

CHANGES IN VIOLENCE AGAINST HEALTHCARE PROFESSIONALS WITH THE COVID-19 PANDEMIC

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ABSTRACT

INTRODUCTION: To investigate how the COVID-19 pandemic has affected violence against healthcare professionals (HCPs). Background: Violence poses a severe threat to healthcare providers.

MATERIAL AND METHODS: All violence cases against HCPs reported in Adiyaman Training and Research Hospital were retrospectively examined in two different periods: between March 22, 2020–March 22, 2021 (pandemic period) and the previous year's same times (pre-pandemic period).

RESULTS: Eighty-eight violence cases against HCPs occurred during the study period were included in the study. Of these cases, 64.8% occurred during the pre-pandemic period and 35.2% during the pandemic period. While the incidence of violence against HCP in the emergency department was 40.4% in the pre-pandemic period, it decreased to 29% in the pandemic period. While the most reason for resorting to violence was not wanting to wait in line in the pre-pandemic period, it was reported as hospital rule violations during the pandemic period.

CONCLUSIONS: Our results showed that characteristics of violence against HCPs have changed in the COVID-19 pandemic.

KEY WORDS: violence; COVID-19; healthcare professionals; workplace violence

Disaster Emerg Med J 2022; 7(2): 75–82

INTRODUCTION

Violence is defined by the World Health Organization (WHO) as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either result in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation” [1]. Workplace violence is common and can have harmful effects on healthcare professionals, such as reduced job satisfaction, poor quality of life, increased stress, burnout, accidents, illnesses, and even death [2].

Workplace violence, like work-related stress and emotional demands, is a psychosocial risk factor

that all employers have to address in the workplace [3]. Psychosocial risk factors are new and emerging risk factors [4]. It is worthy to mention consequences of WV like impaired workability [5], sleep disorders [6], adjustment disorders with anxiety and disorders [7], and burnout [8].

The high burden of emotional distress, workload, fear of death, and transmitting the infection to loved ones were the most important risk factors to HCWs to develop anxiety, burnout, depression, fear, sleep disorders, and post-traumatic stress disorders [9, 10].

The violence poses a serious threat to healthcare providers [2, 11]. It has been reported that violence experienced by individuals working in the health field

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Received: 13.12.2021 Accepted: 23.04.2022 Early publication date: 22.06.2022

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is 16 times more than by those working in other sectors. It is also stated that violence against healthcare professionals is increasing gradually in the world, and thus, it constitutes an important professional problem [12]. According to the quality standards in health, notification systems (such as "code white") are an emergency management tool created to prevent violence against hospital employees [11].

A novel coronavirus (COVID-19) emerged in Wuhan, China in December 2019 and rapidly turned into a pandemic. As in any pandemic, healthcare professionals have had to be at the forefront of the fight against COVID-19, and therefore they are at higher risk of being infected with the pathogen causing this disease. Risks faced by healthcare professionals include exposure to pathogens, long working hours, psychological stress, extreme fatigue, occupational exhaustion, stigma, and physical and psychological violence [13].

During the ongoing COVID-19 pandemic, healthcare professionals are working devotedly and selflessly. We consider that it is important to determine whether people receiving healthcare services have changed their attitudes toward healthcare professionals during this period.

To the best of our knowledge, no study includes cases of violence that occurred against healthcare professionals in the COVID-19 Pandemic in the literature. This study aimed to investigate how the COVID-19 pandemic affected violence against healthcare professionals and offer solutions to prevent violence.

MATERIAL AND METHODS

This study was retrospectively conducted to examine the violent cases against healthcare professionals reported to the Employee Rights and Safety Unit of Adiyaman Training and Research Hospital between March 21, 2019, and March 21, 2021.

The most important action taken on this subject is the establishment of employee rights and safety units in all public hospitals with the circular of the Ministry of Health (Turkey) dated 05/14/2012. The emergency warning code, which was created to prevent violence against healthcare professionals in healthcare institutions, was called 'code white' across the world, including Turkey. "Code White" includes all cases of violence reported against healthcare workers.

Violence cases reported against healthcare workers in the hospital were included in the study. Reports with missing data were excluded from the study.

The cases of violence were examined in two different annual periods: The pre-pandemic was counted from March 21, 2019 to March 21, 2020, and the pandemic period from March 22, 2020 to March 22, 2021. The characteristics of violent cases that occurred during these two periods were compared. The demographic characteristics of the healthcare professionals who were subjected to violence, the number of times the healthcare workers took the matter to the legal authorities, demographic characteristics of the perpetrators, and reasons for the violent acts were examined.

