NEÜ PRESS

SELÇUK TIP DERGİSİ
SELCUK MEDICAL JOURNAL

DOI:http:/dx.doi.org/10.30733/std.2023.01692
Selcuk Med J 2024;40(1): 39-44

OPEN ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

Is Being an Emergency Service Professional a Risk Factor for Violence in Healthcare?

Acil Servis Çalışanı Olmak Sağlıkta Şiddet için Bir Risk Faktörü müdür?

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ÖZET

Amaç: Hastanelerimizde şiddet olayları giderek artan bir sorun haline gelmiştir. Pek çok şiddet olayı sağlık personelinde yıkıcı hasarlar meydana getirmektedir. Bu çalışmada hastanelerde görülen şiddet olaylarında fiziksel ve sözlü şiddet arasındaki etiyolojik farklılıkları, özellikle acil servis çalışanı olmanın fiziksel ve sözlü şiddete etkisinin olup olmadığını incelemeyi amaçladık.

Gereçler ve Yöntem: Üçüncü basamak bir hastanede 2018-2022 yılları arasındaki dört yıllık beyaz kod vaka kayıtları geriye dönük olarak incelendi. Şiddetin türü, olay yeri, şiddet uygulayan ve uygulanan kişinin cinsiyeti, mesleği kaydedildi. Fiziksel şiddet ve sözel şiddet olarak vakalar iki gruba ayrıldı. Toplanan veriler gruplar arası kıyaslandı.

Bulgular: Belirtilen süre içerisinde 231 beyaz kod vakası bildirilmiştir. Şiddete maruz kalan kişilerin 51,9%'u erkek iken ortanca yaşı 33(28-40) olarak tespit edildi. En çok şiddete maruz kalan meslek 102 kişi (44,2%) ile hekimler olmuştur. En sık şiddet uygulanan yer %54,5 ile acil servis olmuştur. Fiziksel şiddet %26,4 oranında meydana gelmiştir. Acil serviste fiziksel şiddet oranı sözel şiddete (%63,9-%51,2) göre istatistiksel olarak anlamlı olmasa da yüksek bulunmuştur. Fiziksel şiddet olaylarında şiddete maruz kalan kişinin erkek olma oranı, sözel şiddet olaylarına göre istatistiksel anlamlı yüksek bulunmuştur (43/61(70.5%), 77/170(%47) <0,001). Sözel şiddet olaylarında şiddet uygulayan kişinin kadın olma oranı, fiziksel şiddet olaylarına göre istatistiksel anlamlı yüksek saptanmıştır (35/170(20.6%), 3/61(4.9%), <0,001).

Sonuç: Çalışmamızda fiziksel şiddete maruz kalanlar daha çok erkekler olduğu bulunmuştur. Kadınların fiziksel şiddete nazaran sözel şiddeti daha fazla uyguladıkları tespit edilmiştir. Hekimler daha çok sözel şiddete maruz kalmışlardır. Ayrıca fiziksel şiddet olaylarında acil servis lokalizasyonu olma oranı sözel şiddet olaylarına göre yüksek olmasına rağmen aradaki fark istatistiksel anlamlı tespit edilmemiştir.

Anahtar Kelimeler: Fiziksel şiddet, sözel şiddet, beyaz kod, acil servis

ABSTRACT

Aim: Violent incidents have become an increasing problem in our hospitals. Many violent incidents cause devastating damage to healthcare personnel. In this study, we aimed to examine the etiological differences between physical and verbal violence in violent incidents seen in hospitals, and especially whether being an emergency service professional has an effect on physical and verbal violence.

Materials and Method: Four-year white code case records between 2018 and 2022 in a tertiary hospital were retrospectively reviewed. The type and setting of violence, the gender, and the occupation of the perpetrator were recorded. The cases were divided into two groups: physical violence and verbal violence. The collected data were compared between the groups.

