

Burnout Syndrome Among Physicians: The Role of Socio-Demographic Characteristics

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ABSTRACT

Burnout syndrome among physicians: the role of socio-demographic characteristics

Objective: Burnout is a syndrome that occurs in occupational groups, which are in close relation with people and includes dimensions of, emotional exhaustion, depersonalization and low sense of personal accomplishment. The aim of the present study is to investigate the relationship between socio-demographic characteristics and burnout syndrome in academic personnel working at a hospital of Faculty of Medicine.

Method: 258 physicians working at Baskent University Ankara Hospital have been included in the present study voluntarily, between January - April 2014 and they have been administered Socio-Demographic Data Form and Maslach Burnout Inventory.

Results: Age, academic title, time span in the profession and at the institution, the number of patients daily examined, administrative tasks, receiving research supports, the number of lectures given were related to all dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment. Personnel assignment, the number of monthly shifts, daily duration of work were related to emotional exhaustion and depersonalization. Specialty preferences and intention to continue on the profession were associated with emotional exhaustion and personal accomplishment. Personnel assignment criteria and time reserved for academic study were related to only emotional exhaustion whereas accessibility to scientific literature was linked to personal accomplishment.

Conclusion: Older age, having an academic title, longer time span in the profession and at the institution, considering the long term consequences of specialty selection are all individual factors that can be related to burnout syndrome. Developing health policies for an optimal organization of daily work duration, number of patients daily examined and personnel assignment criteria could prevent burnout. Also developing organizational climate to create time for academic study, supporting researches, increasing accessibility to scientific literature and optimization of education seminars in academic physicians could protect them from burnout syndrome. Prospective studies modeling individual and organizational risk factors for burnout on academic physicians will help to further illuminate the measures to protect physicians from burnout syndrome and also contribute to the enhancement of treatment service quality and foster the contribution to academic arena.

Keywords: Academician, physician, risk factors, burnout

ÖZET

Hekimlerde tükenmişlik sendromu: Sosyodemografik özelliklerin rolü

Amaç: Tükenmişlik; duygusal tükenme, duyarsızlaşma ve düşük kişisel başarı hissi boyutlarını içeren, işi gereği insanlarla yoğun bir ilişki içerisinde olan meslek gruplarında görülen bir sendromdur. Çalışmamızda, bir tip fakültesi hastanesinde görev yapan öğretim üyeleri ve araştırma görevilerindeki tükenmişlik sendromunun sosyodemografik özelliklerle ilişkisinin incelenmesi amaçlanmıştır.

Yöntem: Ocak- Nisan 2014 tarihleri arasında, Başkent Üniversitesi Ankara Hastanesi'nde çalışmakta olan 258 gönüllü hekime, Sosyodemografik Veri Formu ve Maslach Tükenmişlik Ölçeği uygulanmıştır.

Bulgular: Yaş, akademik unvan, meslekte ve kurumda çalışma süresi, günlük muayene edilen hasta sayısı, idari görev, araştırmalara alınan destek, sorumlu olunan ders saati duygusal tükenme, duyarsızlaşma ve kişisel başarı hissi olmak üzere her üç alt boyutla da ilişkilidir. Kadro atamaları, aylık nöbet sayısı ve günlük mesai süresi duygusal tükenme, duyarsızlaşma üzerine etkili iken; bölüm seçimi ve mesleğe devam niyeti duygusal tükenme, kişisel başarı hissi üzerine etkilidir. Kadro atama kriterleri ve akademik çalışmalara ayrılan süre sadece duygusal tükenme, kaynaklara ulaşım ise sadece kişisel başarı hissi ile ilişkilidir.

