

# Reflection of Violence in Health to Physicians, Its Effect on Anxiety and Depression Levels

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## ABSTRACT

**Objective:** The aim of this study is to examine the impact of violence on health and the effect of violence on anxiety and depression levels in physicians.

**Methods:** 442 physicians working in internal medicine and surgery departments were included in this cross-sectional study. The collected data were analysed using IBM SPSS Statistics, version 27.0.

**Results:** It was found that 63.1% of the physicians were exposed to violence from patients/patient relatives. Anxiety and depression scores were significantly higher among those exposed to violence and those who reported that health-related violence negatively affected their approach to patients.

**Conclusions:** All forms of violence experienced by research assistants, who play an important role in the provision of health care, in the course of their work have a negative impact on their professional and social lives.

**Keywords:** Residency, violence in health, depression, anxiety, hospital anxiety and depression scale

## 1. INTRODUCTION

Violence is a major public health problem that affects all aspects of human life and is increasing worldwide (1). According to the World Health Organization (WHO), violence has emerged throughout human history and is defined as the intentional use of force against oneself, another person, or a group that may cause or contribute to injury, death, or psychological harm (2). Although violence can be found in all areas today, it is particularly prevalent in the workplace and is becoming a serious problem in all professions. In particular, health care institutions are among the high-risk workplaces in terms of exposure to workplace violence. Violence perpetrated in these institutions “comes from the patient, the patient’s relatives or any other person and poses a risk to the health care worker; threatening behaviour, verbal threats, physical assault and sexual assault (3,4). Despite all the precautions and proposals, violence in healthcare has increased over the years. Because of this increase, it is stated that physicians and health care workers are at risk of being exposed to violence ranging from physical to psychological violence (3,5).

WHO emphasizes that 8-38% of those working in health institutions have been exposed to physical violence at

any point in their working life (6). More attention and reporting of physical violence in health institutions causes psychological and verbal violence to be ignored. For this reason, it is estimated that the frequency of violence in health institutions is higher than the stated rates (7). It is stated that especially psychological violence can be more dangerous than physical violence for physicians and health workers in terms of leaving permanent psychological and psychosomatic effects (8).

The main causes of violence experienced in health institutions are factors such as the 24-hour uninterrupted service of the institutions, the presence of stressed patient relatives, the long wait for service, the inability to benefit from health services, the workload, the inadequacy of the number of employees, the work in a crowded environment, the lack of knowledge of the employee about coping with violence, the absence of adequate security personnel, and the inadequacy of laws limiting violence (9,10).

Violence in health institutions is an important issue not only with its causes but also with its consequences. Violence or the threat of violence perpetrated in this area can cause

both dissatisfaction of the employees and negative effects on the structure of the institutions by affecting the service quality. Employees exposed to violence; It is stated that psychological effects of violence such as confusion, anger, helplessness, fear, burnout, loss of confidence, anxiety and depression occur, and post-traumatic stress disorder may develop especially in employees who have been subjected to physical violence (11,12).

The aim of this study is to investigate the reflection of violence in health and the effect of violence on anxiety and depression levels among physicians working as research assistants in the internal and surgical departments of Necmettin Erbakan University Medical Faculty Hospital.

## 2. METHODS

The study was designed as a cross-sectional study. Written permission to conduct the study was obtained from the Non-Pharmaceutical and Medical Device Ethics Committee of Necmettin Erbakan University Medical Faculty (Decision No. 2023/4125) and the Chief Physician of Necmettin Erbakan University Medical Faculty Hospital.

The population of the research consists of 567 research assistants working in the internal and surgical departments of Necmettin Erbakan University Medical Faculty Hospital. The sample size of the study; Based on the chi-squared test in the G Power program, the type 1 error was calculated as 0.05, the power was calculated as 95%, the effect size was small-medium (0.2), and the maximum degree of freedom was 3, with a minimum of 390. Data from the study sample were collected using stratified simple random sampling. First, doctors were stratified according to their specialty, and the number of residents to be reached from each specialty was determined by weighting according to the number of residents in each specialty. Residents in each branch were then contacted using simple random sampling. The inclusion criteria for the study were defined as working as a research assistant in the medical and surgical departments of the hospital, volunteering to participate in the study, and answering all questions on the data collection form. Six participants were found to have deficiencies in the data collection form and were excluded from the study. The research was completed with 442 doctors working as research assistants in internal medicine and surgery who gave verbal consent to participate in the study between 1 and 20 January 2023.

