

## Age and professional experience increase the risk of encountering legal malpractice claims among emergency service physicians

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### ABSTRACT

Encountering legal malpractice claims has become a part of the professional careers of emergency physicians. Various studies have investigated the risk of encountering a malpractice claim. However, the factors defining that risk still remain unclear. The present study aimed to investigate the primary causes affecting the risk of encountering malpractice claims for emergency physicians, such as their age, gender, and duration of professional experience.

This study consisted of a survey conducted in an electronic environment with emergency physicians.

A total of 212 emergency physicians volunteered to participate in the study. Of these, 61.8% were male, 49.1% had encountered malpractice allegations, and 40.1% had been subjected to an institutional investigation. A relationship was found between the status of being subjected to an institutional investigation and the average age, and the difference was statistically significant ( $P < 0.03$ ). No statistically significant relationship was observed between gender and the status of being subjected to an institutional investigation ( $P = 0.778$ ). The duration of professional experience in the emergency department was found to be related to the status of being subjected to an institutional investigation ( $P < 0.001$ ) and a judicial investigation ( $P < 0.02$ ).

For emergency physicians, the increasing duration of professional experience in the emergency department and age are two natural factors that increase the risk of encountering malpractice claims; gender does not affect that risk.

**Key words:** Case, emergency medical doctor, malpractice, emergency service, professional experience

### INTRODUCTION

The responsibilities of emergency physicians toward patients are determined by law. Emergency physicians do not have the right to refuse a patient admission to the emergency department, even if all beds are full (1,2). They provide health care services in a stressful environment while interacting with patients with different severity levels and risks (3). On the contrary, encountering malpractice claims has become a threat to the professional careers of emergency physician similar to other groups of physicians (4). According to a study conducted by the American Medical Association, the risk of emergency physicians encountering a malpractice claim increases by 5% each year in their career compared with the previous year (5). Malpractice allegations and avoidance behaviors are affected by many factors other than age, gender, and duration of professional experience (6). This study aimed to examine the basic character-

istics of emergency physicians, such as age, gender, and duration of professional experience, which affect their risk of encountering malpractice claims.

### MATERIALS AND METHODS

#### Study design

This study consisted of a survey, and the survey questions were prepared by academicians from an academic emergency medicine clinic, based on articles related to the subject. After obtaining the approval of the hospital's local ethics committee, the survey was administered to the emergency physicians who volunteered to participate in the study in an electronic environment. The results were collected in the electronic environment. The survey was conducted between May 2018 and June 2018, for a period of 2 months.

## Measurements

In Section "A" of the survey, the participants were asked regarding their sociodemographic characteristics, such as their age, gender, and duration of professional experience in the emergency department (in years), and regarding the service level of the hospital they worked in (i.e., university hospital, training and research hospital, or state hospital). In Section "B," the following questions were asked regarding their experience of encountering malpractice claims:

- Have you ever encountered a medical malpractice claim?
- Have you been subjected to an institutional investigation for medical malpractice?
- Have you ever received a penalty in an institutional investigation conducted against you for medical malpractice?
- Have you been subjected to a judicial investigation for medical malpractice?
- Have you ever received a penalty in a judicial investigation conducted against you for medical malpractice?

While responding to these questions, the participants were asked to respond only according to the legal procedures that had been concluded and were asked to exclude ongoing investigation procedures, if any.

## Statistical Analysis

All analyses were performed using the Statistical Package for Social Sciences for Windows v.21 (IBM) software. The Shapiro–Wilk test was used to measure the normality of distribution. The Mann–Whitney *U* test was used to compare continuous variables described as median due to their nonhomogeneous distributions, whereas the chi-square test was used to analyze categorical variables described as frequency and percentage distributions. *P* values < 0.05 were considered as statistically significant.

## RESULTS

The survey was sent via the electronic environment to emergency physicians who volunteered to participate in the study. These emergency physicians served in 13 tertiary-level health care institutions, 8

education and research hospitals, 5 university hospitals, and 4 secondary level health care institutions. The survey was sent to 401 emergency physicians, of which 212 replied. Thus, the survey response rate was 52.8%.

