ARAŞTIRMA YAZISI / RESEARCH ARTICLE TÜRKİYE'DE ACİL SERVİS ÇALIŞANLARINDA TÜKENMİŞLİK SENDROMