

## Research Article

## Effect of malpractice claims on orthopedic and traumatology physicians in Turkey: A survey study

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## ABSTRACT

**Objective:** This study aimed to investigate the malpractice claims experienced by orthopedic and traumatology physicians and to determine their effects on burnout, job satisfaction, and clinical practice.**Methods:** A questionnaire survey was conducted on orthopedic and traumatology specialists between May 2019 and February 2020. Data collection was carried out via e-survey at "turk-ortopedi" mail group, which is an electronic communication network of orthopedic and traumatology physicians. For data collection, sociodemographic data forms were used including the general characteristics, working conditions, and the malpractice claim events along with the Maslach Burnout Inventory scale to evaluate burnout and the Minnesota Satisfaction Questionnaire to investigate job satisfaction.**Results:** In total, 353 orthopedic and traumatology physicians (348 men, 5 women), including 37 professors, 41 associate professors, and 275 surgeons, completed the questionnaire. In total, 65.4% of the participants (231 physicians and 471 relevant dossiers) stated that they were currently facing a malpractice claim. Emotional burnout and hesitant behavior in medical practices were significantly higher among the physicians who had undergone an investigation/trial with the claim of malpractice ( $p<0.05$ ), whereas intrinsic job satisfaction was significantly lower ( $p<0.05$ ). It was determined that orthopedic and traumatology physicians dealing with arthroplasty, vertebral surgery, hand surgery, and foot/ankle surgeries had undergone significantly more trials ( $p<0.05$ ). In the evaluation of the burnout levels and job satisfaction scores of the physicians according to the age, academic title, seniority, and institution, it was determined that burnout level decreased with age, those between the ages of 25 and 34 years were exhausted the most, and job satisfaction increased with age. It was also found that burnout level decreased and job satisfaction increased as the academic title became higher, and attending physicians were the most exhausted. Moreover, burnout level decreased as seniority increased, the most senior ones were the ones most exhausted, and job satisfaction increased with seniority.**Conclusion:** Evidence from this study has revealed that malpractice claims cause emotional burnout, low intrinsic job satisfaction, and a hesitant behavior in medical practice for the orthopedic and traumatology physicians. The concept of malpractice alone may result in unnecessary analyses/examinations for patients.**Level of Evidence:** Level IV, Diagnostic Study

## Introduction

The specialty of orthopedics and traumatology is one of the surgical branches in which medical malpractice claims are frequently encountered (1). In Article 13 of the Code of Medical Ethics of the Turkish Medical Association, malpractice has been defined as a bad practice of medicine, which causes a patient to incur damages because of ignorance, inexperience, or neglect (2). Despite necessary care and attention given to the patients during medical intervention, complications are unpredictable conditions that cannot be prevented even if they are foreseen (3). Damage, in other words, undesired result during the medical application process can develop either as a result of complications or wrongful medical practice. The distinction between complications and wrongful medical practice is made by the individuals or organizations providing expertise in this field. In Turkey, this expertise is mostly provided by the Council of Forensic Medicine. In a review evaluating the forensic medicine records between 2016 and 2019, it is stated that com-

plaints in the field of orthopedics and traumatology have a broad range from plaster applications to hand cuts and from follow-up and treatment of extremity, pelvis, and spine fractures to orthopedic elective surgical procedures (4).

Most physicians acknowledge that they have been subjected to an important emotional reaction, whether in favor of or against the physician, as a consequence of malpractice claim (5). Malpractice claims are one of the causes of burnout syndrome (6). Evidence for burnout in orthopedic surgeons is on a low level; thus, further studies are recommended to evaluate the determinants and effects of burnout in orthopedic surgeons (7). When medical negligence or errors including inadequate care and nonstandard treatment by physicians occur, not only the patients but also the physicians are adversely affected (8). Psychological problems develop in physicians when accused of malpractice, which in turn put them under the risk of being a "second victim" (9).