After the literature review for the research, a data collection form consisting of 36 questions and 4 parts was prepared. The first part of the form, consisting of 6 questions, asks about the socio-demographic characteristics of the physicians, the second part, consisting of 4 questions, asks about the characteristics of the working life, and the third part, consisting of 12 questions, asks about the physicians' views on violence in health care. The fourth part of the data collection form is the Hospital Anxiety and Depression Scale (HADS). The HADS is a self-administered scale. It was developed by Zigmond

and Snalth and a Turkish validity and reliability study was conducted by Aydemir et al. (13,14). There are 14 questions in the scale, 7 of which measure anxiety and 7 of which measure depression and are presented in a 4-point Likert structure. For Turkish individuals, the cut-off score for anxiety was 10 and the cut-off score for depression was 7. The scores that can be obtained from both the anxiety and depression subscales of the scale are a minimum of 0 and a maximum of 21 points. The Cronbach's alpha coefficient calculated in the validity and reliability study of the scale was 0.918 (14). In this study, the Cronbach's alpha coefficient of the scale was calculated to be 0.860. Data collection forms were administered to volunteer participants under observation. The forms took approximately 15 minutes to complete.

### 2.1. Statistical analysis

Statistical analysis of the data was performed using IBM SPSS, version 27.0 (IBM Corp, Armonk, N.Y. USA). Visual (histograms and probability plots) and analytical (Kolmogorov-Smirnov) methods were used to test the conformity of the data with the normal distribution. Numerical data were evaluated using arithmetic mean±standard deviation, median (1st and 3rd quarter); frequency distributions and percentages were used to summarise categorical data. Anxiety and depression scores and data; evaluated using Mann-Whitney U and Kruskal-Wallis H tests. Post-hoc Mann-Whitney U test with Bonferroni correction was performed for pairwise comparisons between groups with significant Kruskal-Wallis H test results. Categorical data were compared with the chi-square test. Statistically, cases with p less than .05 were considered significant.

## 3. RESULTS

51.4% (n=227) of the study group consisting of 442 physicians with a mean age of 27.71±2.39 years were female and 58.1% (n=257) were single. The sociodemographic characteristics of the participants are shown in Table 1.

**Table 1.** Sociodemographic characteristics of participants

Characteristic	n (%)	
Gender	Female	227 (51.4)
	Male	215 (48.6)
Marital status	Married	185 (41.9)
	Single	257 (58.1)
Living with	Living alone	177 (40.0)
	With mother and/or father	61 (13.8)
	With spouse and/or child	180 (40.7)
	With a friend	24 (5.4)
Child present	No	259 (81.2)
	Yes	83 (18.8)
Presence of chronic illness	No	412 (93.2)
	Yes	30 (6.8)
Presence of hobby	No	281 (63.6)
	Yes	161 (36.4)

72.2% (n=319) of the physicians included in the study worked as research assistants in internal medicine and 27.8% (n=123) in surgery. The median length of practice was 2.50 (1.50-4.00) years. It was found that 86.4% (n=352) of doctors worked 7.00 (5.00-8.00) shifts per month.

It was found that 63.1% (n=279) of physicians were exposed to violence from patients/patient relatives, mostly verbal violence. It was found that 63.9% of female doctors and 62.3% of male doctors were exposed to violence. The rates of exposure to violence were similar between male and female doctors ( $p = .405$ ). Physicians who were exposed to violence were mostly exposed to violence in the polyclinic (66.3%) and by patients' relatives (89.2%) (Table 2).

**Table 2.** Physicians' exposure to violence

Characteristic		n (%)
Exposure to violence	No	163 (36.9)
	Yes	279 (63.1)
Type of violence (n=279)*	Verbal violence	269 (96.4)
	Physical violence	55 (19.7)
	Sexual violence	13 (4.7)
Place of violence (n=279)*	Polyclinic	185 (66.3)
	Service	152 (54.5)
	Other (emergency, intensive care)	44 (15.8)
Violent (n=279)*	Patient	119 (42.7)
	Patient's relatives	249 (89.2)
	Hospital staff	21 (7.5)

\*Participants ticked more than one option.

