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Original Article

Burnout in Chest Physicians after Health Care Reforms: A Cross-Sectional Study in Turkey

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Abstract

OBJECTIVES: The health reform has recently been one of the most important items on the agenda worldwide. The aim of this study is to investigate burnout syndrome in chest physicians and exhibit its connection with reform processes.

MATERIALS AND METHODS: In this survey, the "Socio-demographic Data Form" and "Maslach Burnout Inventory" were used. Between September and November 2016, chest physicians were reached with permissions by expertise associations via e-mail groups. A sample size of 352 physicians was included in the study out of 2,349 chest physicians in Turkey.

RESULTS: Among 352 physicians, 238 (67.60%) were women, and the mean age was 38.93 (±9.97). Higher burnout scores were determined in young physicians (aged ≤35), residents, those with low income, and those with ≥55 weekly working hours. The performance-based salary system was regarded as a problem by 84.7%, and 83.5% stated that they had not enough leisure time for themselves and their families. More than a half (55.7%) indicated that they would not choose the same specialty if they ever had a chance to choose again.

CONCLUSION: We observed that most of chest physicians in Turkey experience burnout syndrome, which might be influenced by reforms in the health care system. The health system and working conditions should be dealt with immediately by health authorities and reformed in accordance with human dignity and rights to life.

KEYWORDS: Burnout syndrome, chest physicians, health care reforms

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INTRODUCTION

Expeditious reforms have come into practice in health politics in countries such as Greece, Portugal, Bulgaria, Romania, Ireland, Croatia, Macedonia, and also Turkey in the last 10 years [1]. This transformation process defined as the "health reform pandemic" continues to affect the whole world under the leadership of international institutions such as the International Monetary Fund and the World Bank [2,3]. The countries in which health care reforms were shaped by market-oriented regulations are also going through similar processes [1,4,5]. The establishment of "market motives" in the public health institutions has revealed public health institutions in the health sector markets. As a result of these implementations, expressions such as "customer", "health service consumer," or "health service user" have started to be used instead of "patient."

Because of such performance-based regulations, the number of inpatients has nearly quadrupled, compared to the one prior the health care reform period in Turkey [6]. Emergency service admissions in 2014 exceeded 104 million in Turkey (higher than the population of the country) [7]. By the guidance of market actors, media, and new communication technologies, a lifelike illusion demonstrating diseases that do not exist has been created, and demands of individuals regarding health services have increased. An increase in the number of applications for health care institutions is a reflection of this provoked demand.

The performance-based salary system depends on extra payment from a circulating hospital capital account, based on the cumulative amount of individual activities offered to patients. The reflection of this transformation resulted in an increased number (54%) of polyclinics and inpatients (64%) in training-research hospitals connected to the Ministry of Health 2005-2010. However, invasive procedures provoked by a performance-based payment system increased disproportionately with the number of patients (for example, bronchoscopy numbers increased to 187%) [8]. It is apparent that this situation leads to erosion in the ethical values of medical practice and compels physicians to alter the content, count, and priority of the service that they offer to their patients.

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All these procedures have caused physician respectability to decrease in the society and physicians to be displayed as targets for public. Violence and malpractice lawsuits have increased for health professionals. The effect of this degeneration has been revealed as a profound disappointment in health care professionals.

Burnout syndrome is one of the most important problems today and an issue that researchers have studied frequently since it affects lives both at the individual and organizational level [9,10]. Various studies have been carried out evaluating burnout in different occupations, as well as in health care professionals up to date. It was stated that burnout is significantly higher in physicians with respect to other occupations [11]. Nevertheless, there is no study examining burnout syndrome in chest diseases in medical literature written in English.

In this study we aimed to examine burnout syndrome in chest physicians and establish the risk factors for burnout syndrome and its relationship with health care reforms.

MATERIALS AND METHODS

In this cross-sectional, descriptive study, all chest physicians (specialists, residents, and academicians working in state hospitals, training and research hospitals, university hospitals, and private health institutions) in Turkey were regarded as the universe of the study. After obtaining an approval from the local ethics committee of Dokuz Eylül University (28.07.2016/ 21-12), written informed consent and survey forms were sent by e-mail to the mail groups of chest diseases national associations (Turkish Thoracic Society, Pulmonary Health and Intensive Care Association, and Turkish Respiratory Society) after getting a permission between September and November 2016. Every 2 weeks for 3 months, the e-mails were repeated. Some of the chest physicians were reached by telephone and asked to participate in the survey; thus, the physicians with no society memberships were also sampled. In scientific meetings organized by national associations, printed survey forms were distributed to participants, accessible hospitals were visited, and face-to-face interviews were performed.