Sonuç: Bireysel olarak yaşın artmasının, akademik unvana sahip olmanın, meslekte ve aynı kurumda geçirilen süre uzunluğunun ve bölüm seçimi sürecinde uzun vadeli sonuçları göz önünde bulundurmanın tükenmişlik sendromu ile ilişkili olduğu söylenebilir. Sağlık politikaları kapsamında, günlük çalışma süresinin, günlük muayene edilen hasta sayısının ve kadro atamalarının optimal düzeyde yapılandırılmasının tükenmişlik sendromu için önleyici olabileceği düşünülebilir. Ayrıca akademisyen hekimler için örgütsel iklimin düzenlenmesinde, akademik çalışmalar için ayrı mesai saatlerinin oluşturulmasının, projelere verilen desteğin artırılmasının, literatüre ulaşım ve eğitim saatleri düzenlenmesinin de, tükenmişlik sendromu için önleyici olabilecek faktörler olduğu söylenebilir. Akademisyen hekimler üzerinde, tükenmişlik sendromunun bireysel ve örgütsel risk etkenlerinin modellenmesi için planlanacak çalışmalar, hekim tükenmişlik sendromundan koruyabilecek önlemlerin geliştirilmesine ışık tutarken, verilen tedavi kalitesinin ve akademik arenaya katkının artırılabilmesinin önünü de açabilecektir.

Anahtar kelimeler: Akademisyen, doktor, risk faktörleri, tükenmişlik



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INTRODUCTION

Burnout was first described by Freudenberger (1) as the failure, wearing out, loss of energy and strength or as the state of the running out of inner resources of the person because of unsatisfied wishes. Today, however, burnout is defined as a syndrome in occupational groups, which are in close relation with people and includes dimensions of emotional burnout, depersonalization and low sense of personal accomplishment (2).

Emotional exhaustion, the internal dimension of burnout syndrome, is the most important determinant of burnout, indicating emotional overloading and diminished achievable emotional resources. Depersonalization, which is the interpersonal dimension, includes attitudes and behaviors that are devoid of emotion, regardless of whether the recipients are individuals. The lack of personal accomplishment is defined as the inability to overcome the problem and the sense of inefficacy (2).

There are different results about the development of burnout syndrome in the studies in the field. In some studies, individual factors such as age, gender, education level, marital status, time span in the profession and seniority or psychological factors such as personality traits, and coping mechanisms have been reported as responsible factors (3,4), whereas in some others; organizational factors such as the workload, reward, control, sense of belonging and fairness are implied as responsible factors (5,6).

Although the etiology of burnout syndrome has not been fully elucidated, it is evident that burnout syndrome is common in occupational groups who have face to face interaction with people. There are studies reporting that physicians who are in close contact with people are prone to burnout (7,8). In addition to the close contact with the people, the tension caused by the patient overload, the responsibility to make critical decisions in uncertain conditions, and the stress of avoiding possible mistakes increase the development of burnout syndrome among physicians (9). Burnout may lead to health problems in physicians, as well as affecting patients' treatment

outcomes. Recent studies emphasizes the importance of preventing burnout in physicians in order to improve treatment services (5,10).

Identification of risk factors in the development of the burnout syndrome in the physicians will help to prevent the burnout syndrome, which can be defined as a public health problem. In terms of developing countries like Turkey, it will lead to an increase in the quality of treatment services in the process of restructuring health care policies. In our study, it was aimed to investigate the relationship of burnout syndrome with sociodemographic characteristics and to model risk factors, among the faculty members and physicians in residency training at a medical school hospital.

METHOD

Four hundred eighty physicians working at the Baskent University Ankara Hospital, were planned to be included in the study voluntarily, between January and April 2014. Because of absenteeism (due to being on leave or on clinical rotations) and rejecting participation due to intensive workload, 258 physicians was voluntarily included in the study. The study protocol was approved by the ethical committee. The study was supported by the Baskent University Research Council, with the decision number KA13/322.

Measures

Socio-demographic and occupational information form: It is a questionnaire designed by the researchers, questioning the participants' socio-demographic and occupational characteristics. Within the socio-demographic information, sex, age, marital status, hobbies, specialty, academic title, whether selecting the profession and the specialty was willingly or not, the time span in the profession and at the institution, and the intention to continue on the profession were examined. Within the organizational factors; hours of daily work, the number of patient load daily, the number of monthly shifts, administrative jobs, the period of time reserved for scientific studies, research

support, access to resources, foreign language, lectures being responsible, the opportunity of participating in academic studies abroad, and personnel assignment criteria were questioned.

