.6
Resident doctors	79	25.3
Lecturer/ Assistant professors	41	13.1
Duration of employment		
6 months – 4years	194	62.2
5 – 10 years	57	18.3
>10 years	61	19.6
Mean ± SD	5.7 ± 5.7	
Range	1- 25	
Working shifts		
Yes	236	75.6
NO	76	24.4
Exposure to violence		
Yes	207	66.3
NO	105	33.6
Worried from exposure to violence		
Un worried	40	12.8
Mildly worried	79	25.3
Moderately worried	123	39.4
Severely worried	70	22.4

Table (1) showed that the age of the studied HCWs ranged from 20 to 49 years with mean and SD 29.0± 6.1. More than one half (52.9%) was single and 42.0% of the studied HCWs were nurses. As regards duration of employment, it ranged from

6 months to 25 years with mean and SD 5.7 ± 5.7 . Regarding the working schedule, about three quarters (75.6%) of the studied HCWs had work shift. Of the examined HCWs 66.3% were exposed to violence. Nearly two thirds were moderately to severely worry from exposure to work place violence.

Table (2): Prevalence of violence and its characteristics among the HCWs exposed to violence (207).

Characteristics of violence	Total No (%)	Physicians No (%)	Nurses No (%)	Chi square	p value
Prevalence of violence among different groups #	207 (66.3)	112 (61.9)	95 (72.5)	3.8	0.03*
Frequency of occurrence #					
1-2 times	110 (53.1)	63 (56.2)	47 (49.5)	7.6	0.05
2-10 times	65 (31.4)	29 (25.9)	36 (37.9)		
More than 10 times	32 (15.5)	20 (17.9)	12 (12.6)		
Type of violence					
Physical	41 (19.8)	17 (15.2)	24 (25.3)	3.7	0.44
Verbal	129 (62.3)	73 (65.2)	56 (58.9)		
Bullying /mobbing	31 (15.0)	19 (17.0)	12 (12.7)		
Sexual harassments	6 (2.9)	3 (2.7)	3 (3.2)		
Place of violence					
Internal department	46 (22.2)	28 (25.0)	18 (18.9)	3.8	0.27
Outpatient clinics	54 (26.1)	25 (22.3)	29 (30.5)		
Emergency room	88 (42.5)	46 (41.1)	42 (44.2)		
Operation rooms	19 (9.2)	13 (11.6)	6 (6.3)		
Perpetrators					
Patient	39 (18.8)	24 (21.4)	15 (15.8)	5.63	0.22
Patient relatives/ friends	131 (63.3)	66 (59.0)	65 (68.4)		
Colleagues	25 (12.1)	17 (15.1)	8 (8.4)		
Unknown visitors	12 (5.8)	5 (4.5)	7 (7.4)		
Work shift					
Morning shift	103 (49.8)	58 (51.8)	45 (47.4)	0.65	0.7
Evening shift	39 (18.8)	19 (17.0)	20 (21.1)		
Night shift	65 (31.4)	35 (31.2)	30 (31.6)		
Reaction to the violence act					
Did nothing	42 (20.3)	20 (17.9)	22 (23.2)	4.14	0.65
Told the person to stop	32 (15.5)	17 (15.2)	15 (15.8)		
Tried to defend oneself	50 (24.4)	28 (25.0)	22 (23.2)		
Asked for help	18 (8.7)	7 (6.3)	11 (11.6)		
Reported to hospital administration	56 (27.1)	34 (30.4)	22 (23.2)		
Request for vacation/transfer	9 (4.3)	6 (5.4)	3 (3.2)		

Prevalence and frequency during last 12 months

*: Significant

Table (2) showed that the prevalence of violence was 66.3% (207/312) among the studied HCWs with statistically significant higher prevalence among nurses (72.5%) compared to physicians (61.9%) ($p < 0.05$). Frequency of occurrence of violence was once or twice among 53.1%. Verbal violence was the most frequent type (62.3%). Regarding the place of violence, Emergency room was the most common place (42.5%). Patient relatives and friends were the most recurrent perpetrators (63.3%). Nearly half (49.8%) of violence occurred during the morning shift. The HCWs reaction to violence was different; 27.1% reported the attack to the hospital administration, 24.4% tried to defend themselves and 20.3% showed negative reaction in doing nothing. Also, this table showed that there was no statistically significant difference between physicians and nurses regarding frequency, type, perpetrators, place, work shift and reaction to violence ($p > 0.05$).

