# Evaluation of Work-Related Anxiety and Associated Factors Among Sixth-Year Medical Students in the Emergency Department

## *Tıp Fakültesi Altıncı Sınıf Öğrencilerinin Acil Serviste Çalışma Anksiyetesinin ve İlişkili Faktörlerin Değerlendirilmesi*

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**ABSTRACT**

**Aim:** This study aims to evaluate work-related anxiety among sixth-year medical students in the emergency department (ED), identify associated factors, and analyze their relationship with anxiety levels.

**Material and Methods:** This cross-sectional survey study was conducted following approval from the ethics committee. Data were collected via the Emergency Department Work Anxiety Questionnaire (EDWAQ) and State-Trait Anxiety Inventory (STAI TX-2) and the necessary analyses were performed.

**Results:** A total of 151 sixth-year medical students participated in the study. The mean STAI TX-2 score was 44.7 ± 9.1, indicating moderate anxiety. Female students reported higher trait anxiety than males (p=0.002). The main anxiety triggers were fear of violence, managing multiple trauma patients, and handling pregnant patients with non-obstetric complaints. No significant anxiety difference was found between those who completed the ED internship and those who did not (p=0.87). However, internship experience improved confidence in specific clinical situations.

**Conclusion:** Sixth-year students experience moderate anxiety, with females reporting higher levels. While ED internships do not reduce overall anxiety, they improve skills in certain clinical situations. Fear of violence remains the primary concern. Pre-internship orientation, psychological support, and violence prevention policies could lower anxiety and enhance competence.

**Keywords**: Anxiety, medical students, medical education, emergency department, intern doctor.

**ÖZ**

**Amaç:** Bu çalışmada, tıp fakültesi 6.sınıf öğrencilerinin acil serviste çalışma anksiyete düzeylerinin değerlendirilmesi, acil serviste anksiyeteyle ilişkili olabilecek faktörlerin belirlenmesi ve bu faktörlerle anksiyete düzeyi arasındaki ilişkinin incelenmesi amaçlanmıştır.

**Gereç ve Yöntemler:** Kesitsel tasarımlı bu anket çalışması, etik kurul onayı sonrasında yürütülmüştür. Veriler, Acil Serviste Çalışma Kaygı Anketi (ASÇKA) ve Durumluk-Sürekli Kaygı Ölçeği (STAI TX-2) kullanılarak çevrimiçi toplanmış ve gerekli analizler gerçekleştirilmiştir.

**Bulgular:** Çalışmaya 151 6.sınıf tıp öğrencisi katılmıştır. Katılımcıların ortalama STAI TX-2 puanı 44,7 ± 9,1 olup, orta düzeyde sürekli kaygıyı göstermektedir. Kadın öğrenciler, erkeklere kıyasla daha yüksek sürekli kaygı bildirdi (p=0,002). Acil serviste şiddete uğrama korkusu, çoklu travma ve doğum dışı bir nedenle başvuran gebe hasta yönetimi, en fazla kaygı yaratan durumlardır. Acil servis stajını tamamlamış ve tamamlamamış öğrenciler arasında genel kaygı düzeyinde fark görülmedi (p=0,87). Ancak staj deneyiminin belirli klinik durumlarda özgüven kazandırdığı görülmüştür.

**Sonuç:** Altıncı sınıf tıp öğrencilerinin kaygı düzeyi orta seviyede olup, kadınlar daha yüksek kaygı bildirdi. Acil servis stajı, genel kaygıyı değiştirmezken, bazı klinik becerileri geliştirdi. Şiddet görme korkusu acil serviste başlıca anksiyete kaynağıdır. Staj öncesi uyum programları, psikolojik destek ve şiddet önleme tedbirleri, öğrencilerin mesleki yeterliliklerini artırarak kaygı düzeylerini azaltmada önemli bir rol oynayabilir.