Maslach Burnout Inventory: This scale was developed by Maslach (11). It is a 22 item Likert-type scale that evaluates burnout syndrome in 3 dimensions: emotional burnout (MBI-EB) with 9 items, depersonalization (MBI-D) with 5 items and Personal Accomplishment (MBI-PA) with 8 items. The items in the scale, adapted to Turkish by Ergin (12), are evaluated on a scale as “never” 0 and “always” 4 points. The scale and the subscales do not have cut points. High mean scores on MBI-EB and MBI-D subscales correspond to a higher rating of burnout, whereas a low mean score on the MBI-PA subscale corresponds to a higher rating of burnout.

Statistical Analysis

The data of study were analyzed by SPSS for Windows V.17. Student t and One Way Analysis of Variance tests were used to compare Maslach Burnout Inventory results by socio-demographic characteristics. $p < 0.05$ values were considered statistically significant in all analysis.

RESULTS

The distribution of burnout subscale scores according to the descriptive individual and organizational characteristics of the participants is given in Table 1 and Table 2.

Regarding sex, there was no significant difference between burnout subscale scores ($p > 0.05$). According to age groups 20-29, 30-39 and over 40 years of age; emotional burnout and depersonalization scores were significantly different between the three groups ($p < 0.001$). Emotional burnout and depersonalization scores of the young physicians in the 20-29 age group were the highest. There was no significant difference in personal accomplishment scores between 20-29 and 30-39 age groups, but there was a significant difference

between the other age groups ($p < 0.001$); physicians in the 20-29 age group had the lowest personal achievement score. Although, there was a difference in emotional exhaustion and depersonalization scores according to the marital status ($p < 0.001$), no difference was determined in personal accomplishment scores. Single physicians' emotional burnout and depersonalization scores were higher than those married and divorced physicians.

In terms of academic career of physicians; emotional burnout, depersonalization, and personal accomplishment scores were significantly different ($p < 0.001$). Emotional burnout levels were significantly different between residents, associate professors, and professors; between specialists/fellows and professors; between instructors and professors; between associate professors and professors ($p < 0.001$), with the highest score being in residents. Depersonalization scores were significantly different between residents and instructors, associate professors, professors; between specialists/fellows and professors ($p < 0.001$). Depersonalization scores were the highest in residents. There were significant differences between the residents and associate professors or professors, ($p < 0.001$) when they were assessed in terms of their personal accomplishment scores, and the lowest personal accomplishment score belonged to residents.

The physicians that have chosen their profession unwillingly had significantly higher emotional burnout scores ($p < 0.01$) and lower personal accomplishment scores ($p < 0.01$) than the physicians that have chosen their specialty willingly, while there was no significant difference in subscales between the groups choosing the department willingly/unwillingly ($p > 0.05$). Emotional burnout and depersonalization scores were higher and personal accomplishment scores were lower among the physicians who have had 5 years or less job experience than who have had more than 5 years experience; these differences were statistically significant ($p < 0.001$, $p < 0.001$, $p = 0.002$ respectively). Among the physicians who have worked at Baskent University Ankara Hospital more than 5 years; emotional burnout and depersonalization scores were lower and personal accomplishment scores were

Table 1: Descriptive statistics of burnout subscales by individual characteristics

