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MEDICAL RESEARCH REPORTS

EDITORIAL

Değerli Medical Research Reports Dergisi Okuyucuları,

Medical Research Reports Dergisinin 2025 yılı ikinci sayısını sizlerle paylaşıyoruz. Bu sayıda dört araştırma makalesi, bir derleme olmak üzere çok değerli beş bilimsel araştırma bulunmaktadır. Literatüre kazandırılan bu çalışmaların ilgi ile okunacağını ve başka araştırmalara referans oluşturacağını umuyoruz.

Hedefimiz ve çalışmalarımız; okunurluğu ve erişilebilirliği yüksek, uluslararası standartlara uygun bilimsel bir yayın olmak yönündedir. Yeni yılla birlikte daha fazla indekste yer almaya çalışacağız. Mevcut standartlarımız ve yayın süreçlerimiz buna uygun şekilde yapılandırılmıştır.

Meslektaşlarımızı çalışmalarını Medical Research Reports aracılığı ile bilim dünyasıyla paylaşmaya davet eder, saygılarımızı sunarız.

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Dear Readers of the Journal of Medical Research Reports,

We share with you the second issue of the Medical Research Reports Journal for 2025. There are five scientific articles in this issue, including four original studies and one review. We hope that these studies brought to the literature will be read with interest and will serve as a reference for other studies.

Our goal and work; It aims to be a scientific publication with high readability and accessibility, in line with international standards. We will try to be included in more indexes with the new year. Our current standards and publication processes are structured accordingly.

We invite our colleagues to share their work with the scientific world through Medical Research Reports, and we present our respects.

Associate Professor Egemen UNAL
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Editors

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ORIGINAL ARTICLE

The Relationship Between Fear of Violence, Migration Intention, and Occupational Anxiety Among Medical Students

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ABSTRACT

Aim: Violence against healthcare workers is an increasing occupational hazard worldwide, contributing to burnout, migration, and reduced workforce retention. In Türkiye, the fear of violence among medical trainees may be influencing their intention to work abroad and shaping their career trajectories. **Methods:** A cross-sectional study was conducted among 474 5th- and 6th-year medical students using the Fear of Violence Scale and a custom questionnaire exploring sociodemographic and occupational factors. Data were analysed using non-parametric tests due to non-normal distribution. **Results:** The average fear of violence score was 42.87±8.07. Students expressing higher anxiety about beginning their careers, who reported obstacles to working in Türkiye, or who wished to practise abroad had significantly higher fear scores. 62.2% of students indicated a desire to work internationally, and 56.3% reported they would not choose medical school again. Fear of violence emerged as a strong correlate of both migration intent and occupational anxiety. **Conclusion:** Fear of workplace violence significantly impacts medical students' attitudes toward practising in their home country. These findings reflect a broader challenge of healthcare worker retention and signal the need for policy changes targeting workplace safety in clinical training environments.

Keywords: Healthcare Workers, Medical Students, Migration,Violence

ÖZET

Amaç: Sağlık çalışanlarına yönelik şiddet, tükenmişliğe, göçe ve işgücünün elde tutulmasının azalmasına katkıda bulunan, dünya çapında giderek artan bir mesleki tehlikedir. Türkiye'de, tıp stajyerleri arasındaki şiddet korkusu, yurt dışında çalışma niyetlerini etkiliyor ve kariyer yörüngelerini şekillendiriyor olabilir. **Yöntem:** Şiddet Korkusu Ölçeği ve sosyodemografik ve mesleki faktörleri araştıran özel bir anket kullanılarak 474 5. ve 6. sınıf tıp öğrencisi arasında kesitsel bir çalışma yürütülmüştür. Veriler normal dağılım göstermediği için non-parametrik testler kullanılarak analiz edilmiştir. **Bulgular:** Ortalama şiddet korkusu puanı 42.87±8.07 idi. Mesleğe başlama kaygısı daha yüksek olan, Türkiye'de çalışmasının önünde engeller olduğunu belirten veya yurtdışında çalışmak isteyen öğrencilerin korku puanları anlamlı derecede yüksektir. Öğrencilerin %62,2'si uluslararası alanda çalışmak istediğini ve %56,3'ü tıp fakültesini tekrar tercih etmeyeceğini belirtmiştir. Şiddet korkusu hem göç niyeti hem de mesleki kaygı ile güçlü bir korelasyon göstermiştir. **Sonuç:** İşyerinde şiddet korkusu, tıp öğrencilerinin kendi ülkelerinde uygulama yapmaya yönelik tutumlarını önemli ölçüde etkilemektedir. Bu bulgular, sağlık çalışanlarını elde tutmaya yönelik daha geniş bir zorluğu yansıtmakta ve klinik eğitim ortamlarında işyeri güvenliğini hedefleyen politika değişikliklerine duyulan ihtiyaca işaret etmektedir.