Data Collection

To establish burnout in chest physicians and variables leading to burnout in the study, the "Socio-demographic Data Form" and "Maslach Burnout Inventory" (MBI) were used together.

Socio-demographical Data Form

The form consisted of 29 questions, including those on occupational and socio-demographical characteristics, that were considered to be associated with the burnout levels.

Maslach Burnout Inventory

Maslach burnout inventory (MBI) was developed by Maslach and Jackson. There are 22 items, which are divided into three subscales [12]. Its Turkish adaptation was carried out by Ergin [13]. In the English specific form, it consists of seven answer options including "none," "a few times a year," "once a month," "a few times a month," "once a week," "a few times a week," and "every day." Nevertheless, the answer options were narrowed down to five on the grounds that this is more appropriate to Turkish culture in Turkish validation [14].

Emotional Exhaustion (EE)

This subscale describes the burnout or overloading emotions by occupation or work. The individuals in a very busy schedule in terms of feelings are overwhelmed by emotional demands of other people. They always tend to run away to minimize the EE they carry. They minimize their relationships adequately enough to deal with their work. These people feel deprived of necessary energy to start a new day. Going to work next day again is a source of anxiety [15].

Depersonalization (D)

This subscale describes the individuals' behavior toward people they provide service as being deprived of emotions and not considering them as being unique. The person experiencing EE feels powerless in solving problems of other people and uses depersonalization as an escape route. They minimize their relationships sufficiently enough to carry out their work. They treat other people that they render services to as an object; demonstrate insulting and impolite behavior; and ignore their requests and demands [16].

Lack of Personal Accomplishment (LA)

Persons going through burnout feel guilty due to the situation that they are in. They deliver a judgment about themselves that they are unsuccessful. Although they try a lot to get positive results, they get stressed and exhibit depression when they notice that they are unsuccessful. They quit trying when they think that trying again will not be beneficial. The decrease in personal success is a frustration perception that they cannot change no matter how hard they try [17].

In the MBI's English form, there are burnout limit values as high, mean, and low, according to the level of it being experienced. In a research carried out with American and Dutch subjects by Schaufeli and Dierendock [18], breakpoints used in the classification of burnout levels are informed to vary from country to country due to social and cultural reasons. The determination of limits specific to every country is stated to be accurate. For a Turkish translation of the MBI survey, there are no limit values which validity has been studied in their sub-dimensions [13,14,17]. Therefore, the values were compared between the groups by taking median values in this study. Since there is no cut-off value for us to comment whether the burnout exists, a categorical classification was not performed.

Statistical Analysis

A statistical analysis was performed using the IBM Statistical Package for the Social Sciences for Windows 22.0 software (IBM SPSS Statistics Corp.; Armonk, NY, USA). Its suitability for normal distribution was checked by the Kolmogorov-Smirnov and Shapiro-Wilk tests. It was checked whether it is appropriate for normal distribution or not; thus, nonparametric tests were used in statistical methods. In the comparison of average values of numeric variables of dual groups, the Mann-Whitney U and Pearson's chi-squared test were used, and Bonferonni corrected Kruskal-Wallis test was utilized in the comparison of numeric variables of more than two groups. The covariance analysis was used to measure the

effects on dependent variables of more than one independent variable. The significance level was accepted as p<0.05.

RESULTS

A total of 352 chest physicians were involved in the study, including 105 (29.8%) residents, 148 (42%) specialists, and 99 (28.1%) academicians. Of the participants, 238 (67.6%) were women. The mean age of chest physicians distributed in the age group between 24 and 63 was 38.93 (±9.97). Most of the chest physicians (64.5%) thought their income was insufficient. The ratio of being appreciated by managers was only 15.6% when physicians completed a task successfully. Eighty-three percent (n=294) of the physicians stated that they had insufficient leisure time for themselves and their families. The demographical features of chest physicians involved in the study are presented in Table 1.

Table 1. Characteristics of chest physicians

Characteristics		n=352 (100%)	
Sex	Female	238	67.6%
	Male	114	32.4%
Age	≤35	152	43.1%
	>35	200	56.9%
Marital status	Single	76	21.6%
	Married	252	71.6%
	Divorced	19	5.4%
	Married →live apart	5	1.4%
The number of dependent children	None	144	40.9%
	1	104	29.5%
	2	95	27.0%
	3	9	2.6%
Employment institution	State hospital	63	17.9%
	T&R hospital	112	31.8%
	University	154	43.8%
	PHI	23	6.5%
Academic degree	Assistant	105	29.8%
	Specialist	148	42.0%
	Academician	99	28.1%
Employment duration	≤5 years	84	23.9%
	6-10 years	64	18.2%
	>10 years	204	58.0%
Salary	≤ 2525 €	297	84.4%
	2525 -5050 €	50	14.2%
	≥ 5050 €	5	1.4%
Sufficient income belief	Yes	31	8.8%
	No	227	64.5%
	Partially	94	26.7%
Being appreciated by managers	Yes	55	15.6%
	No	157	44.6%
	Sometimes	140	39.8%
Efficient leisure time for himself/herself or his/her family	Yes	58	16.5%
	No	294	83.5%

PHI: private health institution; T&R hospital: training and research hospital

When demographic data and their relationship with the burnout sub-dimensions were analyzed, the burnout levels in the EE, D, and LA sub-dimensions were found to be significantly higher in physicians aged ≤35 (p<0.001). In female physicians, a significant difference was determined in the sub-dimension of EE (p<0.05). According to the academic degree, the burnout levels in residents and specialists were identified significantly higher compared to academicians in all three sub-dimensions (p<0.001). With regard to the employment institution, the lowest EE, D, and LA scores were found in physicians working at private health institutions (p<0.05). The EE, D, and LA were found to be higher in the first 5 years of employment (p<0.05) (Table 2).

Higher scores were found in the EE, D, and LA sub-dimensions of physicians working ≥55 hours/week (p<0.001). A significant relationship was found between the number of night shifts and the burnout level (p<0.001) (Figure 1).

Among the chest physicians involved in our study, 55.7% answered the question, "If you had a chance for re-preference, would you choose the same specialty?" as no.

When physicians were asked what was the major problem related to the occupation choice, or if they might experience it in the future, 298 (84.7%) replied that it was "the performance system"; 298 (84.7%) "the relations with managers"; 287 (81.5%) "insufficient spare time for academic study/education"; and 282 (80.1%) "the insufficient salary system" (Table 3).

DISCUSSION

In this study, we observed that the majority of chest physicians perceive changing working conditions, patient-physician relations, and performance-based salary system as a problem. Many physicians think that they are not appreciated by managers. This situation has led to further burnout especially in young physicians.

The average burnout scores of chest physicians involved in our study were compared with the results from another study [19] examining physicians in Turkey in 2005. The authors found that every three burnout sub-dimensions were high (p<0.001). This difference is thought to be caused by the effects of health reforms performed in recent years in Turkey or that the burnout level in chest physicians is higher than the average burnout level of other specialties.

As a result of increased hospital admissions with provoked demand after the health reforms in Turkey, the workload on physicians increased, and deformation occurred in the patient-physician relationship. This situation caused occupational dissatisfaction in 69% of chest physicians involved in our study. Storlie defined burnout as "collapse of the human spirit." According to Storlie, this sneaky process was explained as "the perception, that no matter what you do or how hard you try, you cannot make a difference" [20].

Table 2. Characteristics, occupational features of chest physicians, and their relationship with burnout

		Burnout EE Median (min-max)	Burnout D Median (min-max)	Burnout LA Median (min-max)
	Chest Physicians Total n=352	20 (0-36)	7 (0-20)	11 (0-32)
Sex	Female	20 (0-36)	7 (0-20)	12 (0-27)
	Male	18 (0-36)	7 (0-20)	10.5 (0-32)
	p	0.029	0.208	0.234
Age	≤ 35	21(3-36)	9(2-20)	13(0-32)
	>35	19(0-36)	6(0-18)	10(0-20)
	p	<0.001	<0.001	<0.001
Marital Status	Single	20 (0-36)	9 (0-20)	14 (0-32)
	Married	19 (0-36)	7 (0-20)	11 (0-27)
	Divorced	18 (4-32)	7 (0-11)	10 (0-19)
	Married→live apart	26 (7-34)	12 (2-16)	6 (3-22)
	p	0.120	0.007	0.005
The number of children	None	20 (0-36)	9 (0-20)	13 (0-32)
	1	20(0-36)	6 (0-18)	10 (0-25)
	2	19 (4-36)	6 (0-16)	10 (0-27)
	3	16(11-35)	8 (1-14)	5 (1-18)
	p	0.138	<0.001	<0.001
Employment institution	State hospital	23 (0-36)	8 (0-16)	13 (0-25)
	T&R hospital	20(5-36)	7(0-20)	12(1-32)
	University	19(0-36)	7(0-20)	11 (0-27)
	PHI	14(6-28)	4 (0-15)	6 (0-25)
	p	0.005	0.004	<0.001
Academic degree*	Assistant	22 (3-36)	10 (2-20)	14 (0-32)
	Specialist	20 (0-36)	7 (0-18)	11 (0-27)
	Academician	15 (0-32)	4 (0-14)	9 (0-26)
	p	<0.001	<0.001	<0.001
Employment duration	≤5 years	22 (7-36)	10 (2-20)	14 (0-32)
	>5 years	19(0-36)	6 (0-18)	11 (0-27)
	p	<0.001	<0.001	0.002
Salary	≤ 2525 ğ	20(0-36)	8 (0-20)	12 (0-32)
	2525 -5050 ğ	16(0-30)	4 (0-18)	10 (0-24)
	≥ 5050 ğ	14(5-20)	3(0-13)	5 (4-11)
	p	<0.001	<0.001	0.091
Sufficient income belief	Yes	17 (0-33)	5 (0-18)	10 (0-24)
	No	17 (7-36)	6 (0-15)	11 (1-27)
	Partially	21 (0-36)	8(0-20)	12 (0-32)
	p	<0.001	0.003	0.258
Being appreciated by managers	Yes	15 (0-33)	7 (0-16)	10 (0-24)
	No	21 (0-36)	8 (0-20)	11 (0-32)
	Sometimes	19 (3-36)	7 (0-20)	12 (0-27)
	p	<0.001	0.100	0.117
Efficient leisure time for himself or his family	Yes	14(0-32)	5(0-15)	8(0-25)
	No	21(0-36)	8 (0-20)	12 (0-32)
	p	0.002	0.013	0.125

*When the covariance analysis and age variable were taken away, a significant difference was found in all three sub-dimensions (EE, p=0.007; D, p=0.002; LA, p=0.004)
E: emotional exhaustion; D: depersonalization; LA: lack of personal accomplishment; PHI: private health institution; T&R hospital: training and research hospital

Table 3. The major problem that physicians think they experience or may experience in the future

	n (%)	Burnout EE Median (min-max)	Burnout D Median (min-max)	Burnout LA Median (min-max)
Sociopolitical situation in the country	305 (86.6%)	0.010	0.508	0.070
Performance system	298 (84.7%)	<0.001	0.001	0.135
Poor relations with managers	298 (84.7%)	<0.001	<0.001	0.034
Not enough spare time for academic study/education	287 (81.5%)	<0.001	0.001	0.847
Insufficient salary system	282 (80.1%)	<0.001	0.004	0.334
Not enough spare time for personal interests	279 (79.3%)	<0.001	0.001	0.221
Patients with high mortality/chronic diseases	273 (77.6%)	<0.001	0.004	0.008
Inadequate physical conditions	257 (73.0%)	<0.001	<0.001	0.005
Inconvenient work/on duty/shift conditions	253 (71.9%)	<0.001	<0.001	<0.001
Occupational dissatisfaction	245 (69.6%)	<0.001	<0.001	0.004
Communication problems with patients and patient relatives	225 (63.9%)	<0.001	<0.001	0.001
Not able to choose the place where they are going to live	213 (60.5%)	<0.001	<0.001	0.002
Disruption of family integrity	158 (44.9%)	<0.001	0.016	0.503
Poor relations with colleagues	120 (34.1%)	0.006	0.044	0.419

E: emotional exhaustion; D: depersonalization; LA: lack of personal accomplishment