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For measurement of burnout and job satisfaction, valid questionnaires include the Maslach Burnout Inventory (MBI) that was developed by Maslach and Jackson (10) and whose validity and reliability study in Turkey was conducted by Ergin (11); the Minnesota Satisfaction Questionnaire (MSQ), which is a 20-item scale developed by Weiss, Dawis, England, and Lofquist (12), and whose validity and reliability study was conducted by Baycan (13).

In this study, we aimed to determine the malpractice claims against orthopedic and traumatology physicians and the effects of these claims on the physicians' burnout, job satisfaction, and clinical applications. We hypothesized that the malpractice claim causes burnout, decrease in job satisfaction, and changes in the professional practices as orthopedic and traumatology surgeons.

## Materials and Methods

This descriptive research was conducted between May 2019 and February 2020. Before starting the research, approval of the Medical Residency Board was obtained. With the power analysis conducted in 2019, when the study was planned, the sample size was calculated as 345 (universe size, 3,353; margin of error, 5%; confidence level, 95%). Data collection was conducted via e-survey at "turk-ortopedi" mail group, an electronic communication network of orthopedic and traumatology specialists. A total of 353 people who accepted to participate in the study filled the questionnaire electronically. We used sociodemographic data forms, the MBI, and the MSQ as measurement tools.

With the sociodemographic data form developed by the researchers, our aim was to obtain data regarding the general characteristics, working conditions, and the malpractice claim events encountered by the orthopedic and traumatology physicians and their opinions related to these events.

MBI scale consists of 3 subscales and 22 items. The subscales comprise "emotional burnout," "depersonalization," and "personal accomplishment" sections. The emotional burnout subscale refers to being burned out and overloaded by the profession and includes items related to fatigue, boredom, and reduction of emotional energy. The depersonalization subscale defines the behavior of the individual without feeling any emotion toward the patient that he/she provides care and service to, regardless of the fact that they are unique entities. The personal accomplishment subscale describes the feelings of competence and success in a person working with people. Emotional burnout and depersonalization scores are expected to be high, and the personal accomplishment scores are expected to be low in individuals who experience a burnout. The items in the scale consist of 5-point Likert-type questions.

## HIGHLIGHTS

- Emotional burnout was significantly higher among the physicians who had undergone an investigation/trial with the claim of malpractice, while intrinsic job satisfaction was significantly lower.
- Hesitant behaviors in physician practices was significantly high in those who faced an investigation/trial based on malpractice claim.
- 86.1% of orthopedics and traumatology physicians thought that, one day, they might give up their monetary gains and savings as a result of malpractice claims.
- The concept of malpractice alone causes the patient to undergo unnecessary analyses/examinations.

Areas of satisfaction in the MSQ scale are intrinsic satisfaction, extrinsic satisfaction, and overall satisfaction. Intrinsic satisfaction includes elements related to the internal nature of the job, such as success, recognition or appreciation, the job itself, the responsibility of the job, and change of post owing to promotion. Extrinsic satisfaction comprises elements related to the external environment of the job, such as institutional policy and management, control type, managers, work and relations with subordinates, and working conditions and wages. Overall satisfaction covers both the internal and external satisfaction, that is, all items. The items in this scale also consist of 5-point Likert-type questions.

## Statistical analysis

In addition to descriptive statistical methods (mean and standard deviation), other methods were used for statistical evaluation. The one-way analysis of variance (ANOVA) test was applied in multiple group comparisons, Tukey's multiple comparison test in subgroup comparisons, independent samples t-test in comparison of two groups, and the chi-square test in comparison of the qualitative data. The results were evaluated at a significance level of  $p < 0.05$ . The Statistical Package for the Social Sciences v.20 software (IBM SPSS Corp.; Armonk, NY, USA) was used for evaluating the data.

## Results

In total, 353 orthopedic and traumatology physicians participated in this study; demographic information is presented in Table 1.

To the question "Have you faced a preliminary investigation/investigation/trial process due to malpractice claim?," 65.4% of the participants (231 people, 474 dossiers) answered "Yes." Process details are given in Table 2.

