

The relationship between the communication skills of intern physicians and their exposure to violence

Hatice Nilden Arslan¹, Berkhan Topaktaş², Nilgün Şanal¹, Özlem Terzi¹

¹ Department of Public Health, Ondokuz Mayıs University Faculty of Medicine, Samsun, Turkey
² Department of Public Health, Amasya University Faculty of Medicine, Amasya, Turkey

ORCID ID of the author(s)

HNA: 0000-0002-3237-7123
BT: 0000-0001-9363-1167
NS: 0000-0002-4617-7309
ÖT: 0000-0002-9524-5582

Corresponding Author

Hatice Nilden Arslan
Ondokuz Mayıs University Faculty of Medicine,
Department of Public Health, Samsun, Turkey
E-mail: haticenilden.arslan@omu.edu.tr

Ethics Committee Approval

Ondokuz Mayıs University Clinical Research Ethics Committee (OMÜ-KAEK 2018/11)
All procedures in this study involving human participants were performed in accordance with the 1964 Helsinki Declaration and its later amendments.

Conflict of Interest

No conflict of interest was declared by the authors.

Financial Disclosure

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

Previous Presentation

This study was presented as an oral presentation at the second International Congress on Understanding Violence (16-18 October 2020, Istanbul, Turkey).

Published

2021 October 29

Copyright © 2022 The Author(s)

Published by JOSAM

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 (CC BY-NC-ND 4.0) where it is permissible to download, share, remix, transform, and build upon the work provided it is properly cited. The work cannot be used commercially without permission from the journal.



Abstract

Background/Aim: Violence against healthcare workers has become a major problem worldwide. This study aimed to examine the relationship between the communication skills of interns and their exposure to violence.

Methods: This cross-sectional study comprised 287 students working as intern physicians at the Ondokuz Mayıs University Faculty of Medicine within the academic year of 2018-2019. It was conducted with 234 volunteering individuals. The data were collected through a questionnaire, consisting of 33 questions in total, applied with a face-to-face interview. The Communication Skills Scale was used, as well as questions about sociodemographic characteristics and violence. The level of statistical significance was set at $P < 0.05$.

Results: Eighty-six (36.8%) intern physicians stated that they had been subjected to violence in the last year. Eighty-four (97.7%) of these participants stated that they were subjected to verbal violence and 5 (5.8%) to physical violence. While there was no significant difference between the participants in terms of being exposed to at least one type of violence or verbal violence, the mean scale score was significantly lower in those who were exposed to physical violence ($P = 0.032$).

Conclusion: The inadequacy of interns in communication was not included among the main reasons for verbal violence. Although the communication skills of interns who were exposed to physical violence were lower, it is necessary to work on larger groups to make a community-wide assessment.

Keywords: Communication, Intern Medical staff, Violence

Introduction

Violence in the field of health is defined as “any event perpetrated by the patient, patient relatives or other individuals which poses a risk for the healthcare worker including threatening behavior, verbal threat, economic abuse, physical and sexual assault” [1].

Healthcare workers around the world are at elevated risk for violence. According to the World Health Organization (WHO) data, 8% to 38% of healthcare workers are subjected to physical violence at some time in their professional life, and verbal violence at much higher rates. They can even be targets of collective or political violence in disasters or under other extraordinary conditions. The perpetrators of violence are mostly patients or visitors, and those most at risk are nurses, other staff directly involved in patient care, and the emergency room staff [2, 3].

Violence in health is becoming more common in our country, and according to a report published by the Turkish Medical Association, a total of 15,841 cases of violence were experienced in 2018, including 661 physical, 12,179 verbal, and 3,001 both physical and verbal violence. However, only 11,204 events were brought to justice [4, 5]. A practice was initiated by the Ministry of Health to report violent incidents and provide legal aid to healthcare workers who were subjected to violence, and a “113 White Code Call Center” was established to provide 24/7 service [6]. The calls to the center are mostly being made by physicians [4, 7]. Unfortunately, intern physicians are among the groups subjected to violence, which affects both their education processes and their future professional practices negatively [8, 9]. Exposure to violence not only causes physical and mental problems, but also negatively affects interpersonal relationships, decreases motivation, and causes absenteeism and changes in career choice.