According to physicians, the three most important causes of violence in health care were impatience of patients and/or their relatives with 74.7% (n=330), loss of prestige of physicians and health care professionals with 73.5% (n=325) and insufficient criminal sanctions with 73.5% (n=325). The most important reason for female physicians was the decrease in respect towards physicians and healthcare professionals with 81.5% (n=185), and for male physicians, the impatience of patients and their relatives with 71.6% (n=154) (Table 3).

71.9% (n=318) of the doctors surveyed said that violence in health care had a negative impact on their approach to patients. Of the 318 physicians who reported a negative impact, 61.9% (n=197) reported that they felt the need to take precautions against the possibility of violence, 51.6% (n=164) reported that they had difficulty tolerating patients' demands, and 50.6% (n=161) reported that they were afraid to be physically close to the patient. When male and female doctors were assessed separately, the most distressing situation for both groups was "feeling the need to take precautions against the possibility of violence" (Table 4).

If confronted with violence in the workplace, 63.3% (n=280) of doctors said they would give a white code, 22.2% (n=98) would react/defend themselves, 12.2% (n=54) would try to

calm the perpetrators and the remaining 2.3% (n=10) would not react.

**Table 3.** Main causes of health-related violence according to doctors

The main causes of violence in healthcare*	All participants (n=442)	Female physicians (n=227)	Male physicians (n=215)
	n (%)	n (%)	n (%)
Patient and family impatience	330 (74.7)	176 (77.5)	154 (71.6)
Lack of respect for doctors and health professionals	325 (73.5)	185 (81.5)	140 (65.1)
Insufficient criminal sanctions	325 (73.5)	174 (76.7)	151 (70.2)
Health policies	304 (68.8)	159 (70.0)	145 (67.4)
Excessive workload for doctors and health professionals	194 (66.5)	165 (72.7)	129 (60.0)
Misdirection of my society by news and series in the media	267 (60.4)	144 (63.4)	123 (57.2)
Insufficient safety measures in health centres	250 (56.6)	136 (59.9)	114 (53.0)
Insufficient time for patients and their families	245 (55.4)	122 (53.7)	123 (57.2)
Inadequate communication between patient and doctor	175 (39.6)	76 (33.5)	99 (46.0)

\*Participants ticked more than one option.

**Table 4.** Affected type of physician's approach to patients

Influence on approach to patients*	All participants (n=318)	Female physicians (n=173)	Male physicians (n=145)
	n (%)	n (%)	n (%)
Feeling the need to take precautions against the possibility of violence	197 (61.9)	107 (61.8)	90 (62.1)
Difficulty tolerating patient demands	164 (51.6)	95 (54.9)	69 (47.6)
Avoiding being physically close to the patient	161 (50.6)	97 (56.1)	64 (44.1)
Avoidance of out-of-hours medical responsibilities	148 (46.5)	79 (45.7)	69 (47.6)
Reduced verbal communication with patient	137 (43.1)	66 (38.2)	71 (49.0)
Feeling the need to consult other departments more	137 (43.1)	76 (43.9)	61 (42.1)
Decreased ability to explain to patients and their families	101 (31.8)	50 (28.9)	51 (35.2)
Shortening of history and examination process	89 (28.0)	44 (25.4)	45 (31.0)
Not wanting to be in hospital	141 (44.3)	89 (51.4)	52 (35.9)
Don't want to give up medicine	73 (23.0)	47 (27.2)	26 (17.9)

\*Participants ticked more than one option.

It was found that 80.1% (n=354) of doctors were concerned about being exposed to violence in the course of their work. In the hospital where they work, 30.3% (n=134) of the doctors reported feeling safe, 20.1% (n=89) were undecided, and 49.6% (n=219) did not feel safe. 66.1% (n=292) of doctors reported that the violence they experienced and/or witnessed had a negative impact on their social life.

