

Healthcare Under Attack

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Abstract

Aim: Social media triggers an increase in violent incidents in all occupational groups, especially in the health sector. The aim of our study is to identify preventable causes of violence against healthcare workers and reveal the measures that can be taken.

Materials and Methods: Survey questions that would reveal the biopsychosocial effects of violent events were asked to healthcare professionals, and the answers were recorded.

Results: A total of 1006 healthcare workers were included in the study. While 87.8% of the healthcare workers stated that they were exposed to verbal violence, 17.8% indicated that they were exposed to physical violence. While 79.9% of the female healthcare workers stated that violent news on social media increases violence in healthcare, the majority of the healthcare workers stated that the news is not reflected objectively. Nurses experienced the highest rate of verbal violence at 90.2% and applied code white (code violet) the most frequently at a rate of 36.6%.

Conclusion: It is noticeable that the number of cases of violence in the health sector has increased due to unconfirmed news and misinformation on social media. Almost all healthcare workers stated that they were subjected to violence at least once in their working lives, and that they wanted to change their field of work. To improve working conditions and prevent violence, the competent authorities should immediately implement the necessary penal actions that are also deterrent.

Keywords: Healthcare, social media, violence, violent news

Introduction

Violence has existed since the beginning of human history and affects individuals, societies, and all social professions in various ways and degrees according to cultural characteristics. According to the World Health Organization, violence is defined as “the threat or deliberate use of force against oneself, another person or a group resulting in injury, death, psychological harm, developmental delay or deprivation” (1). Violence in healthcare is defined as “coming from the patient, patient’s relatives or any other individual, posing a risk to the healthcare professional: situations consisting of threatening behavior, verbal threats, economic abuse, physical assault, and sexual assault” (2).

Exposure to violence has been increasing in recent years for all professional groups, especially healthcare workers and physicians,

and constitutes a serious health problem. Healthcare workers are at risk for violence all over the world. Between 8% and 38% of employees are exposed to physical violence. In addition, verbal violence and threat rates are much higher than previously reported populations (3). It has been determined that people working in the health sector have a 16-fold increased risk of violence compared to those working in other sectors (4). In addition, one study showed that 25% of all incidents of violence occur in the health sector. It has been stated that 50% of healthcare workers are exposed to violence in different dimensions, from physical violence to psychosocial violence (5). Some factors that increase violence in health institutions are 24-hour uninterrupted service, family members’ inability to cope with stress, extended waiting time due to high patient volume, patients not benefiting from care services as much as they want, and insufficient healthcare and security personnel (6,7).



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Cite this article as: Demirbaş H, Sağlam Gürmen E, Yorgancıoğlu M. Healthcare under attack. Eurasian J Emerg Med. 2025;24(3): 183-9.

Received: 11.02.2025

Accepted: 23.03.2025

Epub: 25.04.2025

Published: 10.09.2025



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Regarding occupational groups, general practitioners are the most frequently exposed to violence, followed by assistant doctors and nurses. When the experience of the employees was examined, the risk of exposure to violence was found to be high, especially in the first 10 years of working life (8). When people who have been subjected to violence are examined, women are found to have a higher relative risk of being exposed to violence (9).

The frequency of violence in the workplace is not clearly known due to the deficiencies and disruptions in the notifications, which are limited only to self-reporters. One study in our country determined that 67% of healthcare workers, 62% of physicians, and 60% of emergency service workers did not report violence or register any complaints (10). When examining violence toward healthcare workers, the majority of people who exhibited violence were between the ages of 21 and 30 years and the relatives of the patients were more inclined to violence than the patients (11).

Occasionally, biased news targeting healthcare professionals is produced in the media (12). The blatant encouragement of violence and the presentation of violence as a search for rights also increase violence against healthcare workers. Presenting a complication occurring during healthcare services as a medical error without adequate investigation also increases the incidence of violence (13).

In our country, as in the rest of the world, some regulations have been made to prevent violence in healthcare. Procedures and principles regarding legal aid to healthcare workers subjected to violence have been established. In this context, the Code White Call system has been implemented, which aims to enable communication in case of a risk of violence, save time for intervention, and ensure employee safety (14).

The aim of our study is to identify preventable causes of violence in healthcare workers and reveal the measures that can be taken. In addition, we investigated the level of exposure to violence and the importance of violent news via social media on the biopsychosocial lives of healthcare professionals working in a tertiary university hospital.

