

Evaluation of violence against emergency physicians

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Cite this article as: Kılıç M, Koçak M. Evaluation of violence against emergency physicians. J Health Sci Med 2022; 5(6): 1693-1697.

ABSTRACT

Aim: To identify the causes of violence in the emergency department and suggest ways to reduce the violence experienced.

Material and Method: The population of this cross-sectional survey study consisted of all emergency medicine physicians who participated in the symposium on frequent emergencies held in Cyprus on May 6, 2022. The survey consisted of a total of 20 items comprising 16 multiple-choice and four fill-in-the-blank questions related to demographic characteristics and violence. It was administered to 230 physicians who volunteered to participate in the study.

Results: A total of 230 physicians, 65.2% (n=150) male and 34.8% (n=80) female, participated in the study. It was determined that 28.7% of the participants had been exposed to physical violence, 89.2% to verbal violence, and 1.3% to sexual violence within the last year. The factors causing violence were identified as the low educational level of patients' and their family members, patient requests for unnecessary medical practices, aggressive nature of family members, and patients' desire to be examined before their turn. As the number of shifts worked by the physicians and number of treated patients increased, the frequency of exposure to violence also increased. Women were exposed to more violence. As the title and age of the physicians increased, the frequency of exposure to violence decreased.

Conclusion: We consider that violence against physicians can be reduced by informing patients and patient's relatives and improving the working conditions of physicians.

Keywords: Healthcare workers, violence against physicians, emergency department

INTRODUCTION

The history of violence goes back as far as the history of humanity. Human history is deeply affected by highly violent events, such as wars that occur from time to time. These acts of violence sometimes reach a global level, affecting populations across the world, suggesting that as long as societies exist, violence will continue to exist. Violence is defined as all individual or social incidents that cause the impairment of the mental or physical integrity of people through force and oppression. According to the World Health Organization, violence refers to the intentional use of physical violence and the threat or actual use of force against oneself, another person, a group, or a community, which results in or is likely to result in injury, death, psychological harm, or loss (1).

Individuals working in the health system are 16 times more likely to be exposed to violence than the other sectors (2). A large number of violent incidents occur in emergency departments every day. These acts of

violence consist of physical violence, verbal violence, and sexual assault. Despite all the measures taken, the incidence of violence has not decreased, and such acts continue to adversely affect both healthcare workers and patients receiving healthcare (3). In a province-based study conducted on health workers in Turkey, it was determined that the most frequent place of violence was the emergency room with a rate of 70.6% (4).

Violence in emergency services cannot be completely prevented due to numerous factors, including the number of presenting patients exceeding the capacity of the department, prolonged waiting time, unavailability of early outpatient clinic appointments, patients' being unwilling to wait, number of patients needed to be seen by an emergency physician being higher than ideal, lack of security measures, and many other reasons (5).

In this study, we aimed to determine the level of exposure to violence of doctors working in the emergency departments and the factors that may cause violence.

MATERIAL AND METHOD

The study was conducted with the permission of University of Health Sciences Fatih Sultan Mehmet Training and Research Hospital Clinical Researches Ethics Committee (Date: 14.04.2022, Decision No: 2022/7). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki.

This study was designed as a cross-sectional survey. The population of this cross-sectional survey study consisted of all emergency medicine physicians who participated in the symposium on frequent emergencies held in Cyprus on May 6, 2022.

All data collection procedures were completed within one month after receiving approval from the ethics committee. The survey form consisted of two pages. It included a section questioning demographic characteristics and 20 questions about the types of violence faced by emergency medicine physicians working in emergency departments and identify the causes of violence. The first four questions were in the form of fill-in-the-blanks questions, and the remaining 16 were prepared as multiple-choice questions. The mean survey completion time was approximately 3 minutes.

Inclusion criteria were being actively working in an emergency department and agreeing to participate in the study. Physicians that did not actively see patients, those that were not actively working in emergency departments, and those that were not voluntary to participate in the study were excluded.

The physicians were verbally informed about the study and their consent was obtained. The survey was administered to the physicians by the responsible and/or assistant researcher in an appropriate environment. The participants were not affected in any way. Survey forms with incomplete data were excluded.