Results: During the indicated period, 231 cases of code white were reported. While 51.9% of those affected by violence were men, the mean age was 33 (28-40). Physicians were the most common professional group affected by violence, with 102 individuals (44.2%). The most common site of violence was the emergency service, at 54.5%. The rate of physical violence in the emergency department was found to be higher than verbal violence (63.9%-51.2%), although it was not statistically significant. In cases of physical violence, the proportion of the individual exposed to violence being male was statistically significantly higher than in cases of verbal violence (43/61(70.5%), 77/170(%47) <0,001). The proportion of female perpetrators of verbal violence was statistically significantly higher than that of physical violence (35/170(20.6%), 3/61(4.9%), <0,001).

Conclusion: In our study, it was found that those exposed to physical violence were mostly men. It has been determined that women use verbal violence more than physical violence. Physicians were more exposed to verbal violence. In addition, although the propotion of emergency room location in physical violence incidents was higher than in verbal violence incidents, the difference was not found to be statistically significant.

Keywords: Physical violence, verbal violence, code white, emergency service

Geliş Tarihi/Received: 9 Aralık/December 2023 **Kabul Tarihi/Accepted:** 1 Mart/March 2024 **Yayın Tarihi/Published Online:** 25 Mart/March 2024

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Atıf yapmak için/ Cite this article as: Avci A, Ozer MR, Ay ME. Is Being an Emergency Service Professional a Risk Factor For Violence in Healthcare? Selcuk Med J 2024;40(1): 39-44

Disclosure: *Author has not a financial interest in any of the products, devices, or drugs mentioned in this article. The research was not sponsored by an outside organization. Author has agreed to allow full access to the primary data and to allow the journal to review the data if requested.*

INTRODUCTION

Violence against healthcare workers is increasing day by day (1). Physical violence is four times more common in healthcare facilities than in other industries (2). Violence against emergency service employees causes serious problems for patients, healthcare providers, and healthcare workers exposed to violence. Rates of violence are higher in emergency services than in other settings (3). The high number of applications to emergency services, acute trauma and sudden deaths in the emergency service, patients with low impulse control, psychiatric disorders, and emergencies, or the application to emergency services by those who are under the influence of alcohol/drugs and/or their families, and the inclination of these people to brutality, are the reasons why the emergency service is exposed to violence (4). Violence against medical personnel can be physical or verbal. Violence has emotional effects, such as low morale and low productivity, as well as physical effects on healthcare workers who are exposed to it (5). In addition, physical and verbal violence against healthcare workers has professional implications, such as lower employee retention and the recruitment of new employees (6). Although verbal violence is more common than physical violence, more destructive harm is observed among those exposed to physical violence (2). It has been shown that after physical violence, the repeated memories of the violence, thoughts, and image of the attack cause extreme distress in the person, and severe insomnia is caused by the constant repetition of the attack in the brain. It was reported that 40% of people exposed to physical violence and 25.8% of people exposed to verbal violence were depressed by repeated disturbing memories, thoughts, or images (7).

All healthcare workers, including physicians and nurses, are at risk in cases of increasing healthcare violence (8). Healthcare workers are even more at risk of workplace violence than the police (9). Due to this increased risk, healthcare workers may experience burnout, decreased work efficiency, and disengagement from patients. In addition, the response and decisions of a healthcare worker exposed to physical violence rather than verbal violence vary depending on the level of increased violence. The greater the physical violence, the stronger the healthcare worker's response (10).

The "White Code" application in Turkey has been in effect since May 2012 to protect healthcare workers' safety and record violence. An emergency phone number, "113," has been established to immediately report the violence incident (11). In this way, the incident of violence is recorded and followed up.

Studies in the literature on violence in health care are mostly in the form of survey studies. Unlike the literature, this study is not a survey study. It was conducted using data registered in the "White Code" system. It is important to note that the violence that causes negative situations is either physical or verbal. By examining the recorded incidents of violence, risk factors such as work area (emergency department, operating room, outpatient clinic, etc.), occupational group, gender, and age were identified, as well as possible reasons that may increase physical violence.