**Anahtar Kelimeler:** Anksiyete, tıp öğrencileri, tıp eğitimi, acil tıp, intörn doktor.

**Introduction**

Anxiety is a distressing condition characterized by excessive worry, fear, or unease, often accompanied by physical symptoms, and can interfere with daily life. Unlike normal stress, anxiety often involves exaggerated fears or a perceived inability to cope, leading a persistent expectation of disaster in the individual's mind. Anxiety and related disorders are significant public health issues due to their high prevalence and potential to cause other mental illnesses (1–3). In healthcare, anxiety can impair critical cognitive functions—such as attention, memory, and motor skills-essential for physicians to provide safe and effective patient care (1).

Medical education, known for its academic and emotional demands, frequently exposes students to anxiety-provoking situations (1,4,5). While moderate anxiety can enhance adaptation, excessive levels can impair functionality, leading to poor academic performance, cognitive impairment, and communication difficulties. Studies show that anxiety and depression are prevalent among medical students, yet many avoid seeking help due to stigma or professional concerns, risking long-term effects on their careers and patient care (1,6–8).

The internship period, as the final phase of medical education, is a critical stage where students apply theoretical knowledge through practical experience, effectively preparing them for their professional roles. During this period, students realize that their knowledge is not just for exams but essential skills for their future careers. After six years of medical education, most physicians aim for specialization, but with only about 10% entering residency, the majority become general practitioners, often assigned to emergency departments (ED) (9). Students preparing to start their professional careers in emergency departments gain hands-on experience during emergency medicine rotations by managing critical cases—such as cardiopulmonary arrest, myocardial infarction, stroke, and multiple trauma—actively participating in diagnosis and treatment, which equips them to handle medical conditions requiring rapid intervention in real-world practice.

While general anxiety among medical students is well-documented, ED-specific triggers remain underexplored, particularly among intern doctors. This study aims to evaluate work-related anxiety among sixth-year medical students in the emergency department, identify potential contributing factors, and analyze their relationship with anxiety levels.

**Material and Methods**

This cross-sectional survey study was conducted with the approval of the Buca Seyfi Demirsoy Hospital Non-Interventional Research Ethics Committee (Decision No:2024/295). Sixth-year medical students in [City İzmir] were targeted, contacted via academic coordinators, students were informed about the study's purpose, and those who voluntarily agreed to participate, regardless of their emergency medicine rotation status, received an online survey form via Google Forms to complete.

This study was conducted anonymously, collecting no identifying participant information. Alongside demographic data, participants completed the Emergency Department Work Anxiety Questionnaire (EDWAQ), developed by the researchers, and the 20-item trait anxiety section (STAI TX-2) of the State-Trait Anxiety Inventory (STAI), which assesses trait anxiety. The online survey ran from July to September 2024, spanning three months.

The Emergency Department Work Anxiety Questionnaire (EDWAQ) is a 20-item survey created by researchers based on the "Acil Çalışma Ölçeği (AÇÖ)" questions, which were previously designed and studied considering common situations encountered in emergency departments (10). The questionnaire includes questions related to factors that may contribute to anxiety, such as the work environment and communication, professional competence, specific patient groups, job satisfaction, and future career preferences. Participants responded using a four-point Likert scale(0:Not anxious, 1:Slightly anxious, 2:Moderately anxious, 3:Highly anxious) to identify factors contributing to anxiety in the emergency department.

The State-Trait Anxiety Inventory 2 (STAI TX-2), developed by Spielberger in 1970, assesses trait anxiety, which reflects an individual's tendency to perceive situations as stressful and experience discomfort even in neutral situations (11). This inventory aims to determine an individual's general emotional state, independent of their current circumstances or conditions. Adapted into Turkish by Öner and Le Compte with validated reliability (12), scores ranging from 20 to 80, with higher scores indicating higher anxiety. Scores are categorized as low (20-39), moderate (40-59), and high anxiety (60-80) (13).

*Statistical Analysis*

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 24.0 software. The normality of the data distribution was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Numerical data were summarized as mean $\pm$ standard deviation and median (minimum-maximum), while categorical data were presented as frequencies (n) and percentages (%). Differences between numerical variables were analyzed with Student's t-test and one-way analysis of variance (ANOVA) for groups showing normal distribution and using nonparametric equivalent tests for groups not showing normal distribution. Relationships between categorical variables were analyzed using the Chi-square test. Spearman's rank correlation analysis was used to evaluate the relationships between variables. In all statistical analyses, the significance level was set at $p < 0.05$.