The Number Cruncher Statistical System (NCSS) 2022 and Power Analysis and Sample Size (PASS) 2007 (Utah, USA) were used for statistical analyses. While analyzing the study data, in addition to descriptive statistics (mean, standard deviation, minimum, maximum, median, frequency, and ratio) in the comparison of quantitative data, Student's t-test was used for the two-group comparisons of normally distributed parameters and the Mann Whitney U test for those of non-normally distributed parameters. The Pearson chi-square and Yates continuity correction (Yates corrected chi-square) tests were undertaken to compare qualitative data. Significance was evaluated at the $p < 0.01$ and $p < 0.05$ levels.

RESULTS

A total of 230 emergency doctors (male 65.2%, mean age 32.63 ± 5.6 years) were fulfilled the survey. The demographic characteristics including duration of employment, affiliations and the titles of the participants were presented in **Table 1**.

Table 1. The demographic characteristics of the participants

	Min-Max	Mean±SD
Age	24-55	32.63±5.60
Duration of working	1-31	5.33±5.26
	n	%
Gender		
Male	150	65.2
Female	80	34.8
Institution		
State Hospital	11	4.8
Training and Research Hospital	131	56.9
Medical Faculty	80	34.8
Special Hospital	8	3.5
Degree		
Research Assistant	134	58.3
Specialist	77	33.4
General Practitioner	3	1.3
Others	16	7.0

Physicians participating in the study reported that they were exposed to violence most frequently in the green area (44.3%) and yellow area (39.1%) of the emergency service, respectively. The most frequent attackers were relatives of the patients (96.9%, $n=223$), followed by patients (2.2%, $n=5$) and others (0.9%, $n=2$).

Of the participants, 28.7% ($n=66$) had been exposed to physical violence on duty within the last year. Verbal violence on duty within the last year was reported to be present in 89.1% ($n=205$) of the cases. Sexual assault was experienced by 1.3% ($n=3$) of the participants within the last year. Of the three physicians who were sexually assaulted, two were exposed to such violence twice and the remaining physician once (**Figure 1**).

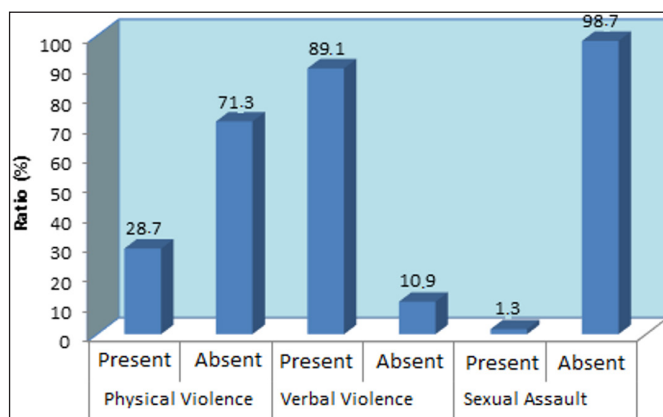


Figure 1. Distribution of violent acts according to the type of violence

The residents were exposed to violence statistically significantly more frequently than other titles (p=0.032). In the group of physicians exposed to physical violence, the number of patients admitted to the emergency department within 24 hours was significantly higher than that of other physicians (p=0.003). The number of shifts of physicians who were exposed to physical violence was significantly higher than those who were not exposed to physical violence (p=0.042). The number of shifts of physicians who were exposed to physical violence was significantly higher than those who were not exposed to physical violence (p=0.042). The number of patients that visited the emergency room in 24 hours was significantly higher for the physician group that was exposed to physical violence compared to the remaining physicians (p=0.003). The mean age of the physicians who were exposed to verbal violence was significantly lower than the mean age of those that were not exposed to verbal violence (p=0.037). The rate of exposure to verbal violence was significantly higher in the female physicians

than in the male physicians (p=0.045). The number of night shifts was significantly higher in the group that was exposed to verbal violence compared to the remaining physicians (p=0.008) (Table 2).