MATERIALS AND METHOD

Violence incidents that occurred in a public hospital between January 2018 and May 2022 in the emergency service, outpatient clinic, intensive care unit, and other clinical services were retrospectively analyzed using the data recorded in the "White Code" system. After the public hospital where the study was conducted consented to the use of the data, approval was obtained from a local ethics committee with the decision number 09-2022/11. The study retrospectively examined violent events in the hospital, which were recorded in the "white code" system based on the automation system used. The age, gender, and service of the medical staff who gave the "white code", the age and gender of the perpetrator of the violence, and the quality of the violence (the patient's own, the relatives, etc.) were examined. Additionally, the work area (emergency service, outpatient clinic, etc.) where the code was given and the type of violence were recorded. After writing down the collected data individually, the violent incidents were divided into physical and verbal groups. The data collected between the groups were compared statistically.

Statistical analysis of the data was performed using the SPSS 20.0 package program (SPSS Inc., Chicago, IL). Normality analysis of the data was performed using histograms and the Kolmogorov-Smirnov test. Because all quantitative data did not conform to the normal distribution, the median (25%–75% quartiles) and categorical variables were reported as frequencies (percentages). Differences between the groups were examined with the Mann-Whitney U test for quantitative variables. Comparisons between groups for categorical variables were performed with the chi-square test. A p value of < 0.05 was considered statistically significant.

RESULTS

Our study included 231 hospital staff exposed to violence in the past 4 years, as recorded in the "white code" system. The mean age of staff exposed to violence was 33 years (28-40 years). In general, 51.9% of staff exposed to violence were men, and 48.1% were women. Physicians constituted the majority of violence victims (44.2%), while the next highest rate of violence victims were nurses (30.7%). Looking at the location where the violence occurred, the emergency service was the area with the most white codes, with 126 (54.5%) incidents. While 73.6% of violent incidents were verbal, 26.4% were physical. While 49.4% of the perpetrators were patient relatives, 43.7% of the perpetrators were patients. While 76.6% of the perpetrators were male, 16.5% were female. The detailed characteristics of the violence incidents are shown in Table 1.

Physical violence incidents were referred to as the physical violence group, and verbal violence incidents were referred to as the verbal violence group. There was no statistically significant difference between the median age of those exposed to physical violence and those exposed to verbal violence ($p=0.357$). In the group of those exposed to physical violence, the male sex ratio was statistically significantly higher than that of those exposed to verbal violence ($p<0.001$). In the verbal violence group, the female sex ratio of perpetrators was

Table 1. Comparison gender of victim, gender of perpetrators, location, type, perpetrator of violence

Total incidents of violence		**231(100%)**
Age of victim(years)*		33(28-40)
Gender of victim**	Male	120(51.9%)
	Female	111(48.1%)
Occupation of victim**	Physician	102(44.2%)
	Nurse	71(30.7%)
	Secretary	31(13.4%)
	Security guard	27(11.7%)
Location of violence**	Emergency Service	126(54.5%)
	ICU	14(6.1%)
	Ward	24(10.4%)
	Outpatient clinic	67(29%)
Type of violence**	Verbal	170(73.6%)
	Physical	61(26.4%)
Perpetrator of Violence**	Patient	101(43.7%)
	Relative of patient	114(49.4%)
	Both patient and relative of the patient	16(6.9%)
Gender of perpetrators**	Male	177(76.6%)
	Female	38(16.5%)
	Both male and female	16(6.9%)

*Data are presented as median (25%-75%). **Data are presented as n (%).

statistically significantly higher than in the physical violence group (p<0.001). The ratio of persons affected by verbal violence was statistically significantly higher than that of those affected by physical violence (p<0.001).