**Table 5.** Comparison of socio-demographic characteristics of physicians with their HADS scores

Characteristic	Anxiety Score		Depression Score	
	Median (Quarter 1-3)	p value	Median (Quarter 1-3)	p value
<b>Gender</b>				
Female	9.00 (6.00-11.00)	.003*	8.00 (5.00-10.00)	.840*
Male	8.00 (6.00-10.00)		7.00 (5.00-10.00)	
<b>Marital status</b>				
Married	8.00 (6.00-11.00)	.367*	7.00 (4.00-10.00)	.459*
Single	8.00 (6.00-11.00)		8.00 (5.00-10.00)	
<b>Living with</b>				
Living alone	8.00 (6.00-11.00)	.789**	8.00 (5.00-10.00)	.359**
With mother and/or father	8.00 (5.50-11.00)		7.00 (3.50-9.00)	
With spouse and/or child	8.00 (6.00-11.00)		7.00 (4.00-10.00)	
With a friend	8.50 (6.00-10.00)		8.00 (6.25-11.00)	
<b>Child present</b>				
No	8.00 (6.00-11.00)	.476*	8.00 (5.00-10.00)	.079*
Yes	8.00 (6.00-11.00)		7.00 (4.00-9.00)	
<b>Presence of chronic illness</b>				
No	8.00 (6.00-11.00)	.005*	7.00 (5.00-10.00)	.523*
Yes	10.50 (6.75-13.25)		7.00 (4.75-12.25)	
<b>Presence of hobby</b>				
No	8.00 (6.00-11.00)	.178*	8.00 (5.00-10.00)	.118*
Yes	8.00 (5.00-10.00)		7.00 (4.00-10.00)	
<b>Branch</b>				
Internal Sciences	8.00 (6.00-11.00)	.054*	7.00 (5.00-10.00)	.262*
Surgical Sciences	9.00 (6.00-11.00)		8.00 (5.00-10.00)	

\*Mann-Whitney U test

\*\*Kruskal-Wallis H test

The median HADS anxiety score for physicians was 8.00 (6.00-11.00) and the median depression score was 7.00 (5.00-10.00). While 36.2% (n=160) of physicians had an anxiety score of 10 and above, 60.2% (n=266) had a depression score of 7 and above. The comparison of socio-demographic characteristics of physicians with anxiety and depression scores is shown in Table 5. The anxiety scores of female doctors were significantly higher than those of male doctors (p= .003). Anxiety scores were significantly higher in patients with chronic diseases than in those without (p= .005).

Anxiety and depression scores were found to be significantly higher among those who were exposed to violence, those who reported that violence in health care had a negative impact on their approach to patients, those who worried about being exposed to violence while performing their duties, and those who reported that violence in health care had a negative impact on their social life. The anxiety and depression scores of doctors who reported feeling unsafe at work were significantly higher than those who were undecided and those who reported feeling safe (p< .001) (Table 6).

**Table 6.** Comparison of physicians' responses to the questions on health-related violence with the scores they received from HADS

Characteristic	Anxiety Score		Depression Score	
	Median (Quarter 1-3)	p value	Median (Quarter 1-3)	p value
<b>Exposure to violence</b>				
No	7.00 (5.00-10.00)	.006*	6.00 (3.00-9.00)	<.001*
Yes	8.00 (6.00-11.00)		8.00 (5.00-10.00)	
<b>Affected approach to the patient</b>				
No	7.00 (4.00-9.00)	<.001*	6.00 (3.00-9.00)	<.001*
Yes	9.00 (6.00-11.00)		8.00 (5.00-10.00)	
<b>Living the Worry</b>				
No	7.00 (5.00-10.00)	.004*	6.00 (3.25-9.75)	.020*
Yes	8.00 (6.00-11.00)		8.00 (5.00-10.00)	
<b>Negative impact on social life</b>				
No	6.00 (4.00-9.00)	<.001*	5.00 (2.00-8.00)	<.001*
Yes	9.00 (7.00-12.00)		8.00 (6.00-10.00)	
<b>Feeling safe at work</b>				
Feels safe	7.00 (4.75-10.00)	<.001**	5.00 (2.00-9.00)	<.001**
Indecisive	8.00 (5.00-10.00)		7.00 (5.00-10.00)	
Doesn't feel secure	9.00 (7.00-12.00)		9.00 (6.00-10.00)	

\*Mann-Whitney U test

\*\*Kruskal-Wallis H test

#### 4. DISCUSSION

The aim of this study was to examine the impact of violence in health on the work and social life of physicians working as research assistants and to determine the effect of this impact on the level of anxiety and depression in physicians. The study



found that more than half of the research assistants were exposed to violence. In the studies conducted, it was found that the prevalence of violence in health care was 25.0% in the USA, while this rate was 19.0% in Iran (15,16). A meta-analysis study conducted in China reported that the overall prevalence of healthcare workers experiencing violence was 62.4% (17). In studies conducted in our country, these rates varied from 49.3-68.2% (18-21). These differences in the prevalence of violence have been attributed to socio-cultural differences between the provinces or countries in which the studies were conducted, the fact that the participants were selected from different health care units, working conditions such as the number of patients cared for daily, the number of shifts, and personal characteristics such as age and year of work.