	Emotional burnout					Depersonalization					Personal accomplishment				
	n	%	Mean	SD	t/F	p	Mean	SD	t/F	p	Mean	SD	t/F	p	
Gender*															
Female	151	58.5	24.03	7.26	1.360	0.175	13.70	4.08	-1.670	0.096	29.96	4.61	-0.189	0.85	
Male	107	41.5	22.72	8.11			14.57	4.18			30.00	5.00			
Age**															
20-29	71	27.5	27.09	6.02	23.27	<0.001**	16.04	4.19	20.33	<0.001**	28.91	4.71	15.63	<0.001**	
30-39	103	39.9	24.26	7.69			14.31	3.96			28.91	5.10			
>40	84	32.6	19.51	7.02			12.10	3.41			32.27	3.47			
Marital status**															
Single	92	35.7	24.96	8.00	2.90	0.035**	15.10	4.44	5.80	<0.001**	29.16	5.50	2.14	0.096	
Married	156	60.5	22.94	7.40			13.69	3.78			30.50	4.31			
Widowed	2	0.8	17.50	10.60			7.50	2.12			26.00	4.42			
Divorced	8	3.1	18.75	3.15			11.00	3.70			31.00	4.77			
Hobbies*															
Exist	196	76	23.12	7.47	-1.380	0.169	14.11	4.02	0.328	0.743	30.25	4.64	1.483	0.33	
Not exist	62	24	24.66	8.07			13.91	4.52			29.22	5.11			
Department**															
Basic medical sciences	30	11.6	21.40	6.24	1.80	0.167	12.90	3.24	1.76	0.173	29.40	4.73	1.81	0.166	
Internal medicine	140	54.3	24.17	8.24			14.02	4.26			29.65	4.66			
Surgery	88	34.1	23.12	6.94			14.53	4.17			30.78	4.91			
Academic title**															
Resident	104	40.3	26.51	6.70	11.02	<0.001**	15.89	4.18	10.94	<0.001**	28.29	5.22	7.19	<0.0001**	
Specialist	34	13.2	24.50	8.84			14.61	3.96			29.64	4.59			
Instructor	33	12.8	22.54	7.43			12.78	3.80			30.81	3.53			
Assistant professor	18	7.0	21.33	6.73			12.27	3.51			29.88	4.32			
Associate professor	34	13.2	22.11	6.63			13.05	3.56			32.14	3.79			
Professor	35	13.6	16.88	5.68			11.22	2.43			32.65	3.51			
Selecting the occupation*															
Willingfully	236	91.5	23.25	7.61	-1.67	0.096	13.94	4.10	-1.53	0.126	30.16	4.68	1.79	0.075	
Unwillingly	22	8.5	26.09	7.62			15.36	4.38			28.27	5.46			
Choice of department*															
Willingfully	241	93.4	23.17	7.62	-2.61	<0.01*	13.99	4.04	-1.14	0.255	30.21	4.66	2.61	<0.01*	
Unwillingly	17	6.6	28.11	6.37			15.17	5.38			27.11	5.54			
Time in occupation*															
<5 years	82	31.8	26.04	6.35	3.75	<0.001*	15.81	4.21	4.82	<0.001*	28.64	4.99	-3.18	0.002*	
≥5 years	176	68.2	22.30	7.90			13.25	3.85			30.64	4.54			
Time at institution*															
<5 years	156	60.5	25.39	7.17	5.18	<0.001*	14.89	4.22	4.05	<0.001*	28.85	4.67	-5.02	<0.001*	
≥5 years	102	39.5	20.58	7.44			12.81	3.67			31.77	4.37			
Intention to continue to occupation**															
Change in first opportunity	15	5.8	30.60	5.57	9.75	<0.001**	16.46	4.92	2.57	0.055	26.93	4.57	3.32	0.020**	
Change in 5 years	17	6.6	29.41	6.28			15.05	3.71			29.00	4.62			
Continue till to retirement	72	27.9	22.84	6.72			14.20	3.75			29.63	5.36			
Continue as long as	154	59.7	22.45	7.74			13.66	4.21			30.59	4.39			

*t-test performed and represented in table, **ANOVA tests performed and F values represented in table, SD: standard deviation