To the question, "Who paid the compensation for malpractice?," 6 of these 12 people stated that it was paid by them, 4 stated that it was paid by the institution/administration he/she worked for, and 2 said that it was paid by the insurance company.

To the question "Do you think that you might give up your monetary gains/savings one day as a result of malpractice?," 304 (86.1%) of the participants answered "Yes."

To the question "Does the concept of malpractice cause you ask your patients to undergo unnecessary analyses/examinations during your medical practice?," 302 (85.6%) of the participants answered "Yes."

For "Does the concept of malpractice cause you to be hesitant in intervening your patient during your medical practice?," 297 (84.1%) of the participants answered "Yes." A hesitant behavior in medical practice was significantly higher in participants who had undergone an investigation/trial owing to malpractice claim ( $p < 0.05$ ; Table 3).

To the question "Why do you think insurance practices are brought to the agenda?," 189 (53.5%) participants responded "To ensure the payment of compensations," 80 (22.7%) responded "To make physicians work more comfortably," 256 (72.5%) responded "To create a new insurance market," and 10 (2.8%) responded "I have no idea."

To the question "What do you think are the reasons for the increase in malpractice lawsuits?," the top 3 answers were "Media" (73.1%), "Problems in the health system" (68.8%), and "Ease of submitting a complaint" (67.4%; Table 4).

**Table 1.** Sociodemographic data

Question	Answer Options	n	%
Gender	Female	5	1.4
	Male	348	98.6
Age (years)	25-34	65	18.4
	35-44	157	44.5
	45-54	71	20.1
	55-64	59	16.7
	>64	1	0.3
Academic title	Surgeon	275	77.9
	Associate professor	41	11.6
	Professor	37	10.5
Seniority (years)	1-5	92	26.1
	6-10	85	24.1
	11-15	57	16.1
	16-20	36	10.2
	21-25	33	9.3
	Over 25	50	14.2
Institution worked for	State hospital	102	28.9
	Training and research hospital	95	26.9
	University hospital	68	19.3
	Private hospital	85	24.1
	Other	3	0.8
What field of orthopedics are you particularly interested in?	Arthroplasty	232	65.7
	Trauma	249	70.5
	Arthroscopy/sports injuries	176	49.9
	Tumor surgery	29	8.2
	Pediatric orthopedics	63	17.8
	Vertebral surgery	56	15.9
	Deformity	41	11.6
	Hand surgery	48	13.6
	Foot/ankle	83	23.5
	Other	12	3.4
No field of special interest	25	7.1	

**Table 2.** Participation's preliminary investigation/investigation/trial process details due to a malpractice claim

Process detail	Yes n (%)	Number of files (n)
Have you faced a preliminary investigation/investigation/trial process due to malpractice claim?	231 (65.4)	474
Investigation files were submitted to the court	146 (41.4)	198
Files were sent to the Council of Forensic Medicine, the Supreme Council of Health and the forensic medicine departments of the universities by the Chief Public Prosecutors and courts to get technical opinions	130 (36.8)	172
Trial process was ongoing	84 (23.8)	107
Trial was concluded against them	12 (3.4)	13

**Table 3.** Cases with a hesitant behavior and an attitude to ask for unnecessary examinations because of having faced an investigation/trial

	Having faced an investigation/trial		p*
	Yes (%)	No (%)	
Show hesitant behavior (yes)	203 (68.4)	94 (31.6)	<b>0.008</b>
Ask for unnecessary examinations (yes)	201 (66.6)	101 (33.4)	0.283

\*Pearson's Chi-squared test  
Significant p values are written in bold

Emotional burnout was significantly higher among the physicians who had undergone investigation/trial owing to malpractice claims ( $p<0.05$ ), whereas intrinsic job satisfaction was significantly lower ( $p<0.05$ ; Table 5).