Materials and Methods

This study was conducted under the leadership of the research team between 01.11.2023 and 01.05.2024 at Manisa Celal Bayar University Faculty of Medicine Hospital, Emergency Medicine Clinic Seminar Hall. Healthcare workers in this study were asked survey questions created by the researchers. The survey lasted approximately 5 minutes. Answers to the questionnaire form were recorded. Informed consent was obtained from healthcare

workers. The confidentiality of each participant who filled out the questionnaire was ensured. This survey was conducted according to the Personal Data Protection Law. The survey questions, created by the researchers and designed to take approximately 5 minutes, were administered to volunteer participants under the guidance of the research team at Manisa Celal Bayar University. The responses given to the survey form were recorded in the study form.

Ethics approval was obtained from Manisa Celal Bayar University Non-Interventional Clinical Research Ethics Committee with (decision number: 20.478.486-2071, date: 08.11.2023).

Criteria for Inclusion in the Study:

- Healthcare workers including doctors, nurses, midwives, and health technicians at Manisa Celal Bayar University Faculty of Medicine Hospital

Criteria for Exclusion from the Study:

- Healthcare workers who did not give informed voluntary consent
- Incomplete questionnaires

Statistical Analysis

All volunteer healthcare workers at Manisa Celal Bayar University Faculty of Medicine Hospital were included in the study. All statistical analyses were performed using SPSS for Windows, version 11.5 (SPSS Inc.). The Shapiro-Wilk test was used to assess the normality assumption for the variables “age” and “working year”. In the descriptive statistics, median (minimum-maximum) values were used for “age” and “working year” because they were non-normally distributed. Numbers (n) and percentages (%) were used for categorical variables.

The comparisons between survey questions and demographic variables (gender and occupational groups) were examined using the Pearson chi-square or Fisher's exact test A p value less than 0.05 was considered statistically significant.

Results

A total of 1006 people participated in this study. Of those, 760 (75.5%) were female. The median age of the healthcare workers was 28 (17-68) years. Of the healthcare workers, 413 (41.1%) were doctors, 336 (33.4%) were nurses, 218 (21.7%) were health technicians, and 39 (3.9%) were midwives. The median duration of employment was 5 years (ranging from 1 to 42 years).

Regarding exposure to violence, 883 (87.8%) healthcare workers stated that they were exposed to verbal violence, while 179 (17.8%) indicated exposure to physical violence. The rate of those

who triggered code white (code violet) in cases of violence was 30.5% (n=307).

When we examined the effects of violence on social media of the healthcare workers, 42.1% stated that their work motivation was affected, and 35.2% stated that their career plans were negatively affected.

When we asked the healthcare workers if they had ever considered living or working abroad, 85.2% stated that they had.

While 56.7% stated they are members of a professional organization, association, and/or health union, 79.5% of the healthcare workers stated that professional organizations, associations, and health unions do not have sufficient initiatives and efforts to prevent violence.

The rates of healthcare workers stating that X-ray devices and security guards are insufficient to prevent violence were 76.3% and 90.7%, respectively, (Table 1).

When we compared the exposure of healthcare workers to violence, exposure to verbal violence was more frequent among females than males (88.9% vs. 84.1%, $p=0.046$).

Table 1. Healthcare workers views on violence in healthcare (n=1006)	
Survey questions	n (%)
Have you ever been exposed to verbal violence at some point in your working life?	
Yes	883 (87.8)
No	123 (12.2)
Have you ever been exposed to physical violence at some point in your working life?	
Yes	179 (17.8)
No	827 (82.2)
If you have been exposed to violence before, have you ever applied code white for violence?	
Yes	307 (30.5)
No	699 (69.5)
Do the incidents of violence in health on social media negatively affect your work motivation?	
It does not affect at all	5 (0.5)
Infrequently affects	36 (3.6)
Sometimes it affects	176 (17.5)
It often affects	424 (42.1)
Constantly influencing	365 (36.3)
Do you think that the violent news in health on social media plays a role in the increase in violence in health?	
Has an effect	777 (77.2)
No effect	89 (8.8)
I have no idea	140 (14.0)

