

VIOLENCE AGAINST HEALTHCARE WORKERS DURING COVID-19 PANDEMIC AND ITS IMPACT ON JOB PERFORMANCE AND SATISFACTION

By

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Abstract

Introduction: During the COVID-19 pandemic, a large number of distressed people referred to the health sector, increasing the burden of healthcare workers (HCWs) and inciting violence against them. **Aim of Work:** To investigate the prevalence of workplace violence (WPV), its risk variables, and the pattern of violence against healthcare workers in the context of the COVID-19 pandemic, and to study the relationship between WPV; work satisfaction and performance among the studied group. **Materials and Methods:** A cross-sectional study was conducted at a public university hospital in Cairo, Egypt; convenience sampling was used via an online survey, and data collection took place during the COVID pandemic from June to the end of September 2022. A total of 314 participants (151 physicians and 163 nurses) were surveyed using a standardized, self-administered questionnaire. **Results:** More than half of the studied respondents (55.7%) experienced at least one form of WPV during the COVID-19 pandemic. Verbal abuse was the most common form of violence. Patients' families were the most frequent perpetrator. Violence was more statistically significantly higher against females (60.5%) and was more committed against physicians (63.6%) compared to nurses and mainly during night shift. There was a weak negative correlation between WPV and job performance score, while no significant correlation was found between WPV and job satisfaction score. **Conclusion and Recommendations:** WPV against nurses and physicians is a significant issue that has a detrimental impact on job performance. Proper knowledge of WPV dynamics and efficient prevention is required. **Key words:** Workplace violence, Job performance, Job satisfaction and COVID-19.

Introduction

The National Institute for Occupational Safety and Health (NIOSH) defines Workplace violence (WPV) as any act of aggression, assault, or threat directed aimed at a person while at work, which includes physical attacks, verbal abuse, bullying, and sexual harassment (NIOSH, 2021). WPV is a major rising public health problem that has attracted the concern and attention of the whole community (Abo-Ali et al., 2020). Healthcare sector is particularly associated with a lot of factors that increase the incidence for violence attacks as dealing with individuals in highly stressful, unpredictable, and potentially impulsive situations (Khan et al., 2021). According to a previous study in Saudi Arabia, the rate of violence against HCWs was 65% (Alharthy et al., 2017). In addition, an Egyptian study was carried out in Tanta revealed that physical violence was reported by 30.6% while verbal violence was experienced by 76.5% and 4.7% of participants were subjected to sexual assaults (Kabbash and El-Sallamy, 2019). Moreover, previous research revealed that there is underreporting of WPV rate, which may be due to social or cultural issues

as considering violence as part of the career (Bhatti et al, 2021). Believing that reporting is useless, not knowing how to report, being embarrassed or scared to report are among the most common reasons for not reporting. Patients' relatives are usually reported as the most common perpetrators in different health settings (Lu et al., 2020). WPV was more prevalent in public hospitals compared to private ones (Bhatti et al, 2021). WPV has a lot of serious consequences not only on the exposed HCWs, but also on the quality of delivered health services as it can lead to increased work-related stress, burn out, and absenteeism of healthcare professionals (Odes et al., 2020). It negatively affects job satisfaction and performance, in turn leading to poor quality of health care (Shaikh et al., 2020).

The occurrence and spread of COVID-19 pandemic had triggered and exaggerated aggression against HCWs (Ghareeb et al., 2021). It might be due to physicians instructions for quarantining the confirmed or suspected cases and banning the family visits (Yang et al., 2021), rejection to admit COVID-19 cases due to limited rooms, the refusal to hand over deceased patients' bodies

prior to COVID-19 testing, and a general blaming against HCWs had interrupt the trust and communications between staff, patients and their families, thereby increasing the risk of violence act (Bhatti, 2020). Moreover, the occurrence of COVID-19 increased the rate of stress among HCWs, due to shortage of personal protective equipment (PPE) (Alfuqaha et al., 2022) and the fear of acquiring COVID-19 and potentially transmitting it to others (Neto et al., 2020); which may lead to poor interpersonal communication and increasing the risk of violence (Yang et al, 2021).

Job dissatisfaction is one of the most important predictors of health care worker's intention to leave the job (Steinmetz et al., 2014). In addition, researchers reported that dissatisfied HCWs found to be more likely to prescribe wrong drugs and commit a lot of medicals errors (Klein et al., 2011). Thus, clearly recognition the impact of WPV on health care workers' job satisfaction and performance is highly warranted to develop and prioritize effective suitable strategies (Ali et al., 2018).