Table (3): Impact of violence among the studied HCWs.

Impact of violence	Total (207) No (%)	Physicians(112) No (%)	Nurses (95) No (%)	Chi square	p value
Physical effects:					
Physical Injuries#	8 (3.9)	3 (2.7)	5 (5.3)	0.95	0.2
Sleep disorders	49 (23.7)	26 (23.2)	23 (24.2)	0.02	0.4
Frequent headache	105 (50.7)	64 (57.1)	41 (43.2)	4.01	0.03*
Irritable colon	59 (28.5)	39 (34.8)	20 (21.1)	4.7	0.02*
Two or more effects together	42 (20.3)	28 (25.0)	14 (14.7)	3.34	0.04*
Psychological effects:					
Remembering the incidents	83 (40.1)	45 (40.2)	38(40.0)	0.001	0.54
Want to forget the incidents	74 (35.7)	45 (40.2)	29 (30.5)	2.1	0.9
Feeling afraid and worried from people	65(31.4)	43 (38.4)	22 (23.2)	5.5	0.01*
Combined physical and psychological effects	85 (41.1)	50 (44.6)	35 (36.8)	1.29	0.16
Work effects:					
Dissatisfaction with her work	61 (29.5)	30 (26.8)	31 (32.6)	0.84	0.22
Do not want to go to work	84 (40.6)	38 (33.9)	46 (48.4)	4.4	0.02*

#: Abrasion, contusion

*: Significant

Table (3) showed the physical, psychological impacts and work effects of exposure to workplace violence. Frequent headache and irritable colon were the most common physical impacts of violence among the studied HCWs (50.7%, 28.5% respectively) with statistically significant higher frequency among physicians

(57.1%, 34.8%) compared to nurses (43.2%, 21.1%). Also, two or more physical effects were significantly higher among physicians (25.0%) compared to nurses (14.7%). There was a statistically significant difference between physicians and nurses as regards psychological effects in the form of feeling afraid and worried from people. Do not want to go back to work was the most frequent symptoms related to work effects of violence (40.6%) with significant higher prevalence among nurses (48.4%) compared to physicians (33.9%).

Table (4): Association of violence with different characteristics .

Characteristics (No =312)	Exposed to violence		Chi square and p value
	Yes (207) No (%)	NO (105) No (%)	
Age group/years			
20 – 24 (No=64)	42 (20.3)	22 (21.0)	2.02 p = 0.56
25 – 29 (No=132)	85 (41.1)	47 (44.8)	
30 – 35 (No=71)	46 (22.2)	25 (23.8)	
>35 (No=45)	34 (16.4)	11 (10.5)	
Marital status			
Single (No=165)	98 (47.3)	67 (63.8)	7.58 p = 0.004*
Married (No=147)	109 (54.7)	38 (36.2)	
Occupation and job title			
Nurse / Nursing specialist (No=131)	95 (45.9)	36 (34.3)	6.5 p = 0.08
House officer (No=61)	34 (16.4)	27 (25.7)	
Resident doctors (No=79)	54 (26.1)	25 (23.8)	
Lecturer/Assistant professors (No=41)	24 (6.8)	17 (16.2)	
Duration of employment			
6 months – 4 years (No=194)	123 (59.4)	71 (67.6)	3.9 p = 0.14
5 – 10 (No=57)	37 (17.9)	20 (19.0)	
>10 (No=61)	47 (22.7)	14 (13.3)	
Working shift			
Yes (No=236)	149 (72.0)	87 (82.9)	4.47 p = 0.02*
NO (No=76)	58 (28.0)	18 (17.1)	
Physical contact with patients			
Yes (No=174)	111(53.6)	63 (60.0)	1.14 p = 0.17
NO (No=138)	96 (46.4)	42 (40.0)	
Numbers of working staff			
1-5 (No=212)	141 (68.1)	71 (67.6)	0.052 p = 0.97
6-10 (No=69)	46 (22.2)	23 (21.9)	
11-15 (No=31)	20 (9.7)	11 (10.5)	