Table 2: Descriptive statistics of burnout subscales by organizational factors

	Emotional burnout					Depersonalization					Personal accomplishment				
	n	%	Mean	SD	t/F	p	Mean	SD	t/F	p	Mean	SD	t/F	p	
Daily working period*															
≤8 hours	40	15.5	20.32	6.52	-2.897	0.004*	12.85	3.30	-2.040	0.042*	30.42	4.43	0.601	0.549	
>8 hours	218	84.5	24.07	7.69			14.29	4.24			29.93	4.83			
Number of examined patient per day**															
None	67	26	21.59	7.02	3.98	0.002**	12.97	3.86	4.52	<0.001**	28.88	5.05	3.19	0.008**	
1-9	37	14.3	22.56	7.88			12.83	3.70			30.08	4.32			
10-19	69	26.7	23.72	7.60			14.31	4.22			31.02	4.25			
20-29	51	19.8	23.58	7.80			14.82	4.32			31.21	4.25			
30-39	13	5.0	24.30	5.79			14.07	3.35			29.07	3.94			
≥40	21	8.1	29.71	7.14			17.09	3.74			27.76	6.41			
Number of shifts per month**															
None	110	42.6	20.63	7.53	11.85	<0.001**	12.41	3.29	14.09	<0.001**	30.81	4.62	2.19	0.90	
1-5	70	27.1	24.18	6.89			14.41	4.09			29.68	4.48			
6-10	52	20.2	26.88	6.63			15.98	4.16			29.42	4.83			
>10	26	10.1	26.96	7.59			16.31	4.70			28.62	5.65			
Administrative duties*															
Exist	56	21.7	20.17	7.75	-3.76	<0.001*	12.23	3.61	-3.85	<0.001*	32.05	3.89	3.71	<0.001*	
Not exist	202	78.3	24.41	7.36			14.57	4.14			29.44	4.84			
Time for scientific research*															
Sufficient	54	20.9	19.31	7.31	-4.70	<0.001*	13.12	4.28	-1.88	0.060	30.55	4.51	0.94	0.344	
Insufficient	204	79.1	24.60	7.35			14.31	4.07			29.86	4.83			
Support for researches*															
Sufficient	95	36.8	21.04	7.28	-4.05	<0.001*	13.31	4.01	-2.25	0.025*	30.80	4.66	2.04	0.042*	
Insufficient	163	63.2	24.92	7.49			14.50	4.15			29.54	4.78			
Access to scientific resources*															
Sufficient	166	64.3	22.96	7.40	1.49	0.138	13.92	3.99	0.77	0.441	30.51	4.43	-2.29	0.022*	
Insufficient	92	35.7	24.44	8.00			14.33	4.40			29.09	5.22			
Foreign language*															
Sufficient	194	75.2	23.19	7.58	1.11	0.264	13.98	4.08	0.57	0.566	30.23	4.93	-1.31	0.190	
Insufficient	64	24.8	24.42	7.79			14.32	4.32			29.32	4.19			
Number of responsible lecture hours too much*															
Yes	207	80.2	27.05	5.82	3.81	<0.001*	15.84	4.54	3.48	<0.001*	28.80	4.89	-2.02	0.044*	
No	51	19.8	22.61	7.78			13.63	3.92			30.30	4.70			
Academic staff exchange opportunity*															
Exist	123	47.7	22.64	7.62	-1.72	0.087	13.58	4.34	-1.80	0.073	30.26	4.66	0.81	0.419	
Not exist	135	52.3	24.27	7.59			14.51	3.90			29.77	4.87			
Academic promotion criteria are difficult*															
Yes	135	52.3	24.80	6.70	2.91	0.004*	14.28	4.11	0.89	0.374	29.74	4.42	-0.94	0.348	
No	123	47.7	22.06	8.34			13.82	4.17			30.30	5.13			
Academic promotions are unfair**															
Yes	121	46.9	25.53	7.28	4.15	<0.001*	15.00	4.27	3.46	0.001*	29.72	4.97	-0.88	0.376	
No	137	53.1	21.69	7.51			13.24	3.84			30.25	4.59			

*t-test performed and represented in table, **ANOVA tests performed and F values represented in table, SD: standard deviation

higher than the physicians who have worked less than 5 years; these differences were statistically significant ($p < 0.001$, $p < 0.001$, $p < 0.001$ respectively).

There was a significant difference in the emotional burnout and personal accomplishment scores among the physician groups who intended to change their profession at the first opportunity, change within five years, continue upto retirement and continue as long as possible ($p < 0.001$, $p = 0.020$). The emotional burnout scores of the physicians who intended to change at the first opportunity and within five years were more than those that intended to maintain their profession as long as possible and upto to retirement. Those who intended to change at first opportunity had lower personal accomplishment scores than those who intended to maintain as long as possible.