**Results**

A total of 151 sixth-year medical students participated, with a median age of 24 (IQR:24-25) and 49% (n=74) female. Of these, 78.1% (n=118) had completed their emergency medicine rotation, while 21.9% (n=33) had not. Sociodemographic details are presented in Table 1.

Based on the STAI TX-2 inventory, the participants' mean anxiety score was 44.7±9.1 (min:21, max:73), indicating a moderate level of anxiety. Among them, 31.1% (n=47) had low anxiety, 62.9% (n=95) had moderate anxiety, and 6% (n=9) had high anxiety. Gender-based analysis showed that female participants had a mean anxiety score of 47±8.1 (min:31, max:65), while males scored 42.4±9.7 (min:21, max:73), with a significant difference between groups

| Variable | | n (%) |
|---|---|---|
| Gender | Female | 74 (49.0) |
| | Male | 75 (49.7) |
| | Not specified | 2 (1.3) |
| Age | 22 | 7 (4.6) |
| | 23 | 30 (19.9) |
| | 24 | 65 (43.0) |
| | 25 | 36 (23.8) |
| | 26 | 12 (7.9) |
| | 52 | 1 (0.7) |
| Marital Status | Single | 148 (98.0) |
| | Married | 2 (1.3) |
| | Not specified | 1 (0.7) |
| Completion of emergency medicine rotation | Yes | 118 (78.1) |
| | No | 33 (21.9) |
| Total | | 151 (100.0) |

**Table 1.** Sociodemographic data of participants

(p=0.002). However, no significant difference was found between those who completed the emergency medicine rotation and those who had not (p=0.87). STAI TX-2 responses, anxiety scores, and p-values are summarized in Table 2.

EDWAQ responses identified "experiencing violence in the emergency department" as the most anxiety-inducing situation, followed by "managing multiple trauma patients" and "managing pregnant patients presenting with non-obstetric complaints". The least anxiety-provoking situations were "difficulty in communicating with support staff" and "difficulty in communicating with patients". Additionally, choosing surgical or non-surgical specialties in the medical residency exam was associated with lower anxiety levels. Analysis of EDWAQ responses revealed no significant difference in mean anxiety scores between response groups for "managing pregnant patients presenting with non-obstetric complaints" and "choosing a non-surgical specialty in the medical residency exam" (p=0.41 and p=0.18, respectively). However, all other variables showed significant differences in mean anxiety scores between response groups (p<0.05). Correlation analysis indicated a weak positive correlation between these variables and anxiety levels.

Comparison of participants' emergency medicine rotation status and EDWAQ responses revealed significant differences in three situations. Those who completed the rotation reported lower anxiety when managing acute pulmonary edema and resuscitation patients (p=0.031 and p=0.028, respectively) but higher anxiety when dealing with patients' agitated relatives (p=0.024). No significant differences were found for other questions (p>0.05).

The distribution of responses to the EDWAQ questions, the mean anxiety scores of the groups, intergroup differences, and correlation coefficients between each parameter and STAI TX-2 scores are summarized in Table 3.