A significant part of the violence in health is due to communication problems in the relationship between the physician and patient. A study revealed that approximately 40% of the patients' complaints were caused by communication problems [4]. The development of interpersonal communication skills is important in all areas that require human relations, and individuals can influence the feelings, thoughts, and behaviors of the people around them with this skill. Therefore, communication skills are of great importance in establishing correct and effective communication and in eliminating or reducing communication conflicts [10].

This study aimed to determine the relationship between the communication skills of intern physicians who work at Ondokuz Mayıs University Faculty of Medicine and their exposure to violence in the workplace in the last year.

Materials and methods

This cross-sectional study includes 287 students who worked as intern physicians at the Ondokuz Mayıs University Faculty of Medicine within the academic year of 2018-2019. When the frequency of violence against healthcare workers was considered 62% [11], with 80% power and 5% type-1 error, and a deviation value of 10%, the minimum sample size was 180. When the 20% reserve list was added, it was aimed to reach at

least 225 interns. The study was conducted with 234 interns who agreed to participate. A prequestionnaire was administered to 15 students of similar ages to detect comprehension problems and to assess whether the questions were in agreement with the research aims. After the prequestionnaire, a few questions were modified, and the implementation phase began. The data were collected through a questionnaire form applied face-to-face. Students were allowed to answer questions in an environment where they were alone, without specifying their identity. The study was based on the declaration of persons. Approval was obtained from Ondokuz Mayıs University Clinical Research Ethics Committee (OMU-KAEK 2018/11) for this study. In the questionnaire form of 33 questions, the Communication Skills Scale (CSS) was used, as well as questions about sociodemographic characteristics and violence. CSS scale, developed by Korkut [12], consists of 25 questions that individuals can answer by considering their relationships. Ranging from 0 to 4 (0 = never, 4 = always) for each question, the lowest and highest scores that can be obtained from the 5-point Likert-type scale are 0 and 100, respectively. The higher the score obtained from this scale, which has a test-retest scale reliability of 0.76 and a Cronbach alpha coefficient of 0.80 ($P < 0.001$ for both), the more successful the individuals consider themselves in terms of communication skills [12].

Statistical analysis

SPSS 22.0 program was used for statistical analysis of the data. Among the continuous variables, data conforming to the normal distribution were expressed as mean (standard deviation), non-normally distributed data, as median (range), and categorical variables, as frequency (%). Compliance of data to normal distribution was assessed with the Kolmogorov-Smirnov test. In the comparison of two groups of data conforming and not conforming to a normal distribution, the independent samples t-test, and Mann-Whitney U test, respectively, were used. $P < 0.05$ was considered significant.

Results

One hundred nineteen (50.9%) of the 234 intern physicians who voluntarily participated in the study were female and the mean age was 25.9 (7.9) years. The median time that the participants had spent as interns was 6 (1-16) months. Eighty-six (36.8%) interns stated that they were exposed to violence during their duty within the last year. The number of female and male interns exposed to violence was 54 (45.4%), and 32 (27.8%), respectively. There was a statistically significant difference between the genders in terms of exposure to violence ($P = 0.005$). The characteristics of the violence that interns were subjected to are presented in Table 1. Accordingly, verbal violence was the most common type (97.7%). Violence mostly occurred between 08:00 and 16:00 (66.3%), and those who resorted to violence most were the patient relatives (58.1%). Among all, 64.0% of the interns did not report this violence to any department.

Among the opinions of the interns about the reasons for the violence, the most common answers were "low education levels of patients and their relatives and not obeying the rules" (65.4%) and "misunderstanding and communication problems" (60.7%) (Table 2).