*: Statistically significant

Table (4) showed that the prevalence of violence was statistically significant higher among married HCWs (54.7%) and among those who had working shift (72.0%). There was no significant association of violence with age, occupation, duration of employment, physical contact with patients and the numbers of working staff among the studied HCWs (p value >0.05).

Table (5): Health care workers suggestions about reasons and preventive measures for violence.

Possible reasons	Total =312 No (%)	Suggested preventive measures	Total =312 No (%)
Inadequate security	150 (48.1)	Strengthen security measures	206 (66.0)
Low socioeconomic status of patients	219 (70.2)	Restrict public access to examination rooms	197 (63.1)
Unavailability of medical equipment and medicine	163 (52.2)	Provision of adequate equipment and medicine	226 (72.4)
Increase work load	103 (32.7)	Increased staff numbers	131(42.0)
Long waiting time	123 (39.4)	Comfortable waiting room	142 (45.5)
Inadequate experience	29 (9.3)	Training on violence prevention and control	108 (34.6)
Drug abuse by patients	122(39.1)	Legislation	211 (67.6)

Table (5) showed that HCWs suggested that low socioeconomic status of patients, unavailability of medical equipment and medicine and inadequate security were the most frequent causes of violence (70.2, 52.2 and 48.1% respectively). Other suggested causes were long waiting time (39.4%), drug abuse of patients (39.1%) heavy work load (32.7%). Concerning the control and preventive measures for violence, the studied HCWs reported that provision of adequate equipment and medicine, strengthening security measures, legislation and restricting public access to examination rooms were the most frequent preventive measures (72.4, 67.6, 66.0, and 63.1% respectively). In addition, comfortable waiting room and shorter waiting time (45.5%), increased staff numbers (42.0) and training on self-defence, violence prevention and control (34.6%) were also suggested as preventive measures.

Discussion

Violence in the healthcare sector is a problem specific not only to Egypt but also a significant problem worldwide. The nature of work of healthcare providers requires direct contact with patients and their relatives in a complex condition that carries the risk of exposure to violence.

The current study illustrated that the prevalence of violence incidents was 66.3% (207/312) among the studied HCWs at Al-Zahraa University Hospital with statistically significant higher prevalence among nurses (72.5%) than physicians (61.9%) ($p < 0.05$) (Table 2). This is in agreement with Algwaiz and Alghanim (2012) who found that 67.4% of HCWs were victims to violence and nurses were significantly more likely to be exposed to violence than physicians in a study conducted in Riyadh city, King Saudi Arabia. Also, nearly the same prevalence was reported in Nepal (64.9%) (Rajbhandari, et al., 2015). However, a lower frequency of violence incidents against HCWs was observed in previous studies conducted in Italy (45%) (Ferri et al., 2016), Turkey (44.7%) (Pinar et al., 2015) and Saudi Arabia (45.6%) (Al Turkil, 2016). While higher prevalence was

reported in China (83.3%) (Sun et al., 2017). This difference in the prevalence may be attributed to the difference in definition of violence, target group, and the methodology used.