The reasons for violence were examined in the following categories: not wanting to wait in line, patient/patient relative's interference with the treatment process (requesting serum insertion, requesting treatment without blood analysis or imaging results, and treatment rejection), demanding to be examined without an appointment, visitor-companion rule violations, dissatisfaction with treatment and claims regarding the disinterest of the healthcare worker while providing care or delivering news of death to relatives, hospital rule violations (registering with someone else's name, having a picture taken while waiting in line at the hospital, claims of breach of privacy, such as another patient entering the room while the patient is inside, and communication problems), patient's failure to answer questions directed), demanding certain prescriptions or examinations, and dissatisfaction with the physical conditions of the hospital (lack of toilet hygiene and quilt-pillow or single room requests).

Within the scope of the research, a scientific research application was made to the the Turkish Ministry of Health General Directorate of Health Services and approved on 04/02/2021, and written permission was obtained from the hospital management (E-6725 dated 07/08/2021). The ethical standards of the Declaration of Helsinki were respected. Since this is a retrospective chart review study, informed consent was waived for all subjects.

Statistical analysis

Data analysis was performed using the Statistical Package for Social Sciences (SPSS version 17, Chicago, IL). Data were expressed as mean \pm SD for continuous variables and as frequencies and proportions for categorical variables. The student's t-test was used to analyze the mean differences between groups. Categorical data were analyzed using

Table 1. Characteristics of healthcare professionals subjected to violence

Variables, n (%)	Pre-pandemic period (n = 57)	Pandemic period (n = 31)	Total	p value
Gender				
Female	28 (49.1)	14 (45.2)	42 (47.7)	0.722
Male	29 (50.9)	17 (54.8)	46 (52.3)	
Profession				
Physician	27 (47.4)	17 (54.8)	44 (50)	0.560
Nurse/midwife	13 (22.3)	10 (32.3)	23 (26.1)	
Health officer	2 (3.5)	0	2 (2.3)	
Technician	4 (7.0)	2 (6.5)	6 (6.8)	
Medical secretary	4 (7.0)	0	4 (4.5)	
Security guard	3 (5.3)	1 (3.2)	4 (4.5)	
Other*	4 (7.0)	1 (3.2)	5 (5.7)	
Place of violence				
Outpatient clinic	23 (40.4)	13 (41.9)	36 (40.9)	0.336
Emergency department	23 (40.4)	9 (29)	32 (36.4)	
Intensive care unit	4 (7)	1 (3.2)	5 (5.7)	
Ward	7 (12.3)	8 (25.8)	15 (17.0)	
Type of violence				
Verbal	42 (73.7)	27 (87.1)	69 (78.4)	0.338
Physical	3 (5.3)	1 (3.2)	4 (4.5)	
Verbal and physical	12 (21.1)	3 (9.7)	15 (17.0)	
Time of violence				
During working hours	36 (63.2)	18 (58.1)	54 (61.4)	0.639
Outside working hours	21 (36.8)	13 (41.9)	34 (38.6)	
Judicial application				
Yes	32 (56.1)	17 (54.8)	49 (55.7)	0.907
No	25 (43.9)	14 (45.2)	39 (45.3)	

*refers to individuals working in information technologies and data processing, entry, and routing

Pearson's chi-square test. P values less than 0.05 were considered significant statistically.

RESULTS

A total of 88 cases of violence against healthcare professionals were included between March 21, 2019, and March 22, 2021. Of those cases, 57 (64.8%) occurred during the pre-pandemic period and 31 (35.2%) occurred during the pandemic period. When the two periods were compared, there was a statistically significant decrease in violence against healthcare professionals during the pandemic period (difference: 29.6%, $p = 0.007$).

The mean age of these healthcare professionals was 34.25 ± 6.69 years, and the mean age of the

perpetrators was 34.47 ± 6.53 years in the pre-pandemic period. There was no statistically significant difference between the pre-pandemic period and the pandemic period in terms of the gender of the healthcare professionals exposed to violence ($p > 0.05$).