| STAI TX-2 Items | Almost never (1) n (%) | Sometimes (2) n (%) | Often (3) n (%) | Almost always (4) n (%) |
|---|---|---|---|---|
| I feel fine | 5 (3.3) | 82 (54.3) | 52 (34.5) | 12 (7.9) |
| I tire quickly | 25 (16.5) | 82 (54.3) | 35 (23.2) | 9 (6.0) |
| I feel like crying | 75 (49.7) | 52 (34.4) | 19 (12.6) | 5 (3.3) |
| I wish I could be as happy as others seem to be | 25 (16.5) | 59 (39.1) | 45 (29.8) | 22 (14.6) |
| I am losing opportunities because I cannot make decisions fast | 38 (25.2) | 85 (56.3) | 21 (13.9) | 7 (4.6) |
| I feel rested | 59 (39.1) | 77 (51) | 12 (7.9) | 3 (2.0) |
| I am calm | 10 (6.6) | 59 (39.1) | 55 (36.4) | 27 (17.9) |
| I feel that difficulties are piling up in such a way that I cannot overcome them | 53 (35.1) | 79 (52.3) | 12 (7.9) | 7 (4.6) |
| I worry too much about things that do not really matter | 32 (21.2) | 77 (51) | 30 (19.9) | 12 (7.9) |
| I am happy | 16 (10.6) | 70 (46.4) | 54 (35.7) | 11 (7.3) |
| I am inclined to take things hard | 44 (29.1) | 75 (49.7) | 20 (13.3) | 12 (7.9) |
| I lack self-confidence | 69 (45.7) | 67 (44.4) | 12 (7.9) | 3 (2.0) |
| I feel secure | 17 (11.3) | 84 (55.6) | 47 (31.1) | 3 (2.0) |
| I try to avoid facing a crisis or difficulty | 32 (21.2) | 69 (45.7) | 38 (25.2) | 12 (7.9) |
| I feel blue | 37 (24.5) | 80 (53) | 28 (18.5) | 6 (4.0) |
| I am content | 18 (11.9) | 65 (43) | 51 (33.8) | 17 (11.3) |
| Some unimportant thoughts run through my mind and bother me | 25 (16.6) | 86 (56.9) | 27 (17.9) | 13 (8.6) |
| I take disappointments so keenly that I cannot get them out of my mind | 56 (37.1) | 65 (43) | 25 (16.6) | 5 (3.3) |
| I am a steady person | 3 (2.0) | 47 (31.1) | 71 (47) | 30 (19.9) |
| I become tense and upset when I think about my current concerns | 22 (14.6) | 73 (48.3) | 38 (25.2) | 18 (11.9) |

| Variable | | STAI TX-2 Score Mean (Standard Deviation) | p |
|---|---|---|---|
| Gender | Female | 47 (8.1) | 0.002 |
| | Male | 42.4 (9.7) | |
| Completion of Emergency Medicine Rotation | Yes | 44.8 (9.5) | 0.87 |
| | No | 44.5 (7.7) | |
| Total | | 44.7 (9.1) | |