When we compared the physician groups who had 8 hours daily working time and who had more than 8 hours; the emotional burnout and depersonalization scores were higher among physicians who worked more than 8 hours ($p = 0.004$, $p = 0.042$). There was significant difference in emotional burnout, depersonalization, and personal accomplishment scores according to the number of patients examined daily ($p = 0.002$, $p < 0.001$, $p = 0.008$). Emotional burnout scores were higher in physician group who examined more than 40 patient daily than physicians who had no patients and who had 1-9, 10-19, 20-29 patients daily. Depersonalization scores were higher among physicians who examined more than 40 patients than who had no patients or 1-9 patients daily.

When we compared the physician groups who had no shift, 1-5, 6-10 and more than 10 shifts monthly, the physician group who had no shift had lower emotional burnout and depersonalization scores than the other groups, significantly ($p < 0.001$, $p < 0.001$). There were no differences between the groups depending on the number of shifts for subscales. The physicians who had no administrative duties had higher emotional burnout and depersonalization scores, and lower personal accomplishment scores than the group who had administrative duties ($p < 0.001$; $p < 0.001$; $p < 0.001$). Physicians who thought that the number of lectures they were responsible was too much, had

higher emotional burnout and depersonalization scores, and lower personal accomplishment scores ($p < 0.001$; $p < 0.001$; $p = 0.044$).

Emotional burnout scores were higher in the physicians who thought that they do not reserve enough time for scientific studies than others ($p < 0.001$). The physicians, who thought that the research and project support were not sufficient, had higher emotional burnout and depersonalization scores and lower personal accomplishment scores ($p < 0.001$; $p = 0.025$; $p = 0.042$). The physicians who had insufficient access to scientific resources had lower personal accomplishment scores ($p = 0.022$).

Physicians who thought that the criteria of academic promotion were too challenging had higher emotional burnout scores ($p = 0.004$). The physicians who thought that the academic promotions were unfair, had both higher emotional scores and depersonalization scores; ($p < 0.001$; $p < 0.001$).

DISCUSSION

One of the interesting results of our study is that, unlike the literature, gender has no effect on burnout. Some research reported that burnout is more frequent in female physicians (13-15), whereas others reported male physicians have higher burnout (7,16). To the best of our knowledge, this article is the first study on burnout among physicians, in which gender was found to be not related with burnout. This result can be explained by the effects of world healthcare policy changes in recent years, as well as by the effects of the "health transformation program" on physicians, regardless of gender, in developing countries. Another result of the study, in accordance with the literature (17) is the excessive emotional burnout and depersonalization in single physicians. This result suggested that the existence of social support systems may reduce burnout.

Similar to the findings of Soler and Shanafelt (15,16), in our study we found that the senior academicians, those with higher academic titles, those who spent long periods in the profession are less likely to have burnout. Consistent with the study of Amofo (17), it has also been observed that the longer work in the same

institution is associated with the lower likelihood of burnout. These results may show that the increase in experience of the current institution, in addition to increased professional experience, may also reduce burnout.

In our study; while the emotional burnout was less, personal accomplishment feeling was high among the people who opted their jobs willingly and who had intention to continue to work. While no study was found in the literature that examined the effect of specialty choice on burnout, similar results were obtained in Yilmaz's (18) study about physicians' intention to continue to work. In consideration of these results, choosing the desired specialty in The Examination for Specialty in Medicine and physicians' intention about continuation on the occupation may reduce the likelihood of burnout. The lack of questions about the factors affecting the opinions regarding change or continuation on the profession is among our limitations in this study.

One of the results of our research is that emotional burnout and depersonalization are more frequent in doctors who work more than 8 hours per day, who have shift work and examine more than 40 patients per day. Consistent with our results, similar results were obtained in the study of Amofo (17), among the physicians who worked more than 40 hours per week. The longer daily work hours may lead to burnout due to loss of focus, increased error risk and inability to allocate time to themselves. In another study (13) that supports the result of our work, although the number of patients examined daily is not specified, it is stated that having too many patients increases the emotional burnout and depersonalization. This may increase the burnout by causing pressure on the physician to feel limited time for diagnosis and treatment. In this context, the regulation of daily working hours and optimization of the number of daily outpatient clinic patients may be considered as one of the measures that can reduce the burnout in physicians.