This study found that almost all of the doctors who reported being exposed to violence were exposed to verbal violence and about one fifth were exposed to physical violence. Similar studies of national and international health professionals have found rates of exposure to verbal and physical violence similar to the findings of this study (19,22).

In this study, the frequency of violence was similar between male and female doctors. This finding differs from studies showing that women are exposed to more violence (19,27).

4.7% of the doctors included in the study reported that they had been exposed to sexual violence. It has been reported in the literature that rates of sexual violence against health care workers vary from 2.2 to 8.6% (19,22,27). Sexual violence ranges from shouting and gestures to rape. Some acts of sexual violence may be considered as physical or verbal violence. This can be interpreted as a reason for the differences in rates.

The study found that physicians were most exposed to violence in the polyclinic and by patients' relatives. Some studies found that the most common places of violence were emergency services and inpatient services (23,24). A study using white code data also reported that violent events were more frequent in the emergency department (25). In contrast to the literature, this study found a higher proportion of people who reported experiencing violence in outpatient settings. The reason for this difference may be related to the patient load of the hospital where the study was conducted, the waiting time in the polyclinic and the socio-cultural level of the society in which the study was conducted. Violence, as a social phenomenon, has a dynamic structure. In this context, the differences in the place and time of the research and the people who applied to the hospital may have caused the differences in the places where violence was experienced. Similar to the literature, the study found that the majority of violence was perpetrated by the patients' relatives (19,26). Impatient and unsympathetic behaviour of patients' relatives, insufficient information about the diagnosis and treatment of their patients, and ineffective communication with doctors can be considered as reasons for this finding.

In this study, impatience of patients and/or their relatives, reduced respect for doctors and health professionals and inadequate criminal sanctions were found to be the three most common causes of violence in health care. In a similar study conducted by Uskun in 2022, the most common causes were: illiteracy, low socio-economic status, psychological and social problems, health policies, inadequate legal regulations and safety measures, and the media (27). In a study conducted in Pakistan, lack of patient education was found to be the most common reason (28). Although the ways in which the reasons are expressed in the studies vary, it can be interpreted that the reason for violence is related to the level of education of individuals in the society and the cultural and sociological structure of the society. For this reason, it can be concluded that violence in health is multidimensional and it is an issue that should be evaluated from this perspective.

For female doctors, the most important reason for violence against health workers was the lack of respect for health workers, while for male doctors it was the impatience of patients and their relatives. A male-dominated social structure, gender perceptions and power imbalances between the sexes make it difficult for women to be respected in both their professional and social lives. This may have paved the way for the inability of patients and their relatives to respect female doctors and why violence in health care is the most important reason for female doctors.

The study found that almost three-quarters of doctors had experienced a negative impact on their approach to patients as a result of witnessing or experiencing violence. The doctors who reported being most negatively affected were found to feel the need to take precautions against the possibility of violence, to have difficulty tolerating the demands of patients, and to be afraid of being physically close to the patient. In a similar study, it was found that health workers who were exposed to violence displayed a more cautious and self-protective attitude towards patients and did not enjoy their work as much as before (27). Another study showed that the doctor-patient relationship, which is based on trust in the health care system, can deteriorate because of health care violence (29). Mistrust, negative emotions and self-protective attitudes between doctor and patient can disrupt patient-doctor communication and increase the risk of violence. This highlights the importance of improvements in the area of violence in health care, both to improve the quality of health care and to protect the doctor-patient relationship, which should be based on trust.

The study found that about a third of doctors screened with the HADS had anxiety and more than half had depression. In some international studies, the general prevalence of anxiety among physicians ranged from 20.0-74.1%, and the prevalence of depression from 21.3-62.0% (30-33). The rates of anxiety and depressive symptoms found in this study are consistent with international studies, but the figures may vary depending on the country, setting and screening tool used. In

addition, similar to the literature, female doctors were found to have higher levels of anxiety than males (32,33).