While the mean overall CSS score was 73.5 (9.6), it was 75.1 (7.9) among females and 71.9 (10.9) among males

($P=0.012$). While there was no significant difference between the interns in terms of exposure to at least one type of violence or verbal violence ($P>0.05$), the scale score was significantly lower in those who were exposed to physical violence ($P=0.032$) (Table 3).

Table 1: Distribution of exposed violence according to various characteristics

| Characteristics related to violence | n | % |
|-------------------------------------|-----|------|
| Violence in last year (n:234) | | |
| Exposed | 86 | 36.8 |
| Not exposed | 148 | 63.2 |
| Type of violence* (n:86) | | |
| Verbal | 84 | 97.7 |
| Physical | 5 | 5.8 |
| Time of violence (hours)* (n:86) | | |
| 08:00-16:00 | 57 | 66.3 |
| 16:00-24:00 | 50 | 58.1 |
| 24:00-08:00 | 37 | 43.0 |
| Time of violence (shift)* (n:86) | | |
| Working hours | 57 | 66.3 |
| Out of hours | 64 | 74.4 |
| Perpetrator* (n:86) | | |
| Relatives of the patient | 50 | 58.1 |
| Healthcare worker | 41 | 47.7 |
| Patient | 38 | 44.2 |
| Post-violence applied unit* (n:86) | | |
| Nowhere | 55 | 64.0 |
| Unit manager | 9 | 10.5 |
| White code | 3 | 3.5 |
| Medical chamber | 2 | 2.3 |
| Police or private security | 2 | 2.3 |
| Institution manager | 1 | 1.2 |

* There was more than one answer.

Table 2: Participants' opinions on the reasons for violence (n:234)

| Causes of violence | n | %* |
|---|-----|------|
| Low education level of patients and their relatives and not following the rules | 153 | 65.4 |
| Misunderstanding and communication problems | 142 | 60.7 |
| Excessive workload | 135 | 57.7 |
| Disease psychology | 122 | 52.1 |
| Health policies implemented | 119 | 50.9 |
| Excessive requests of patients and their relatives | 106 | 45.3 |
| Long waiting period of the patients | 101 | 43.2 |
| Other | 29 | 12.4 |

* There was more than one answer.

Table 3: Distribution of CSS scores by type of violence exposed

| Type of violence | CSS Score Mean (SD) | P-value |
|-------------------------------|---------------------|---------|
| At least one type of violence | | |
| Exposed | 73.7 (9.3) | 0.849 |
| Not exposed | 73.4 (9.9) | |
| Verbal | | |
| Exposed | 74.2 (9.0) | 0.433 |
| Not exposed | 73.2 (10.0) | |
| Physical | | |
| Exposed | 64.0 (9.1) | 0.032 |
| Not exposed | 73.7 (9.5) | |

CSS: Communication Skills Scale, SD: Standard deviation

Discussion

This study found that the prevalence of exposure to violence in interns was 36.8% in the last year, and in studies involving interns across the country, this rate was ranged between 16.6-65.5% [9, 13, 14]. In a meta-analysis conducted in Iran [15], 59% of medical faculty students and 61.9% of healthcare workers were exposed to violence at work in the last year [11]. Varying rates of exposure to violence are likely because the period of exposure to violence is stated differently in the studies, or violence is perceived as physical violence by the respondents.

Verbal violence is the most common form of violence against healthcare professionals both in our country and abroad [8, 13, 16, 17]. The interns in the study were also exposed to verbal violence the most. Considering that anger is initially expressed verbally, this is an expected finding.

The fact that violence mostly occurs between 08:00 and 16:00 is similar to the distribution of the White Code applications in a hospital in Istanbul [4]. In an international

study, it was reported that the majority of incidents took place after working hours [16]. However, it would be more accurate to take into account the number of patient visits between the relevant hours to talk about a definite relationship between certain hours of the day and the frequency of violent incidents.