One of the results of our research is that the number of lecture hours increases depersonalization; similar to Ardic's (19) academic staff study. In contrast to his study, it increases emotional burnout and reduces

personal accomplishment. While the number of class hours can be expected to increase the emotional burnout and depersonalization due to the workload of physicians, it is interesting that it decreases the feeling of personal accomplishment. The fact that our sample consists of both academicians as "educators" and residents as "receiving the education", the results may have been affected. Being responsible for the same lectures every year may cause the feeling of repetition in trainers, whereas in the trainees, the feeling of personal accomplishment may decrease because of the perception that the course content is inadequate.

In the literature, there was no study that examined the relationship between the time reserved for academic work and burnout in physicians. According to the results of our research, the increase in the emotional burnout in physicians who can not take time for academic studies may be attributed to the fact that the physicians who work at the university hospitals are responsible for carrying out healthcare, education, and academic activities together, and there is no separate time reserved for academic activities. Hence, it can be considered as a reflection of trying to devote time to academic work within the health care activities.

One of the results of our study is that the emotional burnout and depersonalization are higher and personal accomplishment is lower in physicians who can not receive sufficient support in studies. There is also a lower personal accomplishment in the physicians who have insufficient access to academic resources. We have not found any studies investigating the effects of these factors on the burnout of physicians. The availability of resources and support for research may be one of the measures that can reduce the burnout in physicians. Having both factors examined by a yes or no question in sociodemographic data form and unexamined content of them is among the limitations.

Emotional burnout was found to be higher in the persons who thought that the academic promotion criteria were difficult; and both emotional burnout and depersonalization were found higher in those who thought that the academic promotions were unfair. To the best of our knowledge there is no study among

physicians, focusing on these factors in the literature. Review of staffing policies can be considered as one of the measures that can reduce burnout via influencing organizational commitment.

One of the interesting results of our research is that the physicians who are in charge of administrative duty have a higher sense of personal accomplishment as well as lower emotional burnout and depersonalization. While the inclusion of administrative duties in addition to treatment and education services is expected to increase the burnout by increasing workload, the result that point to the contrary is surprising. In a study conducted by Ozyurt (7), it was observed that the administrative duties reduced emotional burnout, while Ardic's (19) study found that, it reduced depersonalization and increased personal accomplishment in nonphysician academicians. Our result, which is consistent with the literature, may be interpreted as, independent of the work load, having a voice in administration may reduce burnout.

In conclusion, it can be said that age, academic title, time span in the profession and at the same institution and long-term plans in choosing a specialty will be effective in preventing burnout syndrome. Besides, in the formation of organizational climate; it can be predicted that the optimal duration of the daily working period, the optimal number of daily patient load, the availability of education hours, academic working hours, access to scientific resources and the provision of research support may be beneficial in preventing burnout syndrome. Improvements in health policies to solve the professional problems of physicians may increase the intention of continuation of the profession, and may be an important factor in the prevention of burnout syndrome.

The sufficiency of the number of samples and evaluation of both sociodemographic characteristics and individual and organizational factors are the strengths of our study. The fact that the sample contains only the physicians working at a foundation university and cross-sectional design of the study are our limitations. In addition, the fact that the physical and mental illnesses of the physicians, membership of

professional institutions and unions, the quality of health care services that is offered and professional satisfaction were not examined in the sociodemographic data form; as well as the lack of questioning the reason for the intention to change the profession, and the yes or no question style of the support given to the academic work and sufficiency of access to resources without depicting their contents are our limitations. Moreover, the level of income, annual leave status, and increased physical/verbal violence against health personnel in the recent years, which are all known factors that effect burnout, were not examined.

In our study it was aimed to investigate the relation of sociodemographic characteristics of academicians physicians with burnout syndrome. In our study, we plan to model both individual and organizational risk factors of burnout syndromes by using psychometric measurements. As a final step, studies with a larger sample group seem to shed more light on physicians' burnout syndrome to view it as a public health problem, to recognize, and to prevent the risk factors for burnout development, and thus improve treatment services.

Contribution Categories	Name of Author
Development of study idea	G.O.
Methodological design of the study	G.O.
Data acquisition and process	G.O., E.D.
Data analysis and interpretation	G.O., E.D.
Literature review	G.O.
Manuscript writing	G.O.
Manuscript review and revision	G.O., E.D.

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