Anahtar Kelimeler: Sağlık Çalışanları, Tıp Öğrencileri, Göç, Şiddet

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INTRODUCTION

Violence in healthcare remains a significant issue in our country, mirroring global trends (1). This encompasses a spectrum of aggression ranging from verbal abuse, such as shouting and insults, to physical altercations, humiliation, threats, and in extreme cases, even homicide (2). According to the World Medical Association, violence in healthcare is designated as a global emergency, posing a significant threat to the integrity of healthcare systems and profoundly impacting the well-being of patients (3). The dimension of violence stemming from sociocultural, social, and institutional factors is increasingly highlighted with the advent of social media, a product of the communication age (4). Individuals exposed to violence may experience serious psychological traumas, leading to ongoing fear and anxiety that negatively impact their professional lives. In some cases, this may result in career changes due to the debilitating effects of conditions such as depression and anxiety (5). According to the findings of a systematic review encompassing 253 studies with 331,554 individuals, the prevalence of exposure to any form of violence among healthcare workers was 61.9%. Specifically, they encountered verbal violence at a rate of 57.6% and physical violence at a rate of 24.4% (6).

In studies conducted within our country, violence in healthcare exhibits various dimensions and ranges between 46.7% and 100% (7, 8).

Violence in healthcare is more prevalent compared to other sectors due to the continuous nature of the service, its direct involvement with individuals, and the fact that individuals seeking healthcare may sometimes be alcohol-addicted, have personality disorders, or exhibit agitation (9). Although incidents of violence occur across all areas of the healthcare sector, it is known to be more frequent in psychiatry and emergency services, particularly targeting nurses and doctors (10).

The exposure of medical students to violent incidents, particularly during their practical training and observations in hospital environments, contributes to increased anxiety as they begin their professional careers. In a study assessing students' exposure to workplace violence, this rate was found to be 74.3% (11). Recently, fear of violence in future work life has become a prominent concern in the health sector. Investigating healthcare workers who altered their career plans and initiated new searches prior to commencing their professional lives due to fear of violence may provide a more comprehensive understanding of the professional outcomes influenced by this fear (12).

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The objective of this study is to assess the apprehension of violence among senior and 5th-grade students undergoing practical training across different domains, rendering services, and on the verge of entering their professional careers, particularly within hospital settings.

MATERIAL AND METHODS

This cross-sectional study involved participants from X University Faculty of Medicine. Specifically, students from the 5th and 6th grades were selected for the study due to their active involvement in internships, close observation of the patient-physician relationship, and imminent transition to professional roles as physicians upon graduation. In previous studies, it was observed that 43% of medical faculty students expressed fear of violence (11). Based on sample calculations conducted using the EpiInfo program, a sample size of 384 was determined with a 95% confidence level, a 5% margin of error, and a design effect of 1. However, the study was completed with 474 participants. In the 2022–2023 academic year, a total of 572 students were enrolled in the 5th and 6th years. Among them, 22 were international students. As international students were excluded from the study, 86.2% of the target population was successfully reached.