**Table 2.** State-Trait Anxiety Inventory2 (STAI TX-2), Participants' Responses, Anxiety Scores, and p-values.

| ED Stressors | Not anxious | | Slightly anxious | | Moderately anxious | | Highly anxious | | p | Spearman's rho | p |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n (%) | Anxiety Level Score Mean (SD) | n (%) | Anxiety Level Score Mean (SD) | n (%) | Anxiety Level Score Mean (SD) | n (%) | Anxiety Level Score Mean (SD) | | | |
| Working alone in an emergency department | 19 (12.6) | 40.7 (9.02) | 49 (32.5) | 42.4 (7.80) | 47 (31.1) | 44.0 (8.21) | 36 (23.8) | 51.1 (9.33) | <0.001 | 0.372 | <0.001 |
| Experiencing violence while working in the emergency department | 21 (13.9) | 39.2 (7.49) | 30 (19.9) | 42.5 (9.62) | 42 (27.8) | 45.1 (7.84) | 58 (38.4) | 47.7 (9.30) | 0.001 | 0.296 | <0.001 |
| Difficulty in communicating with support staff | 91 (60.3) | 43 (9.04) | 39 (25.8) | 46.9 (8.60) | 18 (11.9) | 48.7 (9.29) | 3 (2) | 45.7 (10.0) | 0.031 | 0.236 | 0.004 |
| Difficulty in communicating with patients | 79 (52.3) | 42.5 (8.78) | 52 (34.4) | 45.9 (8.49) | 13 (8.6) | 49.4 (5.06) | 7 (4.6) | 52.7 (15.1) | 0.004 | 0.276 | <0.001 |
| Dealing with patients' agitated relatives | 42 (27.8) | 41.1 (9.27) | 59 (39.1) | 44.6 (8.05) | 32 (21.2) | 46.1 (7.85) | 18 (11.9) | 51.2 (10.9) | <0.001 | 0.304 | <0.001 |
| Informing the patient's relatives of the death news | 27 (17.9) | 42.4 (8.14) | 49 (32.5) | 43 (9.94) | 40 (26.5) | 45.1 (7.91) | 35 (23.2) | 48.6 (9.17) | 0.020 | 0.228 | 0.005 |
| Managing a resuscitation patient | 48 (31.8) | 41.2 (8.62) | 51 (33.8) | 45.6 (8.66) | 35 (23.2) | 46.2 (9.23) | 17 (11.3) | 49.7 (8.95) | 0.002 | 0.295 | <0.001 |
| Managing a patient with acute myocardial infarction | 31 (20.5) | 41.9 (8.96) | 59 (39.1) | 43.9 (8.35) | 45 (29.8) | 45.5 (8.16) | 16 (10.6) | 51.4 (11.9) | 0.005 | 0.256 | 0.002 |
| Managing a patient with acute pulmonary edema | 22 (14.6) | 40.2 (7.56) | 69 (45.7) | 43.8 (8.52) | 44 (29.1) | 45.8 (8.73) | 16 (10.6) | 52 (10.76) | <0.001 | 0.318 | <0.001 |
| Managing a patient with multiple trauma | 16 (10.6) | 39.7 (8.93) | 38 (25.2) | 43.1 (7.84) | 58 (38.4) | 44.4 (8.79) | 39 (25.8) | 49 (9.56) | 0.001 | 0.293 | <0.001 |
| Managing a patient with anaphylaxis | 47 (31.1) | 41.8 (8.78) | 58 (38.4) | 44.7 (8.09) | 34 (22.5) | 45.3 (8.28) | 12 (7.9) | 55 (11.07) | <0.001 | 0.289 | <0.001 |
| Managing a patient with intoxication | 33 (21.9) | 42.1 (8.55) | 53 (35.1) | 43.6 (8.84) | 47 (31.1) | 47.7 (9.94) | 18 (11.9) | 45.1 (7.28) | 0.033 | 0.218 | 0.007 |
| Managing a patient with stroke | 22 (14.6) | 40.7 (9.96) | 59 (39.1) | 42.7 (8.07) | 52 (34.4) | 47.1 (7.93) | 18 (11.9) | 49.6 (11.3) | <0.001 | 0.326 | <0.001 |
| Administer sedation-analgesia to patients | 32 (21.2) | 41.3 (7.03) | 56 (37.1) | 44.5 (8.89) | 47 (31.1) | 45.9 (10.7) | 16 (10.6) | 49.3 (6.76) | 0.024 | 0.249 | 0.002 |
| Managing a patient with Chronic Obstructive Pulmonary Disease | 63 (41.7) | 42 (8.36) | 67 (44.4) | 46.2 (9.90) | 17 (11.3) | 47.8 (5.87) | 4 (2.6) | 50.5 (10.4) | 0.011 | 0.277 | <0.001 |
| Managing pregnant patients presenting with non-obstetric complaints | 27 (17.9) | 41.7 (11.5) | 50 (33.1) | 44.7 (8.69) | 52 (34.4) | 46.5 (8.86) | 22 (14.6) | 44.4 (6.98) | 0.18 | 0.134 | 0.1 |
| Managing a patient with gastrointestinal bleeding | 42 (27.8) | 40.3 (7.54) | 71 (47.1) | 46.1 (9.41) | 31 (20.5) | 45.9 (8.78) | 7 (4.6) | 53.1 (6.12) | <0.001 | 0.335 | <0.001 |
| The absence of the professional satisfaction I expected when choosing medical school. | 41 (27.2) | 41.4 (8.56) | 45 (29.8) | 45 (8.27) | 27 (18.9) | 43.5 (7.75) | 38 (25.2) | 48.9 (10.3) | 0.002 | 0.251 | 0.002 |
| Choosing a surgical specialty in the medical residency exam | 55 (36.4) | 42 (9.37) | 26 (17.2) | 44 (7.83) | 26 (17.2) | 45 (7.26) | 44 (29.1) | 48.5 (9.56) | 0.005 | 0.283 | <0.001 |
| Choosing a non-surgical specialty in the medical residency exam | 63 (41.7) | 44.2 (8.74) | 48 (31.8) | 43.8 (8.79) | 20 (13.2) | 47.2 (10.1) | 20 (13.2) | 46.3 (10.3) | 0.41 | 0.082 | 0.31 |

**Table 3.** Distribution of responses to the Emergency Department Work Anxiety Questionnaire (EDWAQ), anxiety scores, intergroup differences, correlation coefficients and p-values with STAI TX-2 scores.