The descriptive characteristics of the healthcare professionals who were subjected to violence are shown in Table 1. Concerning the professional groups, during pre-pandemic period, physicians were most exposed to violence (47.4%, $n = 27$), followed by nurses/midwives (22.8%, $n = 13$), health technicians (7%, $n = 4$), medical secretaries (7%, $n = 4$). In pandemic period, the group that was most subjected to violence was physicians (54.8%, $n = 17$), followed by nurses/midwives (32.3%, $n = 10$), health technicians (6.5%, $n = 2$), data processing/entry/routing

Table 2. Characteristics of perpetrators of violence

Variables, n (%)	Pre-pandemic period (n = 57)	Pandemic period (n = 31)	Total (n = 88)	p value
Female	11 (19.3)	8 (25.8)	19 (21.6)	0.218
Male	46 (80.1)	23 (74.2)	69 (78.4)	
Perpetrator				
Patient	14 (24.6)	4 (12.9)	18 (20.5)	0.334
Patient relative	39 (68.4)	23 (74.2)	62 (70.5)	
Patient and patient relative	4 (7.0)	4 (12.9)	8 (9.1)	

personnel (3.2%, n = 1). There was no statistical difference between the two periods in terms of the profession of the victims of violence ($p = 0.550$).

The cases of violence were mostly seen in the outpatient clinics (40.9%) and the emergency department (36.3%). The rate of violence cases that occurred in the emergency department was 40.4% (n = 23) in the pre-pandemic period and decreased to 29% (n = 9) in the pandemic period, while violence inwards increased from 12.3% (n = 7) in the pre-pandemic period to 25.8% (n = 8) in the pandemic period.

Verbal violence was the most common type of violence in both the pre-pandemic periods and the pandemic period (73.7% and 87.1%, respectively). Physical violence was the least used type of violence in both periods (5.3% for the pre-pandemic period and 3.2% for the pandemic period). The rate of both verbal and physical violence during the same incident was 21.1% (n = 12) for the pre-pandemic period, which decreased to 9.7% (n = 3) during the pandemic period.

Of all the violence cases, 61.3% occurred during working hours. This rate was 63.2% for pre-pandemic period and 58.1% for pandemic period ($p > 0.05$). In 55.7% (n = 49) of the violence cases, the healthcare professional that was exposed to violence took the matter to the legal authorities, while an agreement was reached with the perpetrator in 45.3% (n = 39). There was no statistically significant difference between pre-pandemic and pandemic periods in terms of the rate of violence cases submitted to the jurisdiction ($p = 0.907$).

Of the perpetrators, 78.4% (n = 69) were male and 21.6% (n = 19) were female. Although the violence cases in both the pre-pandemic period (80.1%) and pandemic period (74.2%) were mostly perpetrated by males, there was no statistically significant difference between the two periods

in terms of gender ($p = 0.218$). The mean age of the perpetrators was 34.52 ± 6.69 years for the two years, 33.7 ± 8.00 years for the pre-pandemic period, and 37.7 ± 7.45 years for the pandemic period ($p = 0.024$).

Of all the perpetrators, 70.45% (n = 62) were the relatives of the patients, 20.5% (n = 18) were the patients themselves, and 9.1% (n = 8) were the patients and their relatives. The majority of the perpetrators of violence in both the pre-pandemic period (68.4%) and pandemic period (74.2%) were the relatives of the patients. Table 2 shows the characteristics of individuals who engaged in violent acts against healthcare professionals.

During the pre-pandemic period, the perpetrators' most common reason for resorting to violence was not wanting to wait in line (24.6%), followed by interference with the treatment process (22.8%), wanting to be examined without an appointment (14%), and visitor-companion rule violations (14%). For the pandemic period, the most common reason for resorting to violence was hospital rule violations (25.8%), followed by dissatisfaction with treatment (19.3%), communication problems (16%), and not wanting to wait in line (12.9%). All the reasons for violence against healthcare professionals are shown in Table 3.

DISCUSSION

To the best of our knowledge, this is the first study to investigate the violence that occurred against healthcare professionals during the COVID-19 pandemic. While the incidence of violence was 64.8% in the pre-pandemic period, it was 35.2% in the pandemic period and there was a decrease in the occurrence of violence. It may be that feelings of gratitude towards healthcare workers increase during the COVID-19 pandemic period.