Questionnaire

The questionnaire prepared by the researchers comprises two parts. The first part includes questions related to sociodemographic characteristics and aspects of the profession. The second part incorporates the Fear of Violence Scale, initially developed by Rogers (1994), and validated for Turkish context through studies conducted by Akbolat et al. (13, 14). The scale comprises 10 questions rated on a 5-point Likert scale, with scores ranging from a minimum of 10 to a maximum of 50. Higher scores indicate greater fear of violence. The internal consistency coefficient of the scale was determined to be 0.94. While fear of violence was assessed using a previously validated and reliable scale, no standardized or validated instruments were employed to measure migration tendency or professional anxiety. Instead, participants' levels of occupational anxiety were assessed using a 5-point Likert-type item ranging from "very low" to "very high." Similarly, migration tendency was evaluated through direct questions formulated by the researchers. The absence of established, psychometrically tested tools for these constructs represents a methodological limitation and should be considered when interpreting the findings.

Statistical analysis

Statistical analysis was performed using SPSS version 24.0. Due to the non-normal distribution of the scale scores, non-parametric tests were employed in the study. Frequency tables were presented as numbers and percentages.The Mann-Whitney U test was utilized to compare paired groups, while the Kruskal-Wallis test was employed to compare groups of three. Post-hoc evaluation was conducted for the results of the Kruskal-Wallis test to determine the source of the difference.

RESULTS

Table 1 displays the sociodemographic characteristics of students in 5th and 6th grades. As indicated, 55.1% of the students were female. The majority resided with their families, and 50.7% reported having an equal balance between income and expenditure.

The responses of the students to various questions about their professional careers are presented in Table 2. While 29.3% of the students stated that they did not want to pursue any specialty education, 73.2% of them indicated that there were circumstances that could hinder their careers in our country. A majority of 62.2% of the students expressed a desire to practice their profession abroad.

Table 1. General Characteristics of the Students

Factors	Number (n=474)	Percent (%100)
Grade		
5th grade	237	50.0
6th grade	237	50.0
Gender		
Female	261	55.1
Male	213	44.9
Place of Residence		
With Family	228	48.1
University Dormitory	32	6.8
Off-Campus Housing	194	40.9
Private Dormitory	20	4.2
Income status		
Income Less Than Expenditure	111	23.4
Income and Expenditure Equal	240	50.7
Income More Than Expenditure	123	25.9
Health workers in the family		
None	258	54.3
Physician	93	19.6
Other health worker	123	25.9

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Table 2. Students' Perspectives on Their Professional Careers

Factors	Number (n=474)	Percent (%100)
Specialty preference		
Not considering specialization	139	29.3
Surgical departments	134	28.3
Internal partitions	137	28.9
Community- and socially oriented medical sciences	9	1.9
Undecided	55	11.6
Are there any career obstacles?		
Yes	347	73.2
No	28	5.9
Undecided	99	20.9
Prefer to live abroad		
Yes	338	73.3
No	62	13.1
Undecided	74	15.6
Desire to practice their profession abroad		
Yes	295	62.2
No	84	17.7
Undecided	95	20.1
Requesting a change in the medical specialty exam		
Yes	317	66.9
No	157	33.1
If you could go back in time, do choose medicine		
Yes	207	43.7
No	267	56.3
Level of anxiety regarding commencing a profession		
Low	24	5.1
Middle	111	23.4
High	339	71.5