Aim of Work

To investigate the prevalence of

workplace violence (WPV), its risk variables, and the pattern of violence against healthcare workers in the context of the COVID-19 pandemic, as well as to study the relationship between WPV, work satisfaction and performance among the studied group.

Materials and Methods

Study design: It is a cross-sectional study.

Place and duration of the study: All physicians and nurses who managed patients with suspected COVID-19 during the pandemic in outpatient's clinics and emergency departments at Ain Shams University Hospital were eligible to participate in the study. Data collection took place during the period from June to the end of September 2022.

Study sample: The current work used a non-random convenience sample. The sample size was estimated by using Open Epi program version 3, assuming a 90% power, 0.05 level of significance, and an estimated proportion of 75 %, based on previous study (Abbas et al., 2020). The required sample size was 300 participants. To accommodate for potential dropout rates, an extra 5 % was added. The final sample size targeted was calculated to be 314 respondents.

Study Methods

A structured, self-administered Arabic questionnaire was sent to participants electronically using WhatsApp platforms. The questionnaire was available through a hyperlink and drawn from relevant literature (Abozaid et al., 2021). It is composed from the following parts:

-The first part inquired on demographic and work-related information such as age, gender, marital status, specialization, years of experience, and rotating night shifts. The second part was adopted based on the World Health Organization (WHO) country survey on violence in healthcare settings (ILO, 2010). It inquired on the occurrence of WPV throughout the past 12 months, the characteristics of the events; the translated Arabic version was developed and validated in a previous study (Abozaid et al., 2021). The third part focused on measuring job satisfaction by a standardized questionnaire "The Job Satisfaction Survey JSS" developed by (Spector, 1997), it contains 36 items: the items on the scale cover different aspects of the job including work organization, salary and promotion prospects, education and training prospects and interpersonal

relationships. The instrument's previous reliability and validity were reported by (Fesharak, 2012), the Cronbach's alpha of (JSS) ranged from (0.75 to 0.90). The instrument's content validity was (76.50%) and the construct validity range between (0.51 and 0.92). The Arabic version of this questionnaire is validated and used in previous studies (Fadlaseed, 2019). The fourth part included The Health and Work Performance Survey, which is a standardized tool developed by the WHO and used in many scientific researches (Kessler et al., 2003). It is a seven-item scale for self-assessment of job performance in the past 4 weeks. It is a 5-point Likert scale ranging from 1 (all the time) to 5 (none of the time). The total score ranged from 7 to 35, where the higher the total score, the more the degree of job performance.

Consent

Informed consent was obtained from all study participants after describing the main study objectives. The questionnaire was anonymous; data confidentiality was maintained.

Ethical Approval

The study was approved by the research ethical committee, faculty

of Medicine, Ain Shams University (Approval number: FWA000017585).

Data Management

All analyses were conducted using a Statistical Package for Social Science SPSS program version 25. Descriptive statistics of the overall

socio-demographic and medical characteristics of the sample was used. Quantitative data was presented as mean and standard deviation. Categorical data was presented as numbers and percentages. P-values of < 0.05 were considered statistically significant.

Results

Table (1): Demographic and job characteristics of the studied HCWs and exposure to violence (No=314).

Demographic and job characteristics	Total (No =314)	%
Age groups		
20-24	75	
25-29	100	23.9
30-35	46	31.8
>35	93	14.6
Age Mean \pm SD	30.26 \pm 6.77	29.6
Age Range	(20-60)	
Gender		
Male	134	42.7
Female	180	57.3
Marital status		
Single	140	44.6
Married	166	52.9
Divorced	8	2.5
Job position		
Physicians	151	48.1
Nurses	163	51.9
Years of experience		
1-4	150	
5-10	74	
>10	90	47.8
Mean \pm SD	7.35 \pm 6.53	23.6
Range	(1-38)	28.7
Number of colleagues in the same place of work		
NO one		
1-5	10	3.2
6-10	194	61.8
11-15	74	23.6
>15	7	2.2
Mean \pm SD	29	9.2
Range	2.53 \pm 0.96 (1-5)	

Working night shift		
Yes	267	85
NO	47	15
Exposure to violence		
Yes	175	55.7
NO	139	44.3
Worried from exposure to violence		
Un worried	66	21
Mildly worried	46	14.6
Moderately worried	153	48.7
Severely worried	49	15.6

As shown in table 1; the study involved 314 participants from different hospital departments 57.3% were female, 52.9% were married and 51.9% were working as nurses .The age of the studied participants ranged from 20 to 60 with Mean and SD 30.26 ± 6.77 years, and the mean years of working experience was 7.35 ± 6.5 years. About 61.8% worked with 1 to 5 colleagues and 85% were involved in night shifts. About 55.7% of the studied HCWs were exposed to violence, and 64.3% were moderately to severely worried from exposure to WPV.