In this study, those who were exposed to violence had higher levels of anxiety and depression than those who were not, and those who reported that violence in health care had a negative impact on their approach to patients. It has been supported by studies that various psychological problems such as post-traumatic stress disorder, anxiety, depression and burnout can occur in health care workers exposed to violence (11,15,19,26,30). In addition, it has been noted that friends and family members of victims of violence may also experience psychological distress, and even the occupational and psychological status of those who witness violence may be adversely affected (34).

In addition, the anxiety and depression scores of doctors who reported that they did not feel safe at work were higher than those who were undecided and those who reported that they did feel safe. In a study conducted by Yilmaz in 2020, 68.0% of healthcare workers who were exposed to violence reported that they did not receive support from their managers (35). The fact that doctors and health workers do not receive enough support from managers after the violence they experience, the lack of a system that protects them when they are right, the inadequacy of criminal sanctions and the inability to provide quick and adequate solutions as a result of complaints lead to a decrease in the trust of health workers towards the system they are in and the hospital.

## 5. CONCLUSIONS

As a result of this study, which was conducted on 442 physicians working as research assistants in the Department of Internal and Surgical Sciences at Necmettin Erbakan Faculty of Medicine Hospital, it was found that more than half of the physicians were exposed to at least one type of violence. The study found that the prevalence of anxiety was 36.2% and the prevalence of depression was 60.2% among physicians screened with the HADS. Anxiety and depression scores were higher among those who had been exposed to violence, those who reported that violent incidents had affected their approach to patients, those who did not feel safe while working in the hospital, those who reported that the violent incidents they experienced and/or witnessed had a negative impact on their social life, and those who reported that they were worried about encountering violence while performing their duties.

All forms of violence experienced by research assistants, who play an important role in the provision of health care, in the course of their work have a negative impact on their professional and social lives. It prevents physicians exposed to violence from performing their work in a prejudiced way, reduces their tolerance towards patients and prevents them from performing their work in a healthy way. It is necessary to solve the problems of violence against health professionals and to create a safe environment for doctors to practice their profession. It is also extremely important to identify the

factors that lead to violence and to recommend solutions to prevent it. Before doctors can effectively care for their patients, they must feel safe. Managers should also fulfil their obligations to ensure a safe environment. Physicians should be informed about code white practices and legal recourse available after violence, and should be supported in implementing these steps after violence. Staff exposed to violence should be provided with immediate and appropriate security support. If necessary, psychological support should be provided.

Our study had a number of limitations. Due to the cross-sectional design of the study, causal relationships between different factors associated with anxiety and depression could not be evaluated for a long time. In addition, only research assistants working at the Faculty of Medicine were included in the study. It is an important limitation that those who work as health professionals in different institutions and in different areas are not included in the study. Finally, the HADS used to assess the prevalence of anxiety and depression is a self-administered screening tool and is not used for diagnostic purposes. Therefore, studies using diagnostic tools such as the Structured and Clinical Interview for DSM or the Mini International Neuropsychiatric Interview are recommended to confirm our findings. Despite the above limitations, this study highlights the negative impact on the mental health of people exposed to health violence and contributes to the literature on the importance of this issue.

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**Author Contributions:**

Research idea: MY, RÇ

Design of the study: LSD, MY, RÇ

Acquisition of data for the study: LSD, MY, RÇ

Analysis of data for the study: MY, RÇ

Interpretation of data for the study: LSD, MY, RÇ

Drafting the manuscript: LSD, MY

Revising it critically for important intellectual content: LSD, MY

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## REFERENCES

- [1] Butchart A, Mikton C, Dahlberg LL, Krug EG. Global status report on violence prevention 2014. World Health Organization. 2015; 21(3): 213. DOI: 10.1136/injuryprev-2015-041640.
- [2] Krug EG, Mercy JA, Dahlberg LL, Zwi AB. The world report on violence and health. The lancet. 2002; 360(9339): 1083-1088. DOI: 10.1016/S0140-6736(02)11133-0.
- [3] Shi L, Li G, Hao J, Wang W, Chen W, Liu S, Yu Z, Shi Y, Ma Y, Fan L, Zhang L, Han X. Psychological depletion in physicians