Verbal violence is usually an initial phase that may either extend to physical one or be controlled. This may explain our finding that verbal abuse was the most frequent type of violence acts (62.3%) followed by physical one (19.8%) and sexual harassment was the least (2.6%) (Table 2). This is in agreement with other studies done in Egypt (Abou-El-Wafa et al., 2015) in Mansoura University Hospitals, and Kabbash and El-Sallamy (2019) in Tanta Emergency Hospital in which verbal violence had the highest frequency and sexual harassment was the least. Similar findings were reported in India (Mishra et al., 2018) and China (Shi et al., 2017) where verbal abuse was as high as 75.9% and 64.9%, respectively. Also in South Korea, verbal abuse was the highest (63.8%), then physical violence (22.3%) while sexual harassment was 19.7%. (Park et al., 2015). In addition, in a study conducted in Ethiopia by Fute et al., (2015) verbal abuse was the most frequent type (89.6%) then physical violence (18.8%) while sexual

harassment was 13%. These higher frequencies of sexual harassment in both South Korean and Ethiopia studies than in our findings may be due to underreporting because of shyness related to cultural sensitivity of this issue in Egypt. On the other hand, the prevalence of physical violence was 35.6% in a study conducted in one of the Palestinian hospitals. This higher prevalence may be explained by the stress created by war and the political state in this area (Hamdan and Hamra, 2015).

The current study showed that the most common place for violence occurrence was the Emergency department (Table 2). This finding could be attributed to availability of medical services all day in emergency department, the serious condition of patients and panic state of their relatives coming to the Emergency department and insufficient communication and training skills of HCWs. The present study is in agreement with previous studies in Egypt (Abou-El-Wafa et al., 2015; and Abdellah and Salama, 2017). Also, this result is in line with a study conducted in northwest Ethiopia (2019) which found that HCWs who worked in the Emergency department were

four times more likely to be exposed to WPV than those in outpatient clinics (Yenealem et al., 2019).

In the present study, nearly half (49.8%) of the violence incidents occurred during the morning shift and about 31.4% occurred during night shift (Table 2) which is in accordance with the study conducted by Yigitbas and Genc (2019) who found that the highest level of violence (46.9%) was reported between 08:00 am and 4:00 pm. Also in China; Lei et al., (2017) detected that the majority of violence acts against HCWs occurred during the day shift. This could be explained to be the result of congestion and increased circulation during morning shift. However, these findings are contrary to Kabbash and El-Sallamy (2019) who declared that the evening and night shifts were the most frequent time for sexual violence while physical and verbal violence happened equally in all shifts. Also Bilisli and Hizay (2016) found that the evening or night shifts were the time when more than half of violent incidents occurred and explained that by defective security measures and less experience of junior staff to deal with violent situations at night and in the evening shifts.

The current study showed that

patient relatives and friends were the most frequent perpetrators (63.3%) followed by the patients themselves (18.8%) (Table 2). These results agree with the findings of earlier studies in Egypt (Abdellah and Salama, 2017), India (Mishra et al., 2018) and Ethiopia (Tiruneh et al., 2016). This could be attributed to the presence of patient's relatives during patients' management; their excessive stress from fear of loss of patients' lives also not obeying the rules regarding visiting time, in addition to a weak security system.

The studied HCWs' reaction to violence varied. Only about one quarter of the participants (27.1%) reported the attack to the hospital administration, 24.4% tried to defend themselves and 20.3% showed negative reaction in doing nothing (Table 2). Kabbash and El-Sallamy (2019) found that the reactions of the studied nurses to physical violence were calling police, asking for help from their colleagues and self-defense, while Lei et al., (2017) showed that more than 60% of the victims reacted by victims' coping mechanisms as tolerance, patience and understanding. The variation in the response between these studies may be attributed to many factors related

to cultural differences, organization's support, and work experience and training programs as stress management.

The consequences of workplace violence in the health sector have significant impact on health care providers and the effectiveness of health systems, especially in developing countries. The current study showed that frequent headache and irritable colon were the most frequent physical impacts of violence, while psychological effects were in the form of remembering the incidents(40.1%) and wanting to forget the incidents(35.7%). Do not want to go to the work and job dissatisfaction were the most frequent symptoms related to work effects of violence (Table 3). In concurrence with our results; Kabbash and El-Sallamy (2019) found that violence may lead to negative psychological effects as feeling worried and being afraid of people, some of the participants wanted to forget the incidents and others always remembered the events. Also extreme distress in the form of repeated distributed memories, thoughts, or images of the attack, avoiding thinking or talking about the attack were found by Abou-El-Wafa et al., (2015). These negative impacts were also reported in other studies as (Ryan

et al., 2008 and Eker et al., 2012). In line with our results Pearson and Porath (2005) found that physical violence may lead to permanent physical problems as continuous headache, chronic aches, spasm, backache or even the death of a nurse. These consequences have negative impact on the health of HCWs and on the quality of medical service. So, management programs should be provided to overcome these effects.