Although the ranking of the people who perpetrate violence against healthcare professionals differs in studies, it is seen that most violence is perpetrated by patients and their relatives [17-19]. However, the striking point is that although the people who used violence most were identified as relatives of the patients in this study, health care workers took second place as the perpetrators of violence. In a study conducted at a medical school in Ankara, when the interns were asked about the last person who committed violence against them, the answer was mostly the senior staff [13]. In a study conducted in Iran, 44.6% of the violence to medical school students in the last year was committed by nurses and other employees [15]. Considering that violence against healthcare professionals causes burnout and decreased job satisfaction, the reasons for the attitudes and behaviors of other healthcare professionals towards the interns and medical students should be examined [17].

After the violent incidents occurring in various health institutions, most healthcare workers generally prefer not to report this incident through any official channel [13, 18, 20]. Not wanting to deal with the legal procedure due to workload, lack of information about which unit to apply and how, or not believing that the applications will have deterrent consequences for the perpetrators of violence can be shown among the reasons for a similar result in the present study. In a study involving medical students, most participants stated that they thought they would not receive adequate support after a possible incident of violence, and it was seen that very few had an idea about the White Code procedure [20]. The code systems used to report emergencies in hospitals are also used in various countries of the world. For example, in the United States, the Hospital Association of Southern California proposed the gray code for unarmed attackers and silver for armed attackers to eliminate the confusion created by the code classification that varies according to the hospital [21]. In studies conducted abroad, healthcare workers often do not report the violence they are exposed to. In a study involving healthcare professionals in the United States, 96% of the employees who were subjected to violence knew that they had to report it electronically, but only 12% reported it officially [22]. The reasons are fear of the aggressor or family, shame about being the subject of aggression, and considering violence as a routine part of the work [23]. In a study conducted in India, physicians who were subjected to violence and did not report it stated that they saw it as a useless and time-wasting process [24].

The intern physicians participating in the study cited the reasons for violence as the low level of education of the patients and their relatives and not obeying the rules. There are different findings in the literature regarding the reasons for violence from the healthcare professionals' perspective. In studies involving interns, responses such as "not behaving as expected" and "patients waiting for a long time for an examination" were the most common reasons for violence [13, 25]. In a study conducted in India, medical faculty students pointed out illiteracy as the

most common cause of violence of the patients and lack of information for the violence committed by the doctors [26]. These differences may be related to the internal dynamics such as the management of the health institutions in question, or the patients and their relatives, which varies according to the institution where the studied individuals work. Additionally, it may be related to factors such as personal characteristics, communication methods, or the skills of the colleagues.

While the CSS scores of the interns who were exposed to any type of violence or verbal violence were similar, the scale scores of the individuals exposed to physical violence were significantly lower. In a similar study, there was no significant difference in terms of scale scores between healthcare workers who were exposed to violence and those who were not [27]. However, in a review study, the communication skills of healthcare trainees increase with the employees' self-confidence in managing patients' aggressive attitudes [28]. We believe that this data is generalizable due to the scarcity of studies in this area and the difference in research methods used. Due to the nature of the communication between people, each violent event has its reasons. In addition to reasons such as poor moral judgments, low empathy and reasoning ability, male gender, young age, past violence, substance use, psychotic illnesses, personality disorders, rapid social changes in the society, economic inequalities, social norms that encourage violence, non-enforcement of laws, a weak legal system and the easy supply of lethal devices such as firearms increase the risk in terms of interpersonal violence [29, 30]. Considering the "low education level of patients and their relatives and them not following the rules" and "misunderstanding and communication problems" among the main reasons stated in our study, increasing health literacy and providing education to all segments of the society to improve communication skills should not be passed on. Preventing unnecessary applications to health institutions will be beneficial to reduce the workload of healthcare workers, as well as the waiting time of patients and their relatives in health institutions. We think that all regulations regarding these practices will contribute to the prevention of violence against healthcare workers. More scientific studies and evidence are needed to develop new policies and alter health managers' approaches in this regard.