Table 3. Distribution of the reasons for violence according to the periods

Reasons, n (%)	Pre-pandemic period (n = 57)	Pandemic period (n = 31)	Total
Not wanting to wait inline	14 (24.6)	4 (12.9)	18 (20.5)
Patient/patient relative's interference with the treatment process (e.g., requesting serum, requesting treatment before blood analysis or imaging results are ready, and refusing treatment)	13 (22.8)	2 (6.5)	15 (17)
Wanting to be examined without an appointment	8 (14)	3 (9.7)	11 (12.5)
Visitor-companion rule violations	8 (14)	1 (3.2)	9 (10.2)
Dissatisfaction with treatment and claims regarding disinterest of worker while providing care or delivering news of death to relatives	5 (8.8)	6 (19.4)	11 (12.5)
Hospital rule violations (e.g., registering using someone else's name, having a picture taken while waiting in line at the hospital, and claims of breach of privacy, such as another patient entering the room while the patient is inside)	4 (7)	8 (25.8)	12 (13.6)
Communication problems (e.g., patient not answering questions and entering the room ready to argue)	4 (7)	5 (16.1)	9 (10.2)
Patient requesting certain prescriptions, examinations or reports	1 (1.8)	1 (3.2)	2 (2.3)
Dissatisfaction with physical hospital conditions (e.g., poor toilet hygiene and requests for quilt-pillow and single rooms)	0	1 (3.2)	1 (1.1)

In studies on violence against healthcare professionals before the COVID-19 pandemic, different data have been reported about the gender of the victims. While some studies found the frequency of exposure to violence to be higher against men [14, 15], others determined that women were more subjected to such violence [16, 17]. In the current study, male healthcare professionals were found to be exposed to violence more than women in both pre-pandemic and pandemic periods. However, there was no statistically significant between in pre-pandemic period and the pandemic period in terms of the gender of victims. In studies investigating violence against healthcare professionals, different results have also been reported for age. Ilhan et al. [16] found that young healthcare professionals under the age of 25 years were more exposed to violence. In another study, Ayranci et al. [18] determined that exposure to violence was more common in the group aged 39 years and under compared to 40 years and over. In our study, the mean age of the healthcare professionals who were exposed to violence was 34.25 ± 6.69 years.

Some studies evaluating healthcare professionals exposed to violence observed that it was the physicians that were most exposed to violence, followed by midwives and nurses [11].

Some studies found that physicians ranked first in exposure to violence [19–21]. Contrary to these studies, a study showed that most of the healthcare workers exposed to violence were nurses [22].

In the current study, we observed that half of the healthcare professionals who were exposed to violence were physicians, and this was followed by nurses in both the pre-pandemic period and the pandemic period.

In a previous study, verbal or physical violence was reported to occur mostly in outpatient clinics and emergency services [19]. In another study, it was found that the places where violence occurred most were the examination room (23%), emergency department (21%), and clinical wards (19%), and violence mostly occurred during the day (49%) [23]. Consistent with the literature, in our study, violent incidents were mostly seen in the outpatient clinics (40.9%), followed by the emergency department (36.3%). Furthermore, while the incidents of violence in the emergency department and outpatient clinics decreased in the pandemic period, those in the wards increased. In both periods, the least amount of violence occurred in the intensive care unit (7% for the pre-pandemic period and 3.2% for the pandemic period). We attribute this higher rate of violence in the outpatient clinics and emergency department to

the higher number of presentations to the outpatient clinic by appointment and the higher level of anxiety of patients and/or their relatives in the emergency department. Similarly, the lower rate of violence in the intensive care unit may be due to fewer patient relatives/companions being allowed into this unit. Therefore, as a precaution to reduce violence, it may be necessary not to allow relatives and companions into areas of patient care. During the pandemic period, presentation to the emergency department and outpatient clinics decreased, and admissions to inpatient wards increased, which is probably the reason for the higher rate of violence in the wards in this period.

Comprehensive studies in the literature have revealed that the main type of violence against healthcare workers is verbal violence, and physical violence is less common [21, 22, 24, 25]. In line with the literature, in the current study, verbal violence was the most common type of violence and observed at a rate of 73% in the pre-pandemic period and 87% in the pandemic period, while physical violence was the least used type of violence in both periods. In addition, the rate of simultaneous use of both verbal and physical violence was 9.7% in the pandemic period, indicating a decrease compared to the pre-pandemic period.

In a systematic review evaluating violence against healthcare professionals in Turkey, it was stated that 52.5% of violence cases occurred during working hours [15]. Kaeser et al. [26] reported that 68% of the incidents of violence occurred between 2 p.m. and 8 a.m. In contrast, Ferri et al. [27] found that 43% of the violent acts took place in the morning. In the current study, cases of violence were mostly seen during working hours in both periods (63.2% in the pre-pandemic period and 58.1% in the pandemic period). Previous studies have shown that most of the perpetrators of violence against healthcare workers were patient relatives, male, and young [20, 23, 25, 28, 30, 31].