## Discussion

In our study, the participants' mean anxiety score indicated a moderate level of trait anxiety, with 62.9% of the participants exhibiting moderate levels of trait anxiety. The most anxiety-inducing situations in the emergency department were identified as experiencing violence during work, managing patients with multiple trauma, and managing pregnant patients with non-obstetric reasons. Completing the emergency medicine rotation did not

significantly affect trait anxiety levels; however, specific situations were found to influence anxiety responses.

Numerous studies have reported high anxiety levels among pregraduate medical students (1,5,7,14,15). Key factors include high self-expectations, heavy academic workload, exam pressure, and, notably, fear of failure during preparation for the medical residency exam (5). Approaching graduation, professional concerns, mandatory service, and working as a general practitioner further contribute to

anxiety (5,16). Although our study focused on anxiety related to working in the emergency department and did not directly evaluate the causes of anxiety among them, the anxiety levels observed were consistent with those reported in the literature.

Previous studies have identified a significant association between trait anxiety and both depression and burnout, demonstrating that these symptoms are more prevalent among individuals with high anxiety levels (7,15,17). Healthcare workers are reported to experience higher anxiety and depression levels compared to the general population (18,19). Considering these findings, it can be concluded that early interventions to address the high levels of anxiety experienced during medical school may have a positive impact, not only on individuals' future lives but also on their contributions to society. Our study found higher anxiety in females than males, aligning with most literature (7,15,17,20), though Öncü et al. noted no gender difference in anxiety levels, only greater willingness among females to seek psychological support (21). This difference may be due to women's higher anxiety responses to stress and men's tendency to suppress such expressions, viewing them as a weakness.

Emergency departments, often the starting point for new physicians, are major anxiety sources due to their chaotic, stressful nature, constant service demands, frequent violence against healthcare workers, and need for rapid decision-making (10). The emergency medicine rotation is a key part of pre-graduate training, as it exposes students to these challenges for the first time. Although our study did not assess pre- and post-rotation anxiety, no significant relationship was found between completing the rotation and trait anxiety levels. However, EDWAQ findings suggest that the rotation experience reduces anxiety in specific situations. Those who completed the rotation reported lower anxiety when managing critical situations like acute pulmonary edema and resuscitation, likely stems from enhanced self-confidence, awareness, and competence gained during the rotation for handling critical emergencies requiring effective and accurate intervention and prompt response.

According to EDWAQ responses, "experiencing violence while working in the emergency department" was the most anxiety-inducing situation. Violence against healthcare workers is a significant global issue (22,23), with studies in our country highlighting emergency departments as the primary setting for such incidents (24,25). The emergency medicine rotation, which serves as preparation for professional life after graduation, provides medical students with direct exposure to this reality, and leads to a more tangible perception of the risk of experiencing violence than anticipated, thereby increasing anxiety related to this issue. The threat of violence, a well-known anxiety source for healthcare workers, is also a significant factor contributing to anxiety among medical students. And this fear also contributes to avoidance of emergency medicine careers (26).

Managing multiple trauma patients in the emergency department, a major anxiety source for participants, requires a multidisciplinary approach involving rapid decision-making, effective interventions, coordination with specialties, and communication with families (27). Students facing such complex situations for the first time may feel inadequate and anxious due to limited knowledge and experience. Managing pregnant patients with non-obstetric complaints in the emergency department is a significant anxiety source for medical students. Effective management requires assessing the health of both mother and fetus, selecting appropriate diagnostic tests, and planning treatment. The possibility of the complaint involving the fetus complicates decision-making, necessitating greater caution and increasing anxiety among students who may feel inadequate due to limited experience.