**Table 4.** Opinions of orthopedic and traumatology physicians on the causes of increase in malpractice lawsuits

Reasons for the increase in malpractice lawsuits	n	%
Media	258	73.1
Problems in the health system	243	68.8
Facilitating complaints with the practices of the Ministry of Health for patient rights	238	67.4
Change in the health perception/culture of the society	228	64.6
Caring for a large patient population	216	61.2
Physician-patient miscommunication	215	60.9
Creating false expectations in patients regarding the chances of success of medical practices	206	58.4
Rulings for high compensation	203	57.5
The effort to create a new market for insurance companies	201	56.9
Misinformation of the patients	177	50.1
Inadequate infrastructure and physical conditions	172	48.7
Increased patient expectations	169	47.9
Change in the health/disease pattern of the society	143	40.5
Taking / using improper medical equipment	132	37.4
Non-operation of the transfer system	106	30.0
Deficiencies in medical/residency training	99	28.0
Lack of self-improvement and renewal	77	21.8
Increasing number and impact of non-governmental organizations	36	10.2
Rapid advances in medicine and technology	15	4.2
Other	24	6.8

**Table 5.** Relationship between having faced an investigation/trial and burnout and job satisfaction

		Group Statistics		
		Mean	Standard deviation	p*
Emotional burnout	Have not faced any investigation/trial	3.06	0.9	<b>0.000</b>
	Have faced investigation/trial	3.43	1.0	
Depersonalization	Have not faced any investigation/trial	2.46	0.8	0.395
	Have faced investigation/trial	2.54	1.0	
Decrease of personal accomplishment	Have not faced any investigation/trial	3.61	0.6	0.760
	Have faced investigation/trial	3.63	0.6	
Intrinsic job satisfaction	Have not faced any investigation/trial	3.56	0.7	<b>0.050</b>
	Have faced investigation/trial	3.39	0.9	
Extrinsic job satisfaction	Have not faced any investigation/trial	2.88	0.8	0.193
	Have faced investigation/trial	2.75	0.9	
Overall job satisfaction	Have not faced any investigation/trial	3.28	0.7	0.075
	Have faced investigation/trial	3.14	0.8	

\*Independent samples t-test  
Significant p values are written in bold

In the evaluation of the participants' field(s) of interest in orthopedics and traumatology and their statuses of having faced an investigation/trial, it was observed that the difference between those who had a particular interest in arthroplasty, vertebral surgery, hand surgery, and foot/ankle surgery and had faced an investigation/trial and those who had not was significantly high ( $p<0.05$ ; Table 6). The difference between those who were specialized in the fields of trauma, arthroscopy, tumor surgery, pediatric orthopedics, and deformity and had faced an investigation/trial and those who had not was not statistically significantly ( $p>0.05$ ).

In the evaluation of the burnout levels and job satisfaction scores of the orthopedic and traumatology physicians who participated in the

research according to age, academic title, seniority, and the institution they work for using one-way ANOVA, it was determined that the burnout level decreased with age, those between the ages of 25 and 34 years were the ones exhausted the most, and job satisfaction increased with age. It was also concluded that burnout level decreased as the academic title became higher; attending physicians were the ones most exhausted, and job satisfaction increased as the academic titles became higher. Another finding of our study was that the burnout level decreased as seniority increased, the most senior ones were the ones most exhausted, and job satisfaction increased with seniority. The ranking of burnout levels from highest to lowest, according to the institution worked for, was first, state hospitals; second, training

and research hospitals; third, university hospitals; and finally, private sector. It was also noted that job satisfaction of the employees in the private sector was higher than that of public employees (Table 7).

**Discussion**

The study revealed that emotional burnout is significantly higher (p<0.05), whereas intrinsic job satisfaction is significantly lower (p<0.05), and a hesitant behavior in medical practice is significantly higher (p<0.05) in orthopedic and traumatology physicians who had undergone investigation/trial owing to malpractice claims. At the same time, the concept of malpractice alone causes the patient to undergo unnecessary analyses/examinations and participants defensive medicine practice.