In our study, the perpetrators of violence against healthcare professionals are mostly middle-aged men agree with the literature. In addition, the majority of the perpetrators of violence, 68.4% in the pre-pandemic period and 74.2% in the pandemic period were patient relatives.

In our study, during the pandemic period, 55.6% ($n = 49$) of the healthcare professionals who were subjected to violence took legal action, while 44.4%

agreed with the perpetrator. Similarly, during the pre-pandemic period, more than half the healthcare professionals exposed to violence referred to the judicial authorities, indicating no statistically significant difference between the two periods. Concerning the reasons for violence, a study conducted in a training and research hospital reported the most common reason as the inappropriate attitudes and behaviors of patients and patient relatives at a rate of 55.9% [28]. In another study evaluating violence against healthcare professionals, Oral et al. [19] reported that violence was mostly due to treatment dissatisfaction. Similarly, Turgut et al. [25] showed that violent behavior most frequently emerged as a result of the dissatisfaction of patients and their relatives with treatment or their efforts to have their demands met (38.2%).

In the current study, during the pre-pandemic period, the most common reason for the perpetrators resorting to violence was not wanting to wait in line (24.6%), followed by patient/patient relatives' interference with the treatment process (22.8%), wanting to be examined without an appointment (14%), and visitor-companion rule violations (14%), which is consistent with the literature [17, 18]. However, these reasons were observed to change during the pandemic period, with the most common being determined as hospital rule violations (25.8%), followed by treatment dissatisfaction and communication problems (16%) in that order. During the pandemic period, interference with the treatment process, violation of visitor and companion rules, requesting an examination without an appointment, and not wanting to wait in line were fewer common reasons for violence. This may be because, during the pandemic period, hospitals have been instructed not to examine patients without an appointment made through the central appointment system in Turkey. In addition, the pandemic led to a reduction in the number of presentations to hospitals due to patients' fear and anxiety of contracting the virus, which may have also resulted in a decrease in violence due to the lack of appointments and waiting for the line. As a possible reason for the reduced interference with the treatment process, patients and their relatives may have greater trust and respect for healthcare professionals during the pandemic period compared to the previous period.

Recommendations and implications for policymakers

Violence against healthcare professionals is increasing dramatically across the world, including in Turkey. Healthcare professionals place public health above anything, including their health during the ongoing COVID-19 pandemic, as they did in previous periods. It is necessary to create a safe and peaceful working environment for healthcare professionals and take all the necessary precautions against possible violence cases.

The role of occupational health surveillance and risk assessment for the prevention of psychosocial risk factors and the role of workplace health promotion programs based on mindfulness, spirituality, and training for managing the phenomenon, as well as the cooperation of public health and occupational health stakeholders, is crucial [32–34].

To prevent violence, it is necessary to pass necessary legal regulations regarding violence against healthcare professionals and have sufficient legislative regulations of deterrent quality. Necessary public service announcements should be created to show respect and care for healthcare professionals, and all citizens should be informed about patient rights to be renounced in case of violence. Regardless of the type of violence, a judicial process should be initiated immediately against the individual perpetrating violence against healthcare professionals. Deterrent punishments should be applied to the relatives of patients who resort to violence. Necessary training should be provided for healthcare professionals concerning what to do in case of being subjected to violence.

The code white application should be implemented as a notification system within the hospital, and the efficacy of this system should be checked at regular intervals. It should be ensured that security cameras recording video and sound are used in all units of the hospital.

Limitations

This is a retrospective single-center study, and the number of cases is small. Because this study only included reported cases, it may not reflect actual case numbers. However, it is important to reveal the characteristics of violence against healthcare workers during the COVID-19 epidemic.

CONCLUSIONS

In our study, the cases of violence against healthcare professionals decreased during the COVID-19 pandemic. The perpetrators of violence during both the pre-pandemic period and pandemic period were middle-aged men. In the pandemic period, violence cases that occurred in the emergency department and outpatient clinics decreased, while those observed in the wards increased. In both periods, physicians constituted the group that was most subjected to violence among healthcare professionals. While the most common type of violence was verbal violence in both the pre-pandemic period and pandemic period, the rate of simultaneous verbal and physical violence decreased during the pandemic period. The most common reasons for resorting to violence during the pandemic period changed compared to the pre-pandemic period, with hospital rule violations, dissatisfaction with treatment, and communication problems being the most common reasons reported during the pandemic period.

Conflict of interest

All authors declare no conflict of interest.

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