Table (2): Prevalence of workplace violence (WPV), its types and its Job consequences among the studied health care workers (No= 314).

Characteristics of WPV	Total No (%)	Physicians No (%)	Nurses No (%)	Chi square	P value
#Prevalence of violence	175(55.7)	96 (63.6)	79 (48.5)	7.25	0.007*
Types of violence					
Physical	50 (15.9)	24 (15.9)	26 (16)	0.99	<0.001*
Verbal	166(52.9)	92 (60.9)	74 (45.4)	7.59	0.006*
Sexual	17 (5.4)	14 (9.3)	3 (1.8)	8.45	0.004*
Bullying	45 (14.3)	35 (23.2)	10 (6.1)	18.55	<0.001*
WPV consequences on job satisfaction and performance					
WPV	Correlation coefficient		P value		
Job satisfaction score	0.006		0.91		
Job performance score	-0.15		0.008*		

*: Statistically Significant #: Prevalence and frequency in the last 12 months

Table 2 showed that 55.7% of the participants had been subjected to at least one type of violence in their workplace in the last 12 months prior to the study. The most prevalent type of violence was verbal, followed by physical, bullying, and lastly sexual. There were significant differences between physicians and nurses in terms of frequency of experiencing overall violence ($p= 0.007$). Physicians and nurses had a nearly equal prevalence of physical violence, while physicians had a higher prevalence of non-physical violence.

The table also showed the correlation between WPV and job satisfaction and job performance among the studied group. The results showed a weak negative correlation between WPV and job performance score, (correlation coefficient= (-0.15), $p = (0.008)$), while no significant correlation was detected between WPV and job satisfaction ($p = 0.91$).

Table (3): Characteristics of violent events against the Studied HCWs during the COVID-19 pandemic.

Characteristics of WPV	Physical No. (%)	Verbal No. (%)	Sexual No. (%)	Bullying No. (%)
	50 (15.9)	166 (52.9)	17 (5.4)	45 (14.3)
Perpetrators				
Patients	7 (14)	19 (11.4)	3 (17.7)	5 (11.1)
Patients' relatives	42 (84)	128 (77.1)	4 (23.5)	10 (22.2)
HCWs	1 (2)	19 (11.4)	10 (58.8)	30 (66.7)
Reaction to the violence act				
Nothing and ignore	21 (42)	61 (36.7)	12 (70.6)	24 (53.3)
Physically defended and asking to stop	11 (22)	49 (29.5)	1 (5.9)	1 (2.2)
Complain to the senior and hospital administration	18 (36)	56 (33.7)	4 (23.5)	20 (44.5)
Violence can be prevented				
Yes	30 (60)	54 (32.5)	9 (52.9)	19 (42.2)
NO	20 (40)	112 (67.5)	8 (47.1)	26 (57.8)

As shown in table 3; patients' relatives were identified as the primary perpetrators of WPV, especially in the physical and verbal categories (84%) and (77.1%) respectively. HCWs themselves were also significant perpetrators, particularly of bullying (66.7%). In terms of reactions to the violence act, a concerning number of incidents were ignored, which is most prevalent in sexual violence cases (70.6%). However, a substantial proportion of victims reported the violence to senior or administrative staff, especially in cases of bullying (44.5%).

More than half of the participants agreed that physical and sexual assaults could be prevented on the other hand, they disagreed that verbal assaults and bullying could be avoided.

Table 4: Association of WPV with demographic and job characteristics among the studied group.