The number of lawsuits between physicians and patients, one of the main providers of healthcare, has seen an increasing trend recently. Unfortunately, the increase in the number of lawsuits filed, whether righteously or not, affects the motivation of the doctors. The law should surely dominate all aspects of life, but in the event that there is a defect in the service provided, the institutions and people who provide the service should be subjected to an objective evaluation, and a legal step taken in this direction will prevent both the healthcare providers and the courts from dealing with an unnecessary lawsuit load (14). In the study by Özgönül et al., it was seen that there was no consensus among physicians and lawyers on the definition and meaning of basic concepts, such as medical error, malpractice, and complications (15). Especially, the events fueled by the media can convert the “patient–physician” relationship into a “customer–physician” relationship format, or worse, the media can carry it further to

**Table 6. The relationship between the field of interest and having faced an investigation/trial due to malpractice claim**

Field of interest	Having faced an investigation/trial		p*
	Yes (%)	No (%)	
Arthroplasty	163 (70.3)	69 (29.7)	<b>0.008</b>
Trauma	162 (65.1)	87 (34.9)	0.817
Arthroscopy-sports Injuries	114 (64.8)	62 (35.2)	0.793
Tumor surgery	17 (58.6)	12 (41.4)	0.420
Pediatric orthopedics	38 (60.3)	25 (39.7)	0.346
Vertebra surgery	45 (80.4)	11 (19.6)	<b>0.010</b>
Deformity	26 (63.4)	15 (36.6)	0.772
Hand surgery	25 (52.1)	23 (47.9)	<b>0.036</b>
Foot/Ankle	43 (51.8)	40 (48.2)	<b>0.003</b>
Other	7 (58.3)	5 (41.7)	0.598
No specific field of interest	11 (44.0)	14 (56.0)	<b>0.019</b>

\*Pearson's Chi-squared test  
Significant p values are written in bold

**Table 7. Findings regarding the burnout levels and job satisfaction scores of orthopedics and traumatology physicians according to age, academic title, seniority and institution based on one-way ANOVA**

Question	Response	n	Maslach Burnout Inventory						Minnesota Satisfaction Questionnaire					
			Emotional burnout		Depersonalization		Decrease of personal accomplishment		Intrinsic job satisfaction		Extrinsic job satisfaction		Overall job satisfaction	
			Mean	p*	Mean	p*	Mean	p*	Mean	p*	Mean	p*	Mean	p*
Age (years)	25–34	65	3.46	<b>0.033</b>	2.69	<b>0.013</b>	3.53	0.061	3.29	<b>0.012</b>	2.61	<b>0.048</b>	3.02	<b>0.013</b>
	35–44	157	3.37		2.60		3.56		3.37		2.76		3.12	
	45–54	71	3.23		2.44		3.73		3.61		2.92		3.33	
	55–64	59	3.07		2.18		3.77		3.62		2.92		3.34	
	64	1	1.44		1.60		4.25		4.92		4.50		4.75	
	Total	353	3.30		2.51		3.63		3.45		2.80		3.19	
Academic title	Surgeon	275	3.39	<b>0.002</b>	2.59	<b>0.001</b>	3.58	<b>0.005</b>	3.36	<b>0.000</b>	2.69	<b>0.000</b>	3.09	<b>0.000</b>
	Associate professor	41	2.99		2.48		3.62		3.57		3.04		3.36	
	Professor	37	2.94		1.96		3.96		4.00		3.36		3.74	
	Total	353	3.30		2.51		3.63		3.45		2.80		3.19	
Seniority (years)	1–5	92	3.56	<b>0.009</b>	2.72	<b>0.001</b>	3.51	0.136	3.27	<b>0.044</b>	2.65	<b>0.327</b>	3.02	0.080
	6–10	85	3.31		2.60		3.63		3.42		2.76		3.16	
	11–15	57	3.34		2.67		3.56		3.44		2.86		3.21	
	16–20	36	3.08		2.24		3.67		3.47		2.82		3.21	
	21–25	33	2.90		2.22		3.81		3.78		3.01		3.47	
	Over 25	50	3.20		2.19		3.76		3.60		2.90		3.32	
	Total	353	3.30		2.51		3.63		3.45		2.80		3.19	
Institution worked for	State hospital	102	3.51	<b>0.000</b>	2.55	<b>0.007</b>	3.55	<b>0.010</b>	3.30	<b>0.000</b>	2.60	<b>0.000</b>	3.02	<b>0.000</b>
	Training and research hospital	95	3.51		2.75		3.52		3.25		2.58		2.98	
	University hospital	68	3.22		2.42		3.63		3.61		2.91		3.33	
	Private hospital	85	2.93		2.33		3.82		3.70		3.16		3.48	
	Other	3	2.22		1.47		4.08		4.36		3.71		4.10	
	Total	353	3.30		2.52		3.63		3.45		2.80		3.19	