The prevalence of violence is significantly higher among married HCWs (54.7%) compared to unmarried (Table 4). This finding may be explained as the responsibilities of married females regarding their families may reduce their coping abilities and make them more stressed and more vulnerable to violence incidents than unmarried HCWs.

Also, those working shifts are more likely to report workplace violence than their colleagues of day shift (Table 4). In line with this result, Sun et al., (2017) showed that in the evening or night shifts HCWs were significantly at higher risk for violence than in the morning shifts. The same finding was reported by Ariza-Montes et al., (2013). This may be due to disruption of the circadian rhythm of HCWs working

shifts that increases their likelihood for fatigue, or physical illnesses and reduce their work performance that pose favourable conditions for violence.

In the present study, there was no significant association of violence with age, occupation and duration of employment (Table 4). This is in agreement with Ewis and Arafa (2015) who found that there were no significant differences among nurses who were exposed to violence regarding their age, years of experience and occupation. Contrary to these results, other studies found that less work experience and younger age are more associated with violence (Gacki-Smith et al., 2009). The difference may be related to the difference in study subjects.

The prevalence of violence was higher among HCWs with direct physical contact with patients (53.6 %) compared to those without contact (46.4 %) but the difference was not statistically significant (Table 4). Sun et al., (2017) found that nurses providing physical direct contact with patients were more liable to violence. Also it was found in the current study that there was no significant association of violence with the number of the working staff; the prevalence of violence was higher

among HCWs with less working staff (68.1%) compared to those with more working staff (22.2%) (Table 4). This may be attributed to longer waiting hours for consultation and treatment that was associated with staff shortage. This is in concordance with LeBlanc and Kelloway (2002) who found that decreasing work staff was more associated with violence because it prevents HCWs from adequately coping with patients' demands.

As regards the causes of violence, HCWs suggested that low socioeconomic status of patients, shortage of medical equipment and medicine and inadequate security were the most frequent causes of violence. Other suggested causes as long waiting time, drug abuse of patients and increase work load (Table 5). A study conducted in Abha city by AlSaleem et al., (2018) found overcrowding, long waiting time, heavy workload, staff shortage and lack of security were the main causes of workplace violence. Another study conducted by Mishra et al., (2018) detected that heavy workload on healthcare staff, high patient expectation and drug abuse were the most important factors contributing to violence. Also, shortage of staff increased waiting time

and unmet patients' demands were reported as the most frequent causes of violence by Algwaiz and Alghanim, 2012. In addition, lack of knowledge and skills to handle the situations were recorded as the reason for violent incidents (Kumar et al., 2016).

The studied HCWs reported that provision of adequate equipment and medicine, security measures, legislation and restricting public access to examination rooms were the most frequent preventive measures. In addition, comfortable waiting rooms, increased staff numbers, training on violence prevention and control, were suggested as preventive measures (Table 5). Similar suggested measures were reported by (Koukia et al., 2013 and Kumar et al., 2016). In Turkey, establishment of employee security units and legislation have been implemented to prevent violence against healthcare professionals (Attar, 2017).

Conclusion and Recommendations

Based on the results of the present study, we conclude that WPV is highly prevalent among the studied HCWs. Being a nurse, married, and working in Emergency departments and shift time were associated with the violence. In spite of the fact that most violence

incidents were verbal, physical violence was common and the victims suffered psychological and physical effects in addition to the negative impacts towards work. The current study highlighted the need to develop management strategy to overcome WPV against HCWs. This strategy should include implementing a programme for reporting, analysis and management, legislation enforcement, proper working environment with adequate security. The HCWs should have adequate training on how to communicate and deal with aggressive people. Public education is also essential.

Conflicts of Interest

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