Lastly, a statistically significant difference was detected in the number of security personnel working per shifts in the emergency department according to the presence of verbal violence (p=0.013). The number of security personnel working in a single shift in the emergency department was significantly higher in the group that was exposed to verbal violence compared to the remaining participants.

The physicians who have experienced violence have identified the following factors, in order of frequency, as the violence's causes: low educational levels of patients' family members, patient requests for unneeded medical practices, incorrect information in the press, and patients' desire to be evaluated before their time, and the others (Figure 2).

Table 2. Evaluation of descriptive characteristics according to physical and verbal violence

	Physical Violence		P	Verbal Violence		P
	Yes (n=66)	No (n=164)		Yes (n=205)	No (n=25)	
Age			^a 0.642			^a 0.037*
Min-Max	25-45	24-55		25-55	24-47	
Mean±SD	32,36±5,46	32.74±5.67		32.37±5.43	34.84±6.55	
	n (%)	n (%)		n (%)	n (%)	
Gender			^b 0.068			^c 0.045*
Male	49 (%74.2)	101 (61.6%)		129 (62.9%)	21 (84%)	
Female	17 (%25.8)	63 (38.4%)		76 (37.1%)	4 (16%)	
Institution			^b 0.254			^b 0.211
State hospital	3 (%4.5)	8 (4.9%)		10 (4.9%)	1 (4%)	
Training and research hospital	44 (%66.7)	87 (53%)		121 (59%)	10 (40%)	
Medical faculty	18 (%27.3)	62 (37.8%)		68 (33.2%)	12 (48%)	
Special	1 (%1.5)	7 (4.3%)		6 (2.9%)	2 (8%)	
Title			^b 0.032*			^b 0.057
Resident	42 (%63.7)	92 (56.1%)		125 (61%)	9 (36%)	
Specialist	15 (%22.7)	62 (37.8%)		64 (31.2%)	13 (52%)	
Other	9 (%13.6)	10 (6.1%)		16 (7.8%)	3 (12%)	
Number of patients			^d 0.003**			^d 0.017*
Min-Max (Median)	70-2000 (800)	30-1800 (600)		45-2000 (700)	30-1500 (350)	
Mean±SD	765.68±394.27	616.07±408.24		680.34±406.24	484±397.79	
Work duration			^d 0.916			^d 0.130
Min-Max (Median)	1-21 (3.5)	1-31 (3.0)		1-31 (3.0)	1-20 (5.0)	
Mean±SD	5.38±5.25	5.32±5.28		5.08±5.07	7.44±6.29	
Number of night shifts			^d 0.085			^d 0.008**
Min-Max (Median)	0-12 (10)	0-15 (9)		0-15 (9)	0-14 (7)	
Mean±SD	8.59±2.73	7.73±3.75		8.23±3.28	5.88±4.56	
Number of day shifts			^d 0.194			^d 0.661
Min-Max (Median)	0-20 (10)	0-20 (10)		0-20 (10)	0-20 (10)	
Mean±SD	10.44±4.87	10.01±4.82		10.16±4.59	9.92±6.58	
Number of shifts			^d 0.042*			^d 0.193
Min-Max (Median)	0-30 (20)	0-28 (19)		0-30 (20)	0-28 (18)	
Mean±SD	19.03±5.76	17.74±5.62		18.39±5.27	15.80±8.11	

^aStudent-t Test, ^bPearson Ki-kare Test, ^cYates Continuity Correction Test, ^dMann-Whitney U Test, *p<0.05, **p<0.01