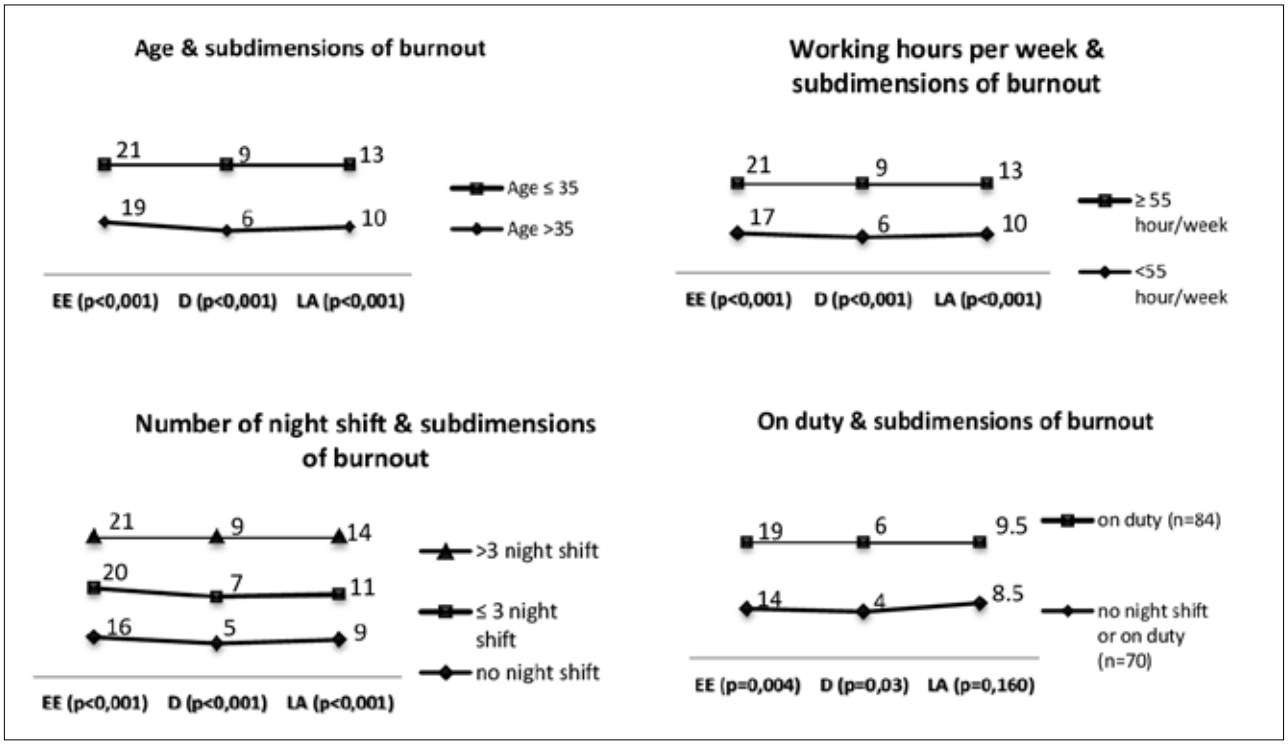

Figure 1. The association between sub-dimensions of burnout and characteristics of chest physicians
E: emotional exhaustion; D: depersonalization; LA: lack of personal accomplishment

In one of the studies, the burnout levels in physicians were compared to those in other jobs; it was reported that the burnout prevalence of physicians in America reached the alarming levels; the working hours of physicians were longer than in other white-collar professions [11]. In the same study, the physicians stated that 36% of them had no adequate time for their private life [11]. In our study, however, 83% of chest physicians mentioned that they had not enough time for leisure activities. This result shows the necessity of rearrangement of working hours and shift physicians' concepts.

In the present study, higher burnout levels were found in the EE, D, and LA dimensions of young population. According to Cherniss, this situation is associated with insufficient levels of coping skills, instinct, and interior skills of the young [21]. In

the first 5 years of the occupation, the finding that the burnout level is high in "the newest ones" ($p<0.001$) may also be related to examining more patients compared to senior physicians, doing more routine work, having more supervision pressure, and having no satisfactory status features. In our study, the EE, D and LA sub-dimension scores of residents and specialists were found to be higher than those of academicians. This situation remained significant when covariance analysis and age variables were removed ($p<0.05$).

It is reported that more burnout syndrome has gone through in the lower steps of various occupation groups in literature [22,23].

The lowest score of the EE, D and LA sub-dimensions was observed in the workers of private health institutions; the highest score, however, was in those working at state hospitals. Having high salary and prestige at private health institutions were thought to be associated with lower burnout levels. Having more research and personal development opportunities at universities and training and research hospitals provide benefit in being protected from burnout by increasing occupational satisfaction. Working in an academic institution is known to be a factor preventing from burnout [24].

In a study carried out to search the relationship between the prevalence of insomnia symptoms and sleeping quality of the physicians with high and low burnout scores in Spain, the burnout was established to be related to all insomnia symptoms highly as a result of multivariate logistic regression [25]. When physicians with "no shift," "three or less than three shifts," and "more than three shifts" were evaluated, a significant difference was determined in the EE, D, and LA subdimensions of all three groups ($p<0.001$) (Figure 1).