- and nurses exposed to workplace violence: A cross-sectional study using propensity score analysis. *International Journal of Nursing Studies*. 2020; 103: 103493. DOI: 10.1016/j.ijnurstu.2019.103493
- [4] Taquette SR, Monteiro Maia LD. Causes and consequences of adolescent dating violence: A systematic review. *J Inj Violence Res*. 2019; 11(2): 137-147. DOI: 10.5249/jivr.v11i2.1061.
- [5] Atan Ünsal S, Dönmez S. Workplace violence against nurses. *Journal of Forensic Medicine*. 2011; 25(1): 71-80. DOI: 10.13140/RG.2.1.1772.1685
- [6] World Health Organization. Preventing violence against health workers. Accessed [10 May 2023] <https://www.who.int/activities/preventing-violence-against-health-workers>.
- [7] Sarcan E. Society's perspective on violence against health care workers. Master's thesis. Ankara: Gazi University; 2013.
- [8] Davenport N, Schwartz RD, Elliot GP. *Bullying: Emotional injury at work*. Ömertoy OC. Istanbul: Sistem Publishing. 2003.
- [9] Berlanda S, Pedrazza M, Fraizzoli M, de Cordova F. Addressing risks of violence against healthcare staff in emergency departments: The effects of job satisfaction and attachment style. *BioMed research international*. 2019; 1: 5430870. DOI: 10.1155/2019/5430870.
- [10] Uyar M, Yıldırım EN, Şahin TK. Determination of perspectives of violence on health workers of 18 years and older adults who apply to family health centres in Meram district of Konya province. *ESTUDAM Public Health Journal*. 2020; 5(1): 113-120. DOI: 10.35232/estudamhsd.648576.
- [11] Havaei F, Astivia OLO, MacPhee M. The impact of workplace violence on medical-surgical nurses' health outcome: A moderated mediation model of work environment conditions and burnout using secondary data. *International journal of nursing studies*. 2020; 109: 103666. DOI: 10.1016/j.ijnurstu.2020.103666.
- [12] Camcı O, Kutlu Y. Determination of workplace violence toward health workers in Kocaeli. *Journal of Psychiatric Nursing*. 2011; 2(1): 9-16.
- [13] Zigmund AS, Sanlth RP. The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*. 1983; 67: 361-370.
- [14] Aydemir Ö, Güvenir T, Küey L, Kültür S. The validity and reliability study of the Turkish version of the Hospital Anxiety and Depression Scale. *Turkish Journal of Psychiatry*. 1997; 8: 280-287.
- [15] Gacki-Smith J, Juarez A, Boyett L, Homeyer C, Robinson L, MacLean SL. Violence against nurses working in US emergency departments. *J Nurs Adm*. 2009; 39(7-8): 340-349. DOI: 10.1097/NNA.0b013e3181ae97db.
- [16] Abou El Wafa HS, El Gilany AH, Abd El Raouf SE, Abd Elmouty SM, El Sayed Hassan El Sayed R. Workplace violence against emergency versus non-emergency nurses in Mansoura University hospitals, Egypt. *J Interpers Violence*. 2015; 30(5): 857-872. DOI: 10.1177/088.626.051453627.
- [17] Lu L, Dong M, Wang SB, Zhang L, Ng CH, Ungvari GS, Li J, Xiang YT. Prevalence of workplace violence against health-care professionals in China: A comprehensive meta-analysis of observational surveys. *Trauma, Violence & Abuse*. 2020; 21(3): 498-509. DOI: 10.1177/152.483.8018774429.
- [18] İkişik H, Yılmaz FK, Karacanoğlu A, Kadayif A, Güven İ, Özdemir GM, Taşdan H, Koç F, Evli Ç, Demirci İG, Maral I. Evaluation of research assistants' exposure to violence in health care and their opinions on violence in health care. *Abant Medical Journal*. 2021; 10(1): 55-64. DOI: 10.47493/abantmedj.2021.33
- [19] Er T, Ayoğlu F, Açıkgöz B. Violence against health care workers: Risk factors, impact, assessment and prevention. *Turkish Journal of Public Health*. 2021; 19(1): 69-78. DOI: 10.20518/tjph.680771.