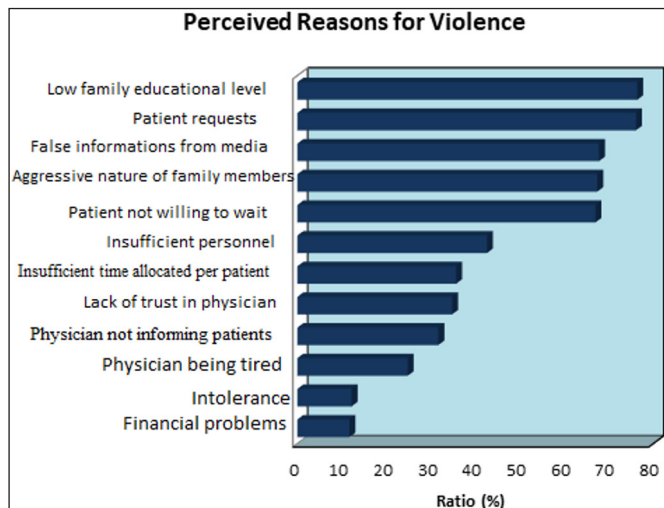


Figure 2. Distribution of participants' thoughts on the reasons for violence

DISCUSSION

In our study, when we examined the physicians' exposure to violence, we determined that verbal violence was more common than physical violence. In a study conducted by Tuğçe et al. (6), the rates of verbal, physical, and sexual violence were detected as 60.7% (n=275), 20.5% (n=93), and 2.9% (n=13), respectively (6). Çamcı et al. (7) reported that the rate of exposure to violence was 72.4% in healthcare providers. Ayrancı et al. (8) determined that 49.5% of healthcare workers were exposed at least one type of violence. In the current study, the rate of exposure to violence was similar to the literature.

In this study, we also evaluated the physicians' perceptions of the causes of violence in the emergency department and determined that high rates of violence were due to the low educational level of the family members of patients, patient requests for unnecessary medical practices, false information published in the press, aggressive nature of family members, and patients' desire to be examined before their turn. In a study carried out by Özişli et al. (2) in the Marmara region, the causes of violence were determined as patients and their relatives being impatient, not being fully informed, and having a low educational level such our findings.

We observed a statistically significant difference between the titles of the physicians according to their exposure to physical violence. Ayrancı et al. (9) reported that nurses constituted the group that was most exposed to violence, followed by general practitioners, while faculty members were least exposed to violence. The specialists not caring for as many patients as residents may also have reduced their recent rate of exposure to violence.

There may be a relationship between patient density and violence. Eroglu et al. (10) reported a relationship between violence and the overcrowded nature of the emergency department. The increase in the number of patients may also increase the workload of physicians, thus reducing the quality of health services provided and leading to violence. Since studies focusing on this relationship are rare in the literature, it is obvious that it is a topic that remains up-to-date.

According to our study, as the number of shifts worked by the physicians increased, their exposure to physical violence increased. Pınar et al. (11) also showed that increased working hours and working in shifts were independent risk factors for experiencing violence. Aksakal et al. (12) determined that working more than 40 hours in a week increased the risk of physical violence by 1.86 times.

There was a significant difference in the ages of the physicians who were exposed to verbal violence compared to those without this experience. In a study by Mirza et al. (13) junior physicians were found to be more likely to report deterioration in work performance compared to their senior colleagues. İlhan et al. (14) stated that people aged less than 25 years were exposed to more violence. We consider that having experience in the profession reduces the rate of violence since it facilitates the better management of emergency services.

The rate of exposure to verbal violence was significantly higher among the female physicians compared to the male physicians. Ertan et al. (15) found that women were more exposed to verbal violence. From a social point of view, it can be stated that physical violence against men and verbal violence against women are more common.

As the number of patients treated by the physicians increased, their exposure to verbal violence increased. Ertan et al. (15) reported that the rate of exposure to violence was 31.9% among physicians that provided care for 10 or fewer patients a day, while this rate increased to 50.2% for those who saw 10-50 patients a day and 71.2% for those who saw 50 or more patients. We consider that prolonging the time allocated per patient and increasing communication with the patient can reduce the incidence of violence.

As the number of night shifts worked by the physicians increased, their exposure to verbal violence also increased. In a study by Ready (16) investigating violence against healthcare workers, an interesting finding was that working in shifts and increased working hours were risk factors for physical violence but did not appear to be risk factors in other types of violence.

CONCLUSION

The problem of violence in emergency services is multifaceted. We believe that measures should be taken by focusing on education levels, socioeconomic conditions and other factors in order to eliminate the causes of violence. Raising awareness of the public, not using emergency services unnecessarily, informing the press accurately, and paying attention to the order of examination can reduce violence in the emergency department. In addition, the improvement of the working conditions of physicians can reduce violence to which they are exposed.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study was conducted with the permission of University of Health Sciences, Fatih Sultan Mehmet Training and Research Hospital Clinical Researches Ethics Committee (Date: 14.04.2022, Decision No: 2022/7).