Table 1. Continued	
Survey questions	n (%)
Do you think that the violent news in health on social media is published objectively and accurately?	
Yes	84 (8.4)
No	763 (75.8)
I have no idea	159 (15.8)
Are you a member of a professional organization, association, and/or health union?	
Yes	570 (56.7)
No	436 (43.3)
Do you think professional organizations, associations, and health unions have enough initiative and effort to prevent violence?	
Yes	52 (5.2)
No	800 (79.5)
I have no idea	154 (15.3)
Do you think that security personnel in hospitals are effective in preventing violence in healthcare?	
Yes	55 (5.5)
No	912 (90.7)
I have no idea	39 (3.8)
Do you think that X-ray security devices placed at hospital entrances are effective in preventing violence in healthcare?	
Yes	188 (18.7)
No	768 (76.3)
I have no idea	50 (5.0)

When we examined the influence of gender-based violence, the impact on work motivation was more prominent in females than in males (44.1% vs. 36.2%, $p=0.007$). When we asked about changing their professions, the desire to change professions was more frequent in females than males (22.5% vs. 16.3%, $p=0.039$).

Answers to the question “Do you think that the violent news on social media has a role in the increase in violence incidents in healthcare?” indicated that more females than males believe this to be the case, with 79.9% vs. 69.1% agreeing, respectively ($p=0.002$) (Table 2).

There was no statistically significant difference between occupational groups in terms of code white’s ability to effectively address violent incidents, although negative opinions were dominant. A statistically significant difference was found in terms of application of “code white” ($p=0.024$). Of the nurses, 36.6% declared that they applied code white.

When we examined the effect of work motivation affected by violence among occupational groups, a statistically significant difference was observed between the groups ($p=0.001$). 28.1%

Table 2. Comparison of healthcare workers by gender (n (%))			
Survey questions	Male (n=246)	Female (n=760)	p value
Have you ever been exposed to verbal violence at some point in your working life?			
Yes	207 (84.1) ^a	676 (88.9) ^b	0.046*
No	39 (15.9) ^a	84 (11.1) ^b	
Have you ever been exposed to physical violence at some point in your working life?			
Yes	45 (18.3)	134 (17.6)	0.814*
No	201 (81.7)	626 (82.4)	
Do the incidents of violence in health on social media negatively affect your work motivation?			
It does not affect at all	3 (1.1) ^a	2 (0.2) ^a	0.007**
Infrequently affects	12 (4.9) ^a	24 (3.2) ^a	
Sometimes it affects	57 (23.2) ^a	119 (15.7) ^b	
It often affects	89 (36.2) ^a	335 (44.1) ^b	
Constantly influencing	85 (34.6) ^a	280 (36.8) ^a	
Do you think that the news of violence in health on social media plays a role in the increase in violence in health?			
Has an effect	170 (69.1) ^a	607 (79.9) ^b	0.002*
No effect	28 (11.4) ^a	61 (8.0) ^a	
I have no idea	48 (19.5) ^a	92 (12.1) ^b	
Have you ever considered settling or working abroad after the news of violence in health on social media?			
I have never considered	22 (8.9) ^a	127(16.7) ^b	0.006*
I have considered infrequently	29 (11.8) ^a	89 (11.7) ^a	
Sometimes, I consider	54 (22.0) ^a	196 (25.8) ^a	
I often consider	62 (25.2) ^a	168 (22.1) ^a	
I have always considered	79 (32.1) ^a	180 (23.7) ^b	
*Pearson chi-square **Fisher's exact test. a,b: Different letter indices indicate statistically significant differences between groups according to pairwise comparisons			

of the doctors stated that they were affected. A statistically significant difference was found between occupational groups regarding the change of profession due to the violence incidents ($p=0.001$). Of the doctors, 32.9% answered this question as "Sometimes, I think".

A statistically significant difference was observed between professional groups when they were asked whether they thought of settling or working abroad after the news of violence on

social media ($p=0.001$). Of the doctors, 30.0% stated that they constantly think about this situation.

Regarding the effectiveness of X-ray security devices placed at hospital entrances in preventing violence in healthcare, a statistically significant difference was detected between professional groups ($p=0.028$). Additionally, 33.3% of midwives stated that X-ray security devices are effective in this regard.

When opinions on the effects of professional organizations, associations, or unions ($p=0.001$) and security personnel ($p=0.002$) in preventing violence were evaluated, a statistically significant difference was found between society members and non-members. Eighty-five point six percent of the society members and 71.6% of the non-members stated that these organizations did not have sufficient initiatives to prevent violence. In addition, 93% of those with membership and 87.6% without membership stated that security personnel are ineffective in preventing violence.