Limitations

This study has some limitations. Communication skills are measured by self-reports; hence, our data is subjective. The study sample represents the intern physicians working at Ondokuz Mayıs University. Since there were individuals who were at the beginning of their internship among the participants, they may not have been in risky environments in terms of exposure to violence.

Conclusion

In the light of existing data, it would not be the right approach to highlight the inadequacy of healthcare professionals in communication, especially among the main factors that cause verbal violence. The low CSS score of interns who were subjected to physical violence compared to those who did not put their communication skills in the foreground, especially in physical violence. However, the small number of people in this group should be considered in terms of the validity of the

statistical evaluation, and larger groups should be studied to make a community-wide assessment.

References

- Saines JC. Violence and aggression in A & E: recommendations for action. *Accid Emerg Nurs*. 1999 Jan;7(1):8-12. doi: 10.1016/s0965-2302(99)80094-0. PMID: 10232107.
- World Health Organization. Violence and injury prevention. https://www.who.int/violence_injury_prevention/violence/workplace/en/. Accessed 28 Dec 2020.
- Li YL, Li RQ, Qiu D, Xiao SY. Prevalence of Workplace Physical Violence against Health Care Professionals by Patients and Visitors: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Health*. 2020 Jan 1;17(1):299. doi: 10.3390/ijerph17010299. PMID: 31906306; PMCID: PMC6982349.
- Polat Ö, Çırak M. Evaluation of Violence in the Health with White Code Data. *Bakirkoy Tip Dergisi* 2019 12;15(4):393-8. DOI:10.4274/BTDMJB.galenos.20190918115436
- Turkish Medical Association. Turkey's health - 2019 report. <https://www.raporlar.org/turkiyenin-sagligi-2019-raporu-ttb/>. Accessed 9 Jan 2021.
- Ministry of Health. Legal aid and white code implementation. Circular 2016/3. <https://dosyasb.saglik.gov.tr/Eklenti/439.hybupdf.pdf?0>. Accessed 29 Dec 2020.
- Eğici MT, Öztürk GZ. Violence against healthcare workers in the light of White Code data *Ank. Med. J.* 2018;18(2):224-31. doi:10.17098/amj.436537
- İnanıcı SY, Yardımcı G, Yüksel RG, Binatamir Y. 5th and 6th year medical students' experience of violence towards doctors and its relationship with education, patient expectations and coping strategies. *Tip Eğitimi Dünyası*. 2020;19(58):73-88. Doi: 10.25282/ed.535217
- Terzi Ö, Pekşen Y. Assessing the risks that interns meet in the working environment. *JHSM*. 2016;5(1):65-71.
- Ceylan Ş. Evaluation of effective communication skills in health care workers [dissertation]. University of Health Sciences Tepecik Training and Research Hospital; 2019.
- Liu J, Gan Y, Jiang H, Li L, Dwyer R, Lu K, et al. Prevalence of workplace violence against healthcare workers: a systematic review and meta-analysis. *Occup Environ Med*. 2019 Dec;76(12):927-37. doi: 10.1136/oemed-2019-105849. Epub 2019 Oct 13. PMID: 31611310.
- Korkut F. İletişim becerileri değerlendirme ölçeğinin geliştirilmesi: güvenilirlik ve geçerlilik çalışmaları. *TPCGJ*. 1996;2(7):18-23.
- İlhan MN, Özkan S, Kurtcebe ZÖ, Aksakal FN. Exposure to violence and related factors among research assistants and intern doctors in Gazi University Hospital. *Social Society Bulletin*. 2009;28(3):15-23.
- Cihan FG, Kutlu R, Karademirci MM. Occupational future concerns and stress management conditions of intern doctors. *JAREM*. 2017;7(3):122.