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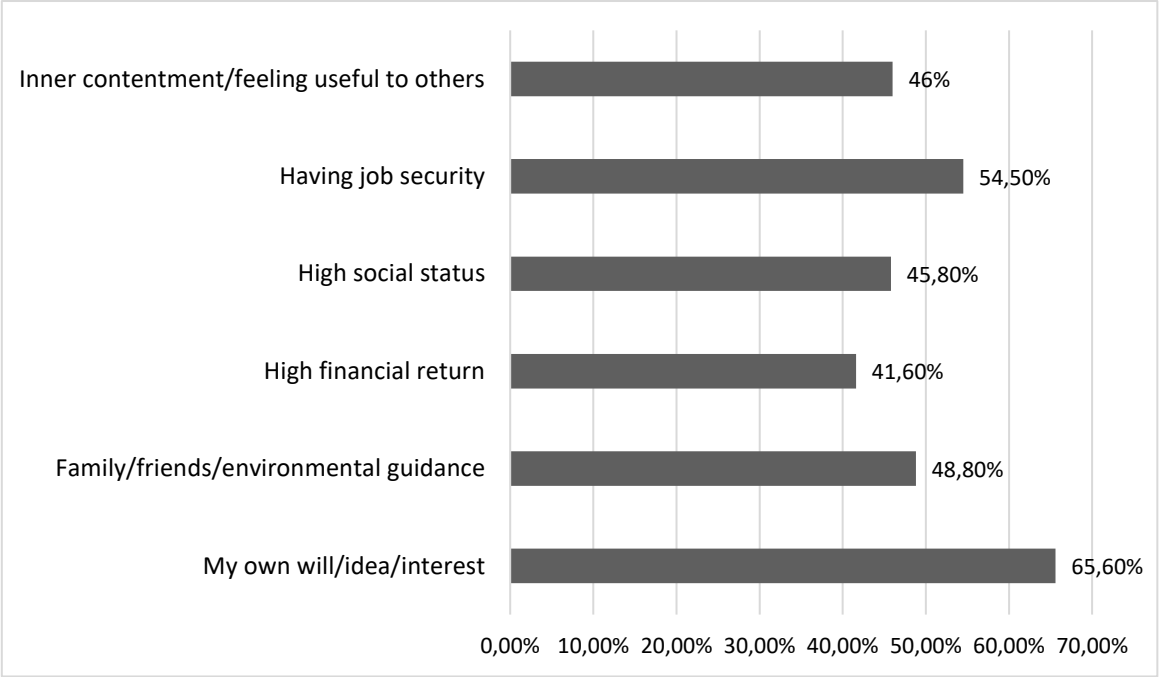


Figure 1. Reasons for Choosing Medical School (Multiple Options Selected)

Figure 1 illustrates the reasons behind students' preference for medical school. The most prevalent rationale for this choice is the students' personal aspirations, ideals, and interests, accounting for 65.6% of responses.

The mean fear of violence score among students was 42.87±8.07, with a median score of 45 (25th-75th percentile: 40-50). Table 3 explores the relationship between fear of violence and certain characteristics. It reveals that individuals who expressed a preference against choosing medicine if given the chance to revisit the past, those who reported heightened anxiety about commencing their professional careers, those aspiring to practice medicine abroad, and those perceiving obstacles in attaining their desired career within the country exhibited a higher fear of violence.

Table 3. Comparison of Fear of Violence and Selected Characteristics of Students

Factors	M (25th-75th)	U, KW	p
Gender			
Female	46 (40 – 50)	25764	0.163
Male	44 (39 – 50)		
Grade			
5th grade	45 (40 – 50)	27955	0.930
6th grade	44 (39 – 50)		

If you could go back in time, do choose medicine			
Yes	41 (38 – 50)	22267	<0.001
No	47 (40 – 50)		
Level of anxiety regarding commencing a profession*			
Low[a]	35 (30 – 43)	74.97	<0.001
Middle[a]	40 (34 – 43)		
High[b]	48 (40 – 50)		
Desire to practice their profession abroad*			
Yes[a]	48 (40 – 50)	38.44	<0.001
No[b]	40 (35 – 48)		
Undecided[b]	41 (38 – 49)		
Prefer to live abroad*			
Yes[a]	47 (40 – 50)	47.97	<0.001
No[b]	40 (32 – 48)		
Undecided[b]	40 (36 – 46)		
Are there any career obstacles?*			
Yes[a]	48 (40 – 50)	44.31	<0.001
No[b]	40 (30 – 41)		
Undecided[b]	40 (35 – 46)		

*Groups labeled with different letters are significantly different from each other.

M: Median, U: Mann Whitney-U, KW: Kruskal-Wallis

DISCUSSION

This study is deemed significant as it delves into the prospective apprehensions of medical students concerning the fear of violence. In Türkiye, 70.7% of medical students contemplate seeking opportunities abroad, with the majority expressing a desire for permanent relocation (15). In our study, the proportion of participants expressing a preference to practice their profession within their own country was 17.7% (Table 2). Particularly in the assessment of fear of violence, it was evident that individuals aspiring to pursue their careers abroad exhibited a significantly heightened level of apprehension (Table 3). This finding may reflect a potential association between the fear of violence and students' inclination towards migration; however, the cross-sectional nature of the study precludes causal inferences. Violence stemming from conflict or workplace-related incidents constitutes one of

the primary factors driving healthcare professionals to seek opportunities abroad (16-18). In this study, a greater inclination towards practicing abroad was observed among individuals with higher violence scores. Although there is no armed conflict in the country, the elevated perception of workplace violence may be one of several factors influencing the migration intentions of medical students, resembling patterns observed during periods of conflict in other contexts.