- [20] Köylü E, Kurtoğlu YK. Burnout syndrome and related factors among senior students and physicians at the Faculty of Medicine, Kütahya Health Sciences University. *The Journal of Turkish Family Physician*. 2022; 13(1): 3-11. DOI: 10.15511/tjtfp.22.00103.
- [21] Akkaya N. Evaluation of the well-being of research assistants working at Dokuz Eylül University Hospital. Master thesis. Izmir; Dokuz Eylül University; 2018.
- [22] Hamdan M, Abu Hamra A. Workplace violence towards workers in the emergency departments of Palestinian hospitals: a cross-sectional study. *Human resources for health*. 2015; 13(1): 1-9. DOI: 10.1186/s12960.015.0018-2.
- [23] Behnam M, Tillotson RD, Davis SM, Hobbs GR. Violence in the emergency department: A national survey of emergency medicine residents and attending physicians. *The Journal of Emergency Medicine*. 2011; 40(5): 565-579. DOI: 10.1016/j.jemermed.2009.11.007.
- [24] Ozen Bekar E, Çevik E. Violence against health care workers in Düzce in the light of white code data. *Journal of Düzce University Institute of Health Sciences*. 2021; 11(3): 298-304. DOI: 10.1371/journal.pone.0289363.
- [25] Gülpınar S, Bulut YE, Çıtıl R. Retrospective evaluation of white code files opened in Tokat province between 2012 and 2014. *Turkish Journal of Family Medicine and Primary Care*. 2019; 13(2): 142-50. DOI: 10.21763/tjfm.569497.
- [26] Bahar A, Şahin S, Akkaya Z, Alkayış M. Examination of the exposure of nurses working in the emergency department to violence and the factors affecting job satisfaction. *Journal of Psychiatric Nursing*. 2015; 6: 57-64. DOI: 10.5505/phd.2015.18189.
- [27] Uskun E, Batmaz K, Aydın G. Violence against health care workers and related factors: The example of a research and practice hospital. *MedJ SDU*. 2022; 29(1): 23-35. DOI: 10.17343/sdutfd.947513.
- [28] Haider N, Ansari MSH, Anjum MZ, Nawaz A, Mustafa S, Qureshi MA. Violence and aggression towards health workers – a study conducted in a tertiary care hospital in Pakistan. *P J M H S*. 2020; 14(4): 964-966.
- [29] Kornhaber R, Walsh K, Duff J, Walker KJ. Enhancing adult therapeutic interpersonal relationships in acute health care: an integrative review. *J Multidiscipl Healthc*. 2016; 9: 537-546. DOI: 10.2147/JMDH.S116957
- [30] Naidoo T, Tomita A, Paruk S. Burnout, anxiety and depression risk in doctors working in KwaZulu-Natal Province, South Africa: Evidence from a multi-site study of resource-constrained public hospitals in a generalised HIV epidemic setting. *PLoS One*. 2020; 15(10): e0239753. DOI: 10.1371/journal.pone.0239753.
- [31] Niewiadomska E, Łabuz-Rozsak B, Pawłowski P, Wypych-Ślusarska A. Physical and mental well-being of physicians in the Silesian Voivodeship. *International Journal of Environmental Studies and Public Health*. 2022; 19(20): 13410. DOI: 10.3390/ijerph192013410.
- [32] Marzouk M, Ouanes-Besbes L, Ouanes I, Hammouda Z, Dachraoui F, Abroug F. Prevalence of anxiety and depressive symptoms among medical residents in Tunisia: a

- cross-sectional survey. *BMJ Open*. 2018; 8(7): e020655. DOI: 10.1136/bmjopen-2017-020655.
- [33] de Mélo Silva Júnior ML, Valença MM, Rocha-Filho PAS. Individual and residency programme factors associated with depression, anxiety and burnout in medical residents-a Brazilian survey. *BMC Psychiatry*. 2022; 22(1): 1-10. DOI: 10.1186/s12888.022.03916-0.
- [34] Pinar T, Pinar G. Healthcare workers and workplace violence. *TAF Prev Med Bull* 2013; 12(3): 315-326. DOI: 10.5455/pmb.1-136.818.8150
- [35] Yılmaz K. The frequency of exposure to violence of health workers in Adana province and their thoughts on violence in health. Master's thesis. Adana: Çukurova University; 2020.

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