\*One-way analysis of variance (ANOVA)  
Significant p values are written in bold



the “plaintiff-defendant” level. With the introduction of “social media” into our lives, such situations can reach a large part of the society much faster (16). As a result of a study that examined 540 files from the Criminal Courts and with the claim of medical malpractice, it was concluded that 50% of the cases were based on complaints about physicians without any basis but simply because of the patient’s anger (17). Although most of the medical malpractice lawsuits are won by physicians, it is a fact that these suits produce fear on physicians (16). In our study, 86.1% of orthopedic and traumatology physicians thought that, one day, they might give up their monetary gains and savings as a result of malpractice claims.

Forensic events related to professional responsibility is a disturbing problem worldwide (18). The probability of encountering malpractice increases as the years in the profession increase (19). In the study by Jena et al., the rate of physicians who retired at the age of 65 years and have faced a trial related to malpractice was between 75% and 99% (20). In our study, it is seen that 65.4% of the orthopedic and traumatology physicians from all ranks of seniority have faced an investigation or trial process for malpractice claim.

In the United States, orthopedics and traumatology have been mentioned among the top 5 specialty branches that were filed a lawsuit against because of malpractice (21). It is noteworthy that the lawsuits opened against orthopedists were mostly in the field of trauma, spinal surgery, and arthroplasty; however, the highest compensation rates were observed in pediatric orthopedics, spinal surgery, and orthopedic oncology (22, 23). In our study, we found that orthopedic and traumatology physicians dealing with arthroplasty, vertebral surgery, hand surgery, and foot/ankle surgery have had significantly more lawsuits ( $p<0.05$ ). It is only possible to discuss the data of the involving surgeons of this study. To generalize data, files in the Forensic Medicine Department related to orthopedics and traumatology need to be investigated.

Professional liability insurance for physicians has become a must today to compensate for the damages as a result of the physicians’ errors. In this context, all physicians working in public institutions, private hospitals, or freelance are required to sign up for compulsory professional financial liability insurance (24). In our study, 6 of the 12 physicians who lost the lawsuit stated that the compensation was paid by them, for 4, it was paid by the institution/administration he/she worked for, and for 2, it was paid by the insurance company. Of all the participants, 72.5% thought that insurance practices are brought to the agenda to create a new insurance market, and 53.5% said that it was to ensure the payment of compensations.

The reasons for the increase in the number of medical malpractice lawsuits in recent years in our country and in the world were as follows: the development of technology in health, the increasing expectations of patients and their relatives, increased communication, the lawyers’ view of these cases as an asset for gain, and the negative attitude of the media (16). From our participants’ point of view, the reasons to the increase were: the impact of the media (73.1%), problems in the health system (68.8%), ease of submitting a complaint (67.4%), and rulings for high compensation (57.5%).