More than 15% of healthcare workers globally are employed outside their countries of origin. The migration of healthcare workers is influenced by a multitude of political, economic, and social factors (19). Indeed, our study did not assess all these factors comprehensively. However, it's worth noting that there's limited literature examining the relationship between violence and migration intentions among healthcare professionals (20). In this study, over half of the students who voluntarily enrolled in medical school (Figure 1) expressed that they wouldn't opt for it again if given the chance to go back. The significant association between higher fear of violence and this sentiment, as evidenced by Table 3, this association suggests that fear of violence may be related to students' dissatisfaction with their career choice; however, causality cannot be established within the scope of this study.

In a particular study, it was observed that the incidence of witnessing violence against physicians was relatively low during the initial three years of medical school. However, as students progressed through their grades, the frequency of such encounters notably escalated (11). In another study conducted in Türkiye, it was noted that the rates of experiencing or witnessing violence escalated as students progressed through their grades (5). In this study, making comparisons with other grades is not feasible as only the final two grades were included in the research. Additionally, the absence of disparity between the final two grades may be attributed to differences in the timing of the research.

It was observed that female physicians reported feeling less secure in their workplaces regarding violence (2). There is also a study indicating that there is no gender difference in medical students' fear of exposure to violence (11). In this study, although no significant difference was observed between genders, fear of exposure to violence was found to be higher among females. This finding aligns with existing literature and suggests that while there may be no gender disparity during their student years, females may experience increased fear of violence as they transition into professional practice.

In a study conducted in Africa, it was reported that workload and occupational risks influence the career aspirations of prospective physicians (21). In the context of this study, violence may be perceived as one of the factors associated with negative career outlooks among participants. Indeed, individuals who believed that various factors could impede their career trajectory exhibited higher scores on measures of violence. Consequently, a similar pattern emerged wherein individuals with elevated violence scores were more inclined to express reluctance in pursuing

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medical education if they could revisit their past decisions.

In recent years, Türkiye has faced a significant risk of physician migration abroad. The number of physicians seeking to migrate overseas has surged to 3000, signalling that one in every 4 graduates opts to practice abroad (15, 22). This scenario not only adversely impacts the country's resources, both economically and in terms of workforce, but also directly affects the health status of the population. A study estimated that the additional deaths resulting from physician migration in middle and low-income countries led to an annual loss of 16 billion dollars (23). The Turkish Parliament has been actively addressing this issue by investigating the root causes of physician migration and proposing potential solutions (24). In this context, despite certain economic measures implemented in 2023 to mitigate physician migration, the number of physicians seeking to migrate reached a record high in the same year (25). Although global studies highlight economic conditions as the primary driver of physician migration. These findings indicate that, in addition to economic concerns, the fear of workplace violence may be among the factors associated with migration intentions. Further research is required to clarify the causal pathways involved (26).

While the study's restriction to a single medical faculty is acknowledged as a limitation, it is important to note that this institution caters to a substantial patient population from surrounding provinces in central Anatolia. Another limitation is that participants have not yet assumed full diagnostic and treatment responsibilities. However, despite their pre-graduate status, observing the dynamics of patient-physician interactions and assessing levels of violence, migration tendencies, and occupational anxiety among aspiring physicians can provide valuable insights for policymakers in future planning. Additionally, the study conceptualized violence solely in the context of patient- or service-recipient–initiated incidents. However, workplace violence may also stem from within the healthcare setting itself, including instances of mobbing (psychological harassment) by colleagues or superiors. This dimension was not addressed in the current study and should be acknowledged as a limitation.

In conclusion, violence against healthcare personnel adversely impacts the perceptions of physician candidates toward their profession, prompting some to contemplate seeking employment abroad upon completion of their medical training.

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