Discussion

In this study, 87.8% of the healthcare workers stated that they were exposed to verbal violence, and 17.8% were exposed to physical violence. In a study conducted across public hospitals in Palestine, 59.6% of healthcare workers stated that they were exposed to verbal violence, and 20.8% indicated that they were exposed to physical violence. In contrast, in a study conducted on emergency service workers in Palestine, 71.2% of the healthcare workers stated that they were exposed to verbal violence, and 35.6% indicated that they were exposed to physical violence (15,16). In a study conducted in China, it was observed that 92.7% of physicians were exposed to verbal violence (17). In a multicenter study conducted in Türkiye, it was stated that 92.6% of women and 87.5% of men were exposed to verbal violence (18). Our study is consistent with the literature, indicating that the most prevalent form of violence is verbal violence.

In our study, when we looked at the exposure of occupational groups to violence, there was no statistically significant difference in exposure to verbal violence. Nurses experienced the highest exposure to verbal violence at 90.2%, followed by doctors, midwives, and health technicians, respectively. Nurses (23.5%) and health technicians (24.8%) were exposed to physical violence more frequently than doctors and midwives. In a study conducted in Edirne, nurses were the profession that were exposed to the most violence throughout their professional life, with 85% (19). In this respect, while our study is consistent with the literature, some studies state that the physician group is exposed to more violence than the nurse group in England and Palestine (15,20). Reasons such as the field differences of the employees participating in the

Survey questions	Doctors (n=413)	Nurses (n=336)	Midwives (n=39)	Health technicians (n=218)	p value
Have you ever been exposed to verbal violence at some point in your working life?					0.132*
Yes	364 (88.1)	303(90.2)	34 (87.2)	182 (83.5)	
No	49 (11.9)	33 (9.8)	5 (12.8)	36 (16.5)	
Have you ever been exposed to physical violence at some point in your working life?					0.001*
Yes	43 (10.4) ^a	79 (23.5) ^b	3 (7.7) ^{a,b}	54 (24.8) ^b	
No	370 (89.6) ^a	257 (76.5) ^b	36 (92.3) ^{a,b}	164 (75.2) ^b	
If you have been exposed to violence before, have you ever applied code white for violence?					0.024*
Yes 112 (27.1) ^a	123 (36.6) b	9 (23.1) a,b	63 (28.9) ^{a,b}		
No	301 (72.9) ^a	213 (63.4) b	30 (76.9) ^{a,b}	155 (71.1) ^{a,b}	
Have you ever considered settling or working abroad after the violent news in health on social media?					0.001*
I have never considered	37 (9.0) ^a	58 (17.3) ^b	9 (23.1) ^b	45 (20.6) ^b	
I have considered infrequently	46 (11.1) ^a	40 (11.9) ^a	8 (20.5) ^a	24 (11.0) ^a	
Sometimes, I consider	102 (24.7) ^a	92 (27.4) ^a	6 (15.4) ^a	50 (22.9) ^a	
I often consider	104 (25.2) ^a	74 (22.0) ^a	11 (28.2) ^a	41 (18.8) ^a	
I have always considered	124 (30.0) ^a	72 (21.4) ^b	5 (12.8) ^{a,b}	58 (26.6) ^{a,b}	
Do you think that the health violence news on social media is published objectively and accurately?					0.001*
Yes	21 (5.1) ^a	39 (11.6) ^b	5 (12.8) ^{a,b}	19 (8.7) ^{a,b}	
No	337 (81.6) ^a	248 (73.8) ^{a,b}	22 (56.4) ^b	156 (71.6) ^b	
I have no idea	55 (13.3) ^a	49 (14.6) ^{a,b}	12 (30.8) ^b	43 (19.7) ^{a,b}	
Are you a member of any professional organization, association and/or health union?					0.001*
Yes	160 (38.7) ^a	242 (72.0) ^{b,c}	33 (84.6) ^b	135(61.9) ^c	
No	253 (61.3) ^a	94 (28.0) ^{b,c}	6 (15.4) ^b	83 (38.1) ^c	
Do you think professional organizations, associations, and health unions have enough initiative and effort to prevent violence?					0.003*
Yes	29 (7.0) ^a	14 (4.2) ^a	2 (5.1) ^a	7 (3.2) ^a	
No	304 (73.6) ^a	287 (85.4) ^b	34 (87.2) ^{a,b}	175 (80.3) ^{a,b}	
I have no idea	80 (19.4) ^a	35 (10.4) ^b	3 (7.7) ^{a,b}	36 (16.5) ^{a,b}	

*Pearson chi-square. a,b,c: Different letter indices indicate statistically significant differences between groups according to the pairwise comparisons

survey, the role of the profession in the country, and differences in experience, may have led to different results among the studies.