Regardless of the outcome of the trial process owing to malpractice claims, the physicians experience significant emotional burnout during this process (5). In addition to the increasing number of malpractice lawsuits, conditions that have an impact on the emotional burnout of the orthopedists are work intensity, decreased professional reputation, bureaucratic demands, aggressive media, and institu-

tional control policies (25). It has been reported that orthopedic and traumatology physicians generally have a high job satisfaction and that burnout symptoms are independently associated with low job satisfaction (26). In our study, we determined that burnout level decreased, and job satisfaction increased as the age and seniority progressed and academic title became higher. Job satisfaction was lower in low levels of seniority and in public hospitals. Emotional burnout was significantly higher among the physicians who had undergone an investigation/trial with the claim of malpractice ( $p<0.05$ ), whereas intrinsic job satisfaction was significantly lower ( $p<0.05$ ).

In a study comparing the burnout statuses of those who worked in surgical branches in the United States, the burnout level of orthopedic surgeons (50%) was found to be in the top five among the most exhausted (27). Emotional burnout causes changes in the practical application of the physician (28). Significant changes in the clinical practice of physicians have been reported following malpractice claim (29). Although the majority of medical malpractice lawsuits are won by physicians, it is a fact that they produce fear on physicians; it is stated that a physician undergoing a trial process shows defensive medicine practices regardless of winning or losing the case (16). In the study by Zhu et al., the authors determined that 60.8% of the participants faced at least 1 malpractice claim, 62.9% of which exhibited defensive medical behaviors. In our study, it was found that hesitant behaviors in physician practices was significantly high in those who faced an investigation/trial owing to malpractice claim ( $p<0.05$ ) (30). However, even when the concept of malpractice was evaluated in physicians who faced a lawsuit and in those who have not, 84% of the participants stated that the concept caused defensive medicine practice.

Given the relationship between burnout and quality of care, it is important to treat the physician’s burnout (31). Physician burnout must be prevented for a successful health reform (32). In our study, it was stated that the concept of malpractice caused the orthopedic and traumatology physicians to ask for unnecessary examinations in 85.6% of the cases, which increased the cost of healthcare.

Because the physicians are afraid that their reputation may deteriorate as a result of malpractice claims, they find it difficult to even talk to their colleagues about their recommendations (33). In this regard, the Italian Board of Health has prepared guidelines with recommendations to physicians in managing such adverse events in healthcare (34). Turkish Society of Orthopaedics and Traumatology Board of Health Law provides scientific and legal support to physicians who encounter adverse consequences mostly resulting from shyness or lack of knowledge during such proceedings (35).

To avoid malpractice, orthopedic and traumatology physicians should seriously abide by the basic principles of their profession, such as personally attending the treatment processes (plaster applications, briefings, and so on), asking for necessary consultations on subjects outside his/her area, and treating the patient with a multidisciplinary approach, especially reducing the risk of major vascular injury (popliteal artery, femoral artery, and vein) and mortality in bleeding fractures (4). The physicians should also pay utmost attention to the standard recording of diagnosis, treatment, and follow-up methods and applications. These records may be the only evidence that the physician shows professional care (36).

Our study had some limitations. Because the rate of women participating in the study was 1.4%, values cannot represent the female sex. Because the participants filled in the questionnaire in a mail group and on demand, there is a possibility of a volunteer bias.

In conclusion, burnout syndrome depends on many factors. However, in our study, it was found that malpractice claims caused emotional burnout in orthopedic and traumatology physicians and that these physicians exhibited a significantly hesitant behavior in their medical practice. The concept of malpractice alone causes the patient to undergo unnecessary analyses/examinations. As the title and age increase, emotional burnout decreases and job satisfaction increases. Public hospital employees had a higher level of emotional burnout and a lower level of job satisfaction than their peers working in private hospitals.

**Ethics Committee Approval:** Ethics committee approval was received for this study from the Institutional Review Board of Metin Sabancı Baltalimani Bone Diseases Training and Research Hospital (IRB: 19.04.2019 No:45/326).

**Informed Consent:** Online survey informed consent was obtained from participants.

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