- Afkhamzadeh A, Bolbanabad AM, Moloudi B, Safari H, Pirooz B. Workplace violence against physicians and medical students in west part of Iran. *International Journal of Human Rights in Healthcare*. 2019;12(2):116-23.
- Nikathil S, Olausson A, Gocentas RA, Symons E, Mitra B. Review article: Workplace violence in the emergency department: A systematic review and meta analysis. *Emerg Med Australas*. 2017 Jun;29(3):265-75. doi: 10.1111/1742-6723.12761. Epub 2017 Apr 12. PMID: 28406572.
- Mento C, Silvestri MC, Bruno A, Muscatello MRA, Cedro C, Pandolfo G, et al. Workplace violence against healthcare professionals: a systematic review. *Aggress Violent Behav*. 2020;51:101381.
- Ferri P, Silvestri M, Artoni C, Di Lorenzo R. Workplace violence in different settings and among various health professionals in an Italian general hospital: a cross-sectional study. *Psychol Res Behav Manag*. 2016 Sep 23;9:263-75. doi: 10.2147/PRBM.S114870. PMID: 27729818; PMCID: PMC5042196.
- Aydemir İ, Rabia Ü, Aydoğan A. According to the emergency room staff the reasons for violence. *J Ist Faculty Med*. 2020;83(1):60-8.
- İnce A, Torun P, Jadoo SAA. Workplace violence against medical students-A Turkish perspective. *JIDHealth*. 2019;2(1):70-4.
- Wallace S, Finley E. Standardized emergency codes may minimize "Code Confusion." *PA Patient Saf Advis*. 2015;12(1):1-7.
- Arnetz JE, Hamblin L, Ager J, Luborsky M, Upfal MJ, Russell J, Essenmacher L. Underreporting of Workplace Violence: Comparison of Self-Report and Actual Documentation of Hospital Incidents. *Workplace Health Saf*. 2015 May;63(5):200-10. doi: 10.1177/2165079915574684. Epub 2015 May 22. PMID: 26002854; PMCID: PMC5006066.
- D'Ettore G, Pellicani V, Mazzotta M, Vullo A. Preventing and managing workplace violence against healthcare workers in Emergency Departments. *Acta Biomed*. 2018 Feb 21;89(4-S):28-36. doi: 10.23750/abm.v89i4-S.7113. PMID: 29644987; PMCID: PMC6357631.
- Anand T, Grover S, Kumar R, Kumar M, Ingle GK. Workplace violence against resident doctors in a tertiary care hospital in Delhi. *Natl Med J India*. 2016 Nov-Dec;29(6):344-348. PMID: 28327484.
- Turla A, Aydın B, Ünlü B. The experiences and views of medical interns on violence and aggression against physicians. *The Bulletin of Legal Medicine*. 2012;17(1):5-11.
- Sood R, Singh G, Arora P. To study medical students' perspective on rising violence against doctors. Do they consider obstetrics and gynecology a risky branch. *Int J Reprod Contracept Obstet Gynecol*. 2017;6(8):3314-8.
- Ergitürk Ö. Status of violence exposure of hospital health employees, communication and problem solving skills and affecting factors [dissertation]; Marmara University Institute of Health Sciences; 2019.
- Baby M, Gale C, Swain N. Communication skills training in the management of patient aggression and violence in healthcare. *Aggress Violent Behav*. 2018;39:67-82.
- Mercy JA, Hillis SD, Butchart A, Bellis MA, Ward CL, Fiang X, et al. Interpersonal violence: global impact and paths to prevention. In: Mock CN, Nugent R, Kobusingye O, Smith KR, eds. *Injury Prevention and Environmental Health. Disease Control Priorities (third edition), Volume 7*. Washington: World Bank; 2017. pp. 81.
- Fazel S, Smith EN, Chang Z, Geddes JR. Risk factors for interpersonal violence: an umbrella review of meta-analyses. *Br J Psychiatry*. 2018 Oct;213(4):609-14. doi: 10.1192/bjp.2018.145. Epub 2018 Jul 30. PMID: 30058516; PMCID: PMC6157722.

This paper has been checked for language accuracy by JOSAM editors.

The National Library of Medicine (NLM) citation style guide has been used in this paper.