Informed Consent: All patients signed the free and informed consent form.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

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

Author Contributions: All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

REFERENCES

1. Krug EG, Mercy JA, Dahlberg LL, Zwi AB. The world report on violence and health. *Lancet* 2002; 360: 1083-8.
2. Özişli Ö. Sağlıkta şiddetin nedenleri üzerine bir araştırma. *Usaysad Derg* 2022; 1: 62-8.
3. Türkmenoğlu B, Sümer HE Sivas il merkezi sağlık çalışanlarında şiddete maruziyet sıklığı. *Ank Med J* 2017; 17: 216-25.
4. Adaş EB, Elbek O, Bakır K. Sağlık sektöründe şiddet: Hekimlere yönelik şiddet ve hekimlerin şiddet algısı. *Gaziantep: Gaziantep Kilis Tabip Odası Yayını* 2008.
5. Morley C, Unwin M, Peterson GM, Stankovich J, Kinsman L. Emergency department crowding: A systematic review of causes, consequences and solutions. *PLoS One* 2018; 13: e0203316.
6. Tuğçe ER, Ayoğlu F, Açıkgöz B. Sağlık çalışanına yönelik şiddet: Risk faktörleri, etkileri, değerlendirilmesi ve önlenmesi. *Türk J Public Health* 2021; 19: 69-78.
7. Çamcı O, Kutlu Y. Kocaeli'nde sağlık çalışanlarına yönelik iş yeri şiddetinin belirlenmesi. *Psikiyatr Hemşire Derg* 2011; 2: 9-16.
8. Ayrancı U, Yenilmez C, Balci Y, Kaptanoğlu C. Identification of violence in Turkish health care settings. *J Interpers Violence* 2006; 21: 276-96.
9. Ayrancı Ü, Yenilmez Ç, Günay Y, Kaptanoğlu C. Çeşitli sağlık kurumlarında ve sağlık meslek gruplarında şiddete uğrama sıklığı/the frequency of being exposed to violence in the various health institutions and health profession groups. *Anadolu Psikiyatri Derg* 2002; 3: 147.
10. Eroğlu SE, Onur O, Sagirolu E, Denizbasi A, Akoglu H. Analysis of violence in a crowded emergency room. *Br J Med Med Res* 2013; 3: 1208.
11. Pinar T, Acikel C, Pinar R, et al. Workplace violence in the health sector in Turkey: a national study. *J Interpers Violence* 2017; 32: 2345-65.
12. Aksakal FNB, Kardeşin EF, Dikmen AU, Avcı E, Özkan S. Workplace physical violence, verbal violence, and mobbing experienced by nurses at a university hospital. *Türk J Med Sci* 2015; 45: 1360-8.
13. Mirza NM, Amjad AI, Bhatti ABH, et al. Violence and abuse faced by junior physicians in the emergency department from patients and their caretakers: a nationwide study from Pakistan. *J Emerg Med* 2012; 42: 727-33.
14. İlhan MN, Özkan S, Kurtcebe ZÖ, Aksakal FN. Gazi Üniversitesi Tıp Fakültesi Hastanesinde çalışan araştırma görevlileri ve intörn doktorlarda şiddete maruziyet ve şiddetle ilişkili etmenler. *Toplum Hekim Bul* 2009; 28: 15-23.
15. Erten R, Öztora S, Dağdeviren HN. Sağlık kuruluşlarında doktorlara yönelik şiddet maruziyetinin değerlendirilmesi. *Türk Aile Hek Derg* 2019; 23: 52-63.
16. Ready FN. Sağlık çalışanları şiddet araştırması. *Sağlık-Sen Yayınları* 2013.
17. Aydemir I, Üçlü R, Aydoğan A. Acil servis personeline göre şiddetin nedenleri/according to the emergency room staff the reasons for violence. *J Ist Faculty Med* 2020; 83: 60-9.