Demographic and job characteristics Exposed (No=175) No. (%)		Exposure to violence		Chi-square	P value
		Not exposed (No =139) No. (%)			
Age group/year	20-24 (75)	39 (52)	36 (48)	1.67	0.64
	25-29 (100)	59 (59)	41 (41)		
	30-35 (46)	23 (50)	23 (50)		
	>35 (93)	54 (58.1)	39 (41.9)		
Gender	Male (134)	66 (49.3)	68 (50.7)	3.98	0.04*
	Female (180)	109 (60.6)	71 (39.4)		
Marital status	Single (140)	79 (56.4)	61 (43.6)	3.60	0.17
	Married (166)	89 (53.6)	77 (46.4)		
	Divorced (8)	7 (87.5)	1 (12.5)		
Job position	Nurses (163)	79 (48.5)	84 (51.5)	7.25	0.007*
	Physicians (151)	96 (63.6)	55 (36.4)		
Years of experience	1-4 years (150)	82 (54.7)	68 (45.3)	2.66	0.26
	5-10 years (74)	47 (63.5)	27 (36.5)		
	>10 years (90)	46 (51.1)	44 (48.9)		
Working night shift	Yes (267)	155 (58.1)	20 (42.6)	3.89	0.04*
	NO (47)	112 (41.9)	27 (57.4)		
Number of colleagues in the same place of work	Nobody (10)	8 (80)	2 (20)	6.71	0.15
	1-5 (194)	113 (58.2)	81 (41.8)		
	6-10 (74)	33 (44.6)	41 (55.4)		
	11-15 (7)	4 (57.1)	3 (42.9)		
	>15 (29)	17 (58.6)	12 (41.4)		

*: Statistically significant

As shown in table 4; violence was statistically significantly higher against the exposed female HCWs (60.6%) (p-value = 0.04), against physicians (63.6 % of the exposed HCWs) compared to nurses (48.5% of the exposed HCWs) with a p-value

of 0.007 and during the night shifts (p-value = 0.04). Violence was higher with increasing age and years of experience, although it didn't reach any statistically significant association.

Table 5 : Multivariate logistic regression analysis for the predictors affecting suffering from violence in context with the COVID-19 pandemic among the studied HCWs.

#Variables	AOR	95% CI for OR		P value
		LL	UL	
Age	1.02	0.98	1.06	0.46
Gender	1.26	0.77	2.07	0.36
Work specialty	2.49	1.39	4.45	0.002*
Working night shift	3.88	1.84	8.17	0.001*

AOR: adjusted odd's ratio, CI: confidence interval, LL: lower limit, UL: upper limit

*: Statistically significant at $p < 0.05$ #: All variables with $p < 0.05$ were included in the multivariate

To find out the main predictors for WPV among the studied group; a multiple logistic regression analysis was conducted in table 5. The work specialty (physicians) ($P=0.002$) and the work schedule (night shift) ($p=0.001$) were the main significant predictors for WPV.

Discussion

The current study was conducted to measure the magnitude of WPV against healthcare workers during the COVID-19 pandemic, and its impact on their job satisfaction and performance. The study was conducted in one of the largest hospitals in Egypt, which played a major role during the COVID-19 pandemic (Abdelfattah et al., 2020). The current study found that over the half of the respondents (55.7%) experienced violence during the COVID-19 pandemic, (52.9%) reported verbal violence, (15.9%) physical violence, (5.4%) sexual violence and nearly two thirds (64.3%) were moderately to severely worried from increased exposure to WPV during the pandemic (Table 1). The reported rates of violence are consistent with those observed in various Egyptian healthcare facilities during the pandemic, with physical violence occurring in 10 to 40% of cases and verbal violence averaging around 70% (Abo-Ali et al., 2020 and Seddik et al., 2023). However, those numbers are not much different from those reported before the pandemic, according to the systematic review conducted by (Njaka et al., 2020) who reported a ratio of 59 % of HCWs in Egypt being subjected

to violence at the workplace. There has been a general lockdown during the pandemic in Egypt, as well as discontinuity of providing any non-urgent medical services, where ASUHs turned to an isolation hospital with a restricted entry which may have led to the rather lower rates of violence during the pandemic than expected.

A meta-analysis study conducted during COVID-19 suggested that cultural aspects and perception of violence played a role in violence against HCWs, as communities where violence is perceived as a regular and acceptable way to resolve disputes had higher level of WPV incidents (Ghareeb et al., 2021), which may explain yet not justify the high prevalence of WPV against HCWs reported in the current study. Moreover, the overall violence has increased during the COVID-19 pandemic, the United Nations (UN) suggested that the financial difficulties associated with the pandemic, as well as the lockdown have led to increased violence particularly against women (UN, 2021). The healthcare system experienced repercussions from the COVID-19 pandemic, the frontline HCWs have faced tremendous workload, stress of getting infected,

infecting their families, resource scarcity as well as being responsible for people's lives, which lead to anxiety, depression, and even post-traumatic stress disorder (Cawcutt et al., 2020).