Many studies have determined that female health workers are exposed to violence more than male health workers, both in Türkiye and abroad (21). In our study, in line with the literature, verbal violence was significantly more frequent in female healthcare workers than in male healthcare workers (88.9% vs. 84.1%, $p=0.046$).

When examining complaints about violent acts, and the implementation of code white in our study, there was no difference between the genders. However, it was determined that the nurses were the group that applied the code white with the highest rate, at 36.6% ($p=0.024$). It is seen that reports on the incidence of violence are limited, regardless of sex and occupational group. When the studies in the literature are examined, it appears that a small number of violent incidents in healthcare are reported (22-24). The code white data, the

people who reported the violence were mainly physicians, and our study, therefore, differs from the literature (25,26).

40.9% of the healthcare workers stated that they were often negatively affected psychologically due to news about violence in healthcare on social media; 62.3% indicated that their professions were constantly devalued; and 78.4% stated that this news negatively affected their work motivation. The literature indicates that there is a link between exposure to violence in the workplace and emotional exhaustion. There is a decrease in job satisfaction and motivation among employees who are exposed to violence and symptoms of posttraumatic stress disorder may occur (27-29).

In previous survey studies conducted in the USA, patients, their relatives, and healthcare professionals stated that they felt safe due to the X-ray devices placed at the hospital entrances (30). Again, among the measures that can be taken to solve violent incidents are 24-hour security, security doors, security cameras, and panic alarms (31). In a study conducted in Izmir, 91.6% of health workers stated that security guards were inadequate in preventing violence (32). In our study, 76.3% of the healthcare workers thought that X-ray devices and 90.7% thought that security guards were ineffective and insufficient in preventing violence. Regardless of the occupational group, most of the employees stated that security guards were ineffective in preventing violence. The ineffectiveness of X-ray devices, contrary to what is stated in the literature, can be attributed to several factors. These include the absence of devices at every entrance, underutilization of available devices, and limited availability of devices in hospitals.

In our study, 56.7% of healthcare workers are members of a professional organization; however, only 21.5% of them believe that these organizations make sufficient efforts to prevent violence.

Violence in health is a problem that our country and the whole world face, and it is growing daily. The measures taken to ensure that healthcare workers work in a peaceful and safe environment are insufficient. In many hospitals, security personnel are insufficient, and the interventions have been delayed due to the limitations on authority.

Study Limitations

Since this study was conducted in a single center, the data do not cover the entire region. Our hospital is a tertiary university hospital, so the severity of the patients may affect the incidences of violence. For this reason, more comprehensive and multicenter studies are needed.

Conclusion

People's use of social media is increasing every day. For this reason, access to information is very rapid. Often, the news is not checked to see whether it is true or not. With fake news and misinformation, people may turn against healthcare workers through social media. Therefore, this increases the incidence of violence.

Considering all of this, it is necessary to implement legal deterrents to reduce violence in healthcare. In this way, healthcare workers who experience incident should be encouraged to report via code white. Professional organizations should work more on this issue, and support their members. Black propaganda against health workers and news of violence on social media should be identified, and necessary punitive and deterrent actions should be taken.

Ethics

Ethics Committee Approval: Ethics approval was obtained from Manisa Celal Bayar University Non-Interventional Clinical Research Ethics Committee with (decision number: 20.478.486-2071, date: 08.11.2023).

Informed Consent: Informed consent was obtained from healthcare workers.

Footnotes

Author Contributions

Surgical and Medical Practices: H.D, E.S.G., Concept: H.D, E.S.G., M.Y., Design: H.D, E.S.G., M.Y., Data Collection or Processing: H.D, E.S.G., M.Y., Analysis or Interpretation: H.D, E.S.G., M.Y., Literature Search: H.D, E.S.G., M.Y., Writing: H.D, E.S.G.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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