The emergency service being the location of violence in the physical violence group was not statistically significant compared to the verbal violence group. Although the rate of physical violence in the emergency department was high among those exposed to physical violence (63.9%-51.2%), no statistically significant p-value was found (p=0.086). Verbal violence was the most commonly reported form of violence by the patient or a patient's relative. In contrast, physical violence was significantly more common in code white situations where the patient and the patient's relative were present (p<0.001). Detailed comparative data between groups can be found in Table 2.

DISCUSSION

In this study, we aimed to find the factors that trigger physical violence against healthcare professionals. The main findings of the study are; we determined that male gender is more exposed to physical violence and female gender is more likely to resort to verbal violence. We also found that verbal violence was used more frequently against physicians than physical violence.

One study mentioned that although verbal violence was more common than physical violence, physical violence was much more destructive. The classification was made according to the severity of violence, and it was found that as the frequency of exposure to physical violence increases, the extent of the person's exposure also increases, which reveals the destructiveness of physical violence (10,12-14).

To this end, we wanted to investigate possible causes that

Table 2. Comparison of verbal and physical violence

		Verbal violence (170)	**Physical violence (61)**	**p-value**
Age(years)*		33(27-40)	34(29-40)	0.357
The ratio of victims**	Male	77(45.3%)	43(70.5%)	0.001
	Female	93(54.7%)	18(29.5%)	
The ratio of physician victims**		91(53.5%)	11(18%)	<0.001
The ratio of emergency service as the location of violence**		87(51.2%)	39(63.9%)	0.086
Gender of perpetrators**	Male	133(78.2%)	44(72.1%)	<0.001
	Female	35(20.6%)	3(4.9%)	
	Both male and female	2(1.2%)	14(23%)	
Type of perpetrators**	Patient	73(42.9%)	28(45.9%)	<0.001
	Relative of patient	95(55.9%)	19(31.1%)	
	Both patient and relative of the patient	2(1.2%)	14(23%)	

*Data are presented as median (25%-75%). **Data are presented as n (%).

lead to an increase in physical violence. Similar to the literature, our study showed that emergency services are the areas where violence is most prevalent. We attribute this to the fact that emergency services provide 24-hour service, that people are in the emergency service when they are most agitated, that any request to the emergency service is considered a true emergency, and that more is expected. According to the results of our study, although more physical violence was observed in the emergency service, this difference was not statistically significant(p=0.086). There may be many reasons why physical violence is more common in the emergency services. The patient or a relative of the patient who commits physical violence may think that it is life-threatening (emergency) negligence. Our study found that men were more often exposed to physical violence, while women were more often victims of verbal violence. We think this is due to the prevailing notion in our society's customs that women should not be touched.

Studies have highlighted that physicians and nurses are more frequently exposed to violence; verbal violence is much more common than physical violence; and physical violence is more common in emergency services than other services (2,3). Also, in these studies, rates of physical violence were found to be about 1/5 of verbal violence. In another study, verbal violence was found to be 3–6 times more common than physical violence, and there were differences in physical violence between countries and races. Verbal and physical violence were found to be more common in Asian and Middle Eastern societies than in European societies, and violence decreased day by day, especially in America (3,15-18).

Many studies on healthcare workers have mentioned that nurses are exposed to higher levels of violence. They have been found to suffer three times more than other healthcare workers. In a study conducted in England, nurses (43.4%) and physicians (13.8%) were found to be the most frequent victims of violence (19). Another study examining the distribution of duties among victims of violence found that 66.67% of victims were nurses, 22.99% were healthcare workers, and 10.34% were paramedics (20). In another study, more than two-thirds of physicians reported exposure to violence throughout their careers, and no significant difference was found between nurses and physicians regarding exposure to violence (21). Studies conducted in Turkey found that the rate of health professionals being exposed to verbal violence was between 75% and 85%, while the rate of being exposed to physical violence was 7% to 26% during their careers. Also, contrary to the literature, as shown in these studies, physicians were exposed to violence at a higher rate than nurses and other healthcare workers (22,23). Another study reported findings that support this situation (24). In our study, most incidents of verbal violence were observed, which is consistent with the literature. Physicians were found to be numerically more exposed to violence. However, although exposure to violence is high, the rate of physical violence is lower than in other professions. Physicians have a lower rate despite the high number of victims of violence since the perpetrator does not inflict physical violence on physicians with social status. However, since physicians are at risk for violence, they may have been exposed to it in large numbers. Almost all studies in the literature are survey studies, and the majority of participants are nurses and non-physician staff, which is why nurses are reported to be exposed to higher levels of violence in many studies of healthcare professionals. Our study is a retrospective study of white codes given and recorded in our hospital, which include real people. In this context, it was found that physicians in our hospital are exposed to higher levels of violence.