Participants exhibited less anxiety about communication difficulties with patients and staff compared to concerns like clinical situations and professional competence. This aligns with Ergin et al.'s findings, which ranked communication-related anxiety lower among professional concerns (14). However, an earlier study by Yeniçeri et al. identified communication anxiety as more significant than issues like professional competence, emergency management, and misdiagnosis (5). These differences suggest a shift in occupational anxiety among healthcare workers, possibly linked to increasing concerns about malpractice. In contrast, participants who completed the emergency medicine rotation reported higher anxiety when dealing with patients' agitated family members. This finding is thought to be related to the possibility of experiencing violence, which was identified as one of the most anxiety-inducing factors in our study. Directly witnessing or experiencing agitation in the emergency department may have heightened their awareness that the risk of encountering violence could be higher than they anticipated. Although students did not report significant communication difficulties with patients and staff, the rotation experience heightened anxiety about interacting with agitated relatives, possibly due to this perceived threat.

Anxiety related to choosing surgical or non-surgical specialties in the medical specialty exam was less prominent compared to clinical situations and professional competence. While medical specialty exams are noted as major anxiety sources in the literature (5,14,16), our study found that specialty choice was not a significant anxiety factor compared to clinical and professional competence concerns. This may be explained by students with predominant concerns about professional inadequacy viewing residency as an opportunity to gain competence and as a strategy to avoid more anxiety-inducing situations. Additionally, choosing surgical specialties provoked more anxiety than non-surgical ones. Although surgical fields are often thought to offer greater job satisfaction, studies show no significant difference in job satisfaction between the two (19,28). However, anxiety levels have been reported to be higher in surgical specialties (19). This may be linked to the increasing concern about malpractice cases in recent years, which may cause more anxiety within surgical fields. This malpractice-related anxiety may overshadow professional satisfaction, causing hesitation in choosing surgical specialties.

In the EDWAQ, anxiety scores rose with increasing concern across response groups for all questions except "Managing pregnant patients presenting with non-obstetric

complaints" and "Choosing a non-surgical specialty in the residency exam". This aligns with higher-anxiety individuals reporting greater concern, as anticipated. The absence of a significant difference in anxiety scores among the response groups for the question "Managing pregnant patients presenting with non-obstetric complaints" suggests that this issue represents a general source of anxiety for medical students, independent of individual anxiety levels. This finding indicates the need for developing training and support programs focused on the management of pregnant patients presenting with non-obstetric emergencies. "Choosing a non-surgical specialty in the medical residency exam", which caused less anxiety than other EDWAQ parameters, showed no significant difference in anxiety scores across response groups. This suggests that choosing a non-surgical specialty is not a major anxiety source for all students and varies based on individual factors. Non-surgical specialties are thought to induce less anxiety due to their lower risk and more predictable working conditions. However, personal preferences, experiences, and expectations may influence anxiety levels. Medical education should offer tailored support during specialty selection, considering students' expectations and anxiety levels. Furthermore, in-depth exploration of anxieties related to specialty choice represents an important area for future research.

The anxiety-inducing factors associated with the emergency medicine, as mentioned above, combined with the fact that students encounter these conditions for the first time during their emergency medicine internship, are significant contributors to increased anxiety levels. However, over time, students' adaptation to the emergency department environment, the reinforcement of theoretical knowledge through practical applications, and the development of competence through managing various emergency medical situations may have provided opportunities to overcome anxiety related to lack of knowledge or experience. This could explain why no significant change in overall anxiety levels was observed in our study, suggesting that students were able to balance their anxiety through the experience gained during this process. Developing orientation programs for students prior to the emergency medicine rotation, enhancing psychological support services for anxiety management, and providing professional assistance when needed under the principles of confidentiality could help students cope more effectively with the challenges they may face in emergency departments. Such supportive interventions are believed to not only positively influence students' professional development but also enhance the quality of healthcare services they provide, thereby benefiting public health.

## Conclusion

This study showed that sixth-year medical students experience moderate anxiety, with the most prominent triggers being fear of violence, managing multiple trauma patients, and treating pregnant patients with non-obstetric complaints. While emergency department rotations did not significantly reduce overall anxiety levels, they helped improve confidence in managing specific clinical scenarios. Female students reported higher anxiety levels than males.

These findings highlight the need for structured pre-rotation orientation, psychological support services, and workplace violence prevention strategies to reduce anxiety and support professional development in future physicians.

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