A total of 212 emergency physicians volunteered to participate in this study. Of these, 61.8% were male. The average age of the participants was 32.8 years (range, 24–51 years). Of the participants, 50% (*n* = 106) were employed in a training and research hospital, 30.1% (*n* = 64) in a university hospital, and 19.8% (*n* = 42) in a secondary-level state hospital. The duration of professional experience in an emergency department was ≤5 years for 46.2% (*n* = 98) participants, 6–10 years for 38.2% (*n* = 81), and >10 years for 15.6% (*n* = 33).

Among the participants, 49.1% (*n* = 104) had encountered a malpractice claim, whereas 40.1% (*n* = 85) had been subjected to an institutional investigation. Further, 5.8% (*n* = 5) of the emergency physicians who were subjected to an institutional investigation eventually received a penalty, and 14.2% (*n* = 30) had been subjected to a judicial investigation. In addition, 3.3% (*n* = 1) of the physicians who had been subjected to a judicial investigation eventually received a penalty. Since the number of participants who received a penalty was less, the status of receiving a penalty was not included in the subgroup comparisons.

The relationship of the status of being subjected to an institutional or judicial investigation with the subcategories of age, gender, duration of professional experience at the emergency department, and hospital service levels was examined. The difference between the status of being subjected to an institutional investigation and average age (those above and below the average age) was statistically significant (*P* < 0.03).

An increase in the rate of being subjected to an institutional investigation was noted among emergency physicians with ≥6 years of experience (6–10 years; 41/40, >10 years; 19/14). On the contrary, no statistically significant difference was found between the groups with 6–10 years and >10 years of professional experience when they were compared in terms of the rates of institutional investigations (*P* = 0.5). In

the case of emergency physicians with  $\leq 5$  years of professional experience, the rate of being subjected to an institutional investigation was significantly less (25/73,  $P < 0.001$ ). No statistically significant relationship was observed between the status of being subjected to an institutional investigation and gender or the service level of the hospital in question ( $P = 0.778$ ;  $P = 0.990$ , respectively).

A statistically significant difference was identified when the ratios of being subjected to a judicial investigation were compared between emergency physicians who had  $\leq 5$  years of experience and those who had  $> 10$  years of experience. The rate of being subjected to a judicial investigation was lower among emergency physicians with  $\leq 5$  years of experience (8/90 vs 9/24,  $P = 0.005$ ). No statistically significant relationship was found between the status of being subjected to a judicial investigation and age, gender, and service level of the hospital (age,  $P = 0.111$ ; gender,  $P = 0.674$ ; service level of the hospital,  $P = 0.908$ , respectively).

## DISCUSSION

When the different characteristics of the emergency physicians were compared, the three most important results obtained in this study were as follows:

1. An increased rate of institutional investigation with increasing age of the emergency physician
2. An increased rate of institutional investigation in those with  $> 10$  years of professional experience in the emergency department
3. A low rate of judicial investigation rate in the first 5 years of professional experience in the emergency department.

Emergency medicine was first recognized as a specialty area in Turkey following the publication of the Official Gazette dated April 30, 1993, and the first training programs were launched in 1995. The branch of emergency medicine is a very young specialty in Turkey, which is a country with a relatively young population; also, emergency physicians are also fairly young (<http://www.resmigazete.gov.tr/arsiv/21567.pdf>, [http://www.tuik.gov.tr/HbGet-](http://www.tuik.gov.tr/HbGet-irHTML.do?id=30709)

[irHTML.do?id=30709](http://www.tuik.gov.tr/HbGet-irHTML.do?id=30709)). Therefore, the study mostly included young emergency physicians. In the Official Gazette No. 27648 published on July 21, 2010, in Turkey, the specialty branch of emergency medicine was defined as a high-risk specialty in the insurance system (<http://www.resmigazete.gov.tr/eskiler/2010/07/20100721-17-1.htm>).

Previous studies have examined the relationship between the risk of encountering a malpractice claim and age and reported that emergency physicians aged  $< 35$  years encounter a malpractice claim almost one-third less compared with other physicians (5,7). Jena et al. explored the relationship between age and judicial investigation and reported that the risk of encountering a malpractice allegation in low-risk specialty areas was 36% for physicians aged up to 45 years and 75% for those aged up to 65 years. In the same study, the risk of encountering a malpractice claim in high-risk specialty areas was 88% for physicians aged up to 45 years and 99% for those aged up to 65 years (5).