According to WHO, violence in the healthcare sector has major impact on HCWs wellbeing, as well as their job motivation, hence affecting their work ability and the quality of care (WHO, 2024). The current study found an inverse weak correlation between exposure to work violence and job performance score (Table 2). Similarly, a study conducted in Tanta university hospital in Egypt revealed that HCWs who experienced violence had a lower job performance scale compared to those who didn't (Abo-Ali et al., 2020). It is logically accepted that HCWs who experience violence incidents would feel less secure at work, which would affect their working ability, work satisfaction as well as their working morale. However, the correlation between exposure to violence and job satisfaction in the current study was statistically insignificant (Table 2). This is inconsistent to (Chenung et al., 2018) study which reported that HCWs who were worried about WPV, were less satisfied at work. No one can deny the

psychological impact of experiencing violence at the workplace, and the consequent effect on job satisfaction. So it might be that during COVID-19 pandemic, HCWs were so focused on their work and saving lives, even if they experienced violence attacks.

Moreover, the respondents who were subjected to physical and verbal violence reported that patient relatives were most likely to perform the violent act (84%) and (77.1%) respectively (Table 3). Comparable findings were reported from similar studies in Ethiopia and Egypt (Tiruneh et al., 2016 and Abdellah and Salama, 2017). This could be attributed to the presence of the patient's relatives near by while being managed; they might become severely anxious over the potential loss of the patient's life. Clear and restricted visiting hours' regulations as well as a high standard security system is warranted to ensure safe work environment for all HCWs.

Female HCWs were the most frequent victims of violence (60.6%) among the studied group (Table 4), which is similar to a study from Iraq done by (lafta et al., 2021) on violence against doctors during the time of COVID-19.

In the present work, the physicians experienced violence more frequently, making up 63.6% of the victims (Table 4). This was in accordance with (Chakraborty et al., 2022) who concluded that physicians were more likely to face violence attack. However, (Mele et al., 2022) found that nurses and unlicensed assistants were more frequently subjected to WPV. This contradiction might be linked to the difference in job hierarch and responsibilities of every member in healthcare team, it is not just a rank or occupation, but rather other factors related to age, gender, confidence to deal with violent situations, as well as work culture among different communities.

Violence was higher among the studied group with increasing age and years of experience, although it didn't reach statistically significant level (Table 4). A recent study in Nepal found that HCWs with experience less than 5 years were less likely to suffer physical violence (Bhusal et al., 2023), they clarified that junior staff have more responsibilities, distressed, and less tolerant and capable of dealing with aggressive patients. Halim et al., 2022 found that HCWs younger than 30 years

old were more likely to experience WPV compared to older ones. Experiencing violence is a multifactorial event; it depends on working conditions, the type of service being delivered, and ability to mitigate violence as well as the patient dealing with, rather than exact age or year of experience of HCWs.

In order to identify the main predictors of experiencing violence among HCWs; Logistic regression analysis was conducted, results revealed statically significant association between WPV, work specialty and night shift ($P=0.002$); ($P=0.001$) respectively (Table 5).

The statistically significant association between WPV and night shift found in the present study (Table 5), goes in line with (Shahjalal et al., 2021) who reported that HCWs undertaking night shift had one and a half the risk to experience WPV (AOR = 1.52; CI: 1.10–2.11). Furthermore (Jiao et al., 2015) found that nurses who worked at night shifts were more likely to experience WPV (physical violence AOR= 3.67; (95% CI 1.28 -10.55), and verbal violence AOR= 1.77; (95% CI 1.12 - 2.79).

Conclusion and Recommendations

The Covid-19 pandemic had a significant impact on the healthcare field. During the COVID-19 pandemic, WPV was experienced by almost half of the studied subjects. There was an increased likelihood of violence among physicians. Health care workers who worked nights were more vulnerable. The most frequent kind of violence reported was verbal abuse. The most frequent offenders were the relatives of the patients. Work performance and WPV experiences were negatively correlated. HCW violence in the workplace is a serious issue. It is necessary to have a thorough understanding of WPV dynamics and efficient prevention techniques should be addressed.

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Conflict of Interest

The authors declared that they have no conflict of interests.

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