The situations when financial or emotional expectations of the individuals are not met satisfactorily are known to form a risk for burnout. Only 8.8% of the physicians involved in our study thought that their income was adequate. In those who find their salaries are sufficient, the burnout in the EE and D dimensions was found to be significantly low ($p<0.001$).

Only 15.6% of the physicians involved in our study thought that their success was appreciated by their managers. Burnout scores in EE sub-dimensions of physicians who thought to be appreciated by their managers were determined to be lower ($p<0.001$). In a study carried out by Visser et al. [26], "mismanagement" and "not feeling any support" were indicated as vital factors decreasing the work satisfaction. In a study performed by McManus et al. [27], it was emphasized that giving physicians a chance in the mechanisms of decision making; showing the necessity of their control and autonomies; and making them understand that they are valuable while running through their needs were important.

Our study demonstrated that 84.7% of the physicians evaluate a "performance-based system"-a part of the changing health system-as a problem. Physicians who were not satisfied with the performance-based system had significantly higher EE and D scores. It made us think that if physicians are left in a dead-end between ethical values and income: It either makes them insensitive by putting their income first or makes them go through EE by choosing ethical values.

In this study, the communication issues between the patient and patient's relatives are perceived as a problematic by 63.9% of chest physicians. Their contribution to burnout was found to be significant in all sub-dimensions ($p<0.001$). Ever-increasing communication issues and violence in recent years have become an important problem for health professionals, and it causes work stress to raise the work load independently [28]. There have been five murders of chest physicians and chest surgeons in the last 5 years, as reported by Turkish media. Between January 2015 and April 2017, 25,443 violence cases were reported to the Health Ministry. A total of 6,893 of these cases were physical violence, and verbal abuse cases were 18,550. These data were sourced from the Turkish Medical Association official website (http://www.ttb.org.tr/index.php/Haberler/siddet-6706.html).

A significant difference was determined in the EE and D subdimensions of burnout in physicians (81.5%) reporting that they did not have spare time for academic study/education ($p<0.05$). In a previous study including physicians, when professional personal competency was developed, it was reported that stress related to occupation decreased to a large extent, and an important motivation source concerning work satisfaction depending on this situation also increased. In the same study, it was also emphasized that personal competency is one of the most important anti-stress sources [29].

In our study, 61.4% of chest physicians answered the statement "I do not mind what happened to people that I met due to my job" with "never." Despite all negativities and burnout, the majority of physicians will continue to use their time for their patients as they promised rather than for themselves, families, and children. Nonetheless, on the other side of the medallion, the fact that physicians do not care about their patients now and again is of importance. In a previous study that examined the burnout in surgeons, it was shown that major medical errors made in the past 3 months increased to 11% with one score up (scale interval 0-33) in depersonalization dimension; it was also emphasized that a serious potential formed in view of the urge of the physician as "first do no harm" [30]. Hospitals are places where the well-being of staff is symbiotically related to patients' well-being. Depersonalization of physicians, however, will be a disaster for the whole society.

This study is, to the best of our knowledge, is the first study in the English language in medical literature where burnout syndrome was analyzed in chest physicians following health reforms. There are some limitations to our study. The first one is that since there are no limit values in terms of validity and reliability of MBI in its Turkish translation, the burnout levels were grouped as "low," "median," and "high" [14]. Not being able to categorize is the biggest limitation to the study. The second one is that the majority of the physicians involved in the study comprised those who replied to survey forms sent collectively. It is possible that those replied with selective perception were really replied by individuals suffering from a burnout. The third limitation is that the study was only performed in chest physicians in Turkey. It solely provides information about local variables. Therefore, similar studies are required in countries where health reforms have gone through.

In a globalized world, as a result of health systems formed by market-oriented regulations, a burnout at the emotional level, depersonalization, and decrease in personal success are particularly more commonly seen in young chest physicians. More than a half of chest physicians implied that they regret their preferences, and this ratio reached 58.2% in young physicians. It is clear that our young colleagues feel the transformation in health services deeply and severely, and this situation threatens the future of the chest diseases field, unless the new regulations in the near future not only consider the needs of patients, but also the needs of medical staff.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Dokuz Eylül University (28.07.2016/ 21-12).

Informed Consent: Written informed consent was obtained from all participants of this study.

Peer-review: Externally peer-reviewed.

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