The rate of being subjected to an institutional investigation was lower for younger emergency physicians in the present study presumably because the study group had a low average age and 46% of the participants had professional experience of  $\leq 5$  years. Although the results were similar to those of the studies by Jena et al. and Studdert et al., the present study differed from the two studies because they did not specify a specific area of expertise. Another difference was that in the present study group, the maximum age was 51 years and the rate of being subjected to an investigation was lower than the rate of encountering a malpractice allegation up to the age of 45 years in high-risk specialties, as also reported by Studdert et al. (5,7).

In the forensic investigation system of Turkey, a preliminary examination is conducted primarily for government officials as required by law. Only based on the results of this examination, a lawsuit is allowed to be filed against physicians (8). Consequently, the rate of judicial investigations in the present study was found to be lower than that of institutional investigations, as the former is a continuation of the latter.

Both Studdert et al. (9) and Carlson et al. (10) reported >10 years as the average duration of professional experience in their studies. The times indicated in these two studies differed from those in the present study, which found that 84% of the emergency physicians had <10 years of professional experience. Studdert et al. reported that 96% of the physicians had >10 years of professional experience and the malpractice-related investigation rate was 88% (9). Carlson et al. reported that the average duration of professional experience of physicians was 15.7 years and malpractice rates increased by 4% each year (10).

The average duration of professional experience in the present study was lower than the rates reported in the studies conducted by Carlson et al. and Studdert et al. The institutional investigations of emergency physicians with >10 years were proceeded as criminal investigations more. In the present study, the rate of institutional investigations of emergency physicians who had >10 years of professional experience in the emergency department was 60%, whereas the rate of judicial investigations was 27%. These rates were 26% versus 8% for emergency physicians with 5 years of professional experience and 51% versus 16% for those with 6–10 years of professional experience. The rate of institutional investigations that were proceeded as judicial investigations was 14% for emergency physicians with ≤5 years of professional experience, 35% for those with 6–10 years of professional experience and 33% for those with >10 years of professional experience.

The present study found that the number of judicial investigations decreased with the increase in the duration of professional experience. However, the rate of judicial investigation significantly increased after 10 years of professional experience in the emergency department, and it was found to be less in the first 5 years of professional experience in the emergency department.

The present study found that the status of being or not being subjected to an institutional or judicial investigation was not related to the gender of the emergency physician. However, a meta-analysis reported that the risk of encountering malpractice claims for male physicians was 2.5 times more than that for female physicians (11). In another study, 82%

of the physicians against whom a lawsuit was filed were male, and the difference between the genders was statistically significant (7). However, these studies were not specific to emergency physicians. Further studies are required to determine the risk of encountering malpractice claims for male and female physicians with emergency department expertise.

Other factors affecting the risk of encountering a malpractice claim for physicians include crowdedness (12), characteristics of physicians' individual practices (13), and physicians' personality traits and mental health (14, 15). These were also investigated earlier. Previous studies examined the outcomes of encountering a malpractice claim, such as economic (16), depression and medical malpractice syndrome (15,17), time spent in litigation (18), and defensive medicine approach (6, 9, 19). However, the characteristics of the specialty of emergency medicine differ from the characteristics of others (20). Therefore, new studies specific to the field of emergency medicine are needed.

#### Limitations of the study

The present study included only a group of emergency physicians; therefore, it could not be generalized to all emergency medical physicians. The results were obtained based on participants' responses to the survey, and the responses were trusted and accepted to be correct. This study focused on the natural characteristics of participants, such as their age, gender, and duration of professional experience in the emergency department. The number of patients evaluated, working hours, and other factors were not in the scope of the present study.

In conclusion, the risk of encountering a malpractice claim was found to be related to the physician's age and duration of professional experience in the emergency department. Malpractice claims can be affected by the physicians' individual characteristics, such as age, gender, and duration of professional experience. They represent a wide and multifaceted subject comprising the health status of doctors, health institutions, and health expenditure of states (6, 17, 21). More extensive studies are required to determine the physicians' risk of encountering a malpractice claim.

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