The issue of risk factors for violence constituted the main idea of many studies. In the studies conducted, many authors found that healthcare workers under 40 years of age were in the highest risk group, that the group most likely to be victims of violence consisted of members of this age group, and that staff aged 42 years and older experienced less violence (3, 25-27). They stated that other important risk factors are gender and inexperience, especially female gender and insufficient experience, which pose a serious risk of violence, and that only male professionals are victims of physical violence more often than women when involved (26,28-30). They found that inexperienced physicians are exposed to more violence, especially in the emergency service, and that this is due to inexperience and a lack of training in communication skills (14). Another study found that female professionals with less experience working shifts were likelier to be workplace violence victims (31).

Guglielmetti et al. emphasized that male healthcare professionals were twice as likely to be victims of physical violence as female professionals (32). The study by Gerberich et al. highlighted that men were more likely to be exposed to violence than women (19.4% and 12.9%, respectively) (33). In an Italian study by Zampieron et al. (30) and a Turkish study by Ayrancı et al., a large proportion of the victims of violence were women (34). In our study, similar to the literature, the age of the person exposed to violence included healthcare workers under 40. As mentioned in the literature, we think that young professionals are more likely to be victims of violence because of the staff's lack of experience and communication skills in cases of possible violence.

The male gender significantly more often perpetrates violent incidents. Many authors emphasized that male patients, in particular, tend to be more violent than their relatives (30,33,35). Almvik et al. found that physical violence perpetrated by male patients was significantly higher than that perpetrated by female patients (36). In our study, females were found to use more verbal violence. In our study, we found that in cases where the patient and their relatives used violence together, they used more physical violence. The reason why men use less verbal violence may be that men are more prone to physical violence.

Some studies have found that the white code system created by the Ministry of Health to protect staff is underutilized. One study mentioned that most health personnel know this code system, however, it is not known exactly in which situations it should be used. The same study also found that personnel who

know the white code system do not use it intentionally. It is also known that verbal or physical violence causes professional reluctance in employees. Reasons for this include the length of the procedures, ignoring the violence, the weariness of the healthcare professionals or the person's apology (37,38).

Another study found that the reports kept were not meaningful, and the white code was not reported since the legal procedures were not followed (28). Studies abroad have also shown that violence is not reported for similar reasons (2,3,10). We believe that the currently registered white codes are underreporting violence and that the number of white codes is insufficient for similar reasons.

The limitations of this study are that it is a retrospective, single-center study, and the number of cases is small for statistical analysis. The professional experience and experiential data of the person exposed to the violence are not collected, and the case-related reasons for the event that caused the violence are not recorded.

CONCLUSION

When examining the data on violence in health care, we find that the cases in which Code White was activated as a result of violence occurred primarily in the emergency service. Physicians were more affected by violence. Among perpetrators of violence, men tended to be more likely to use physical violence, while women tended to be more likely to use verbal violence. Physicians are at higher risk than other healthcare professionals for verbal violence.

Conflict of interest: *Author declares that there is no conflict of interest between the authors of the article.*

Financial conflict of interest: *Author declares that he did not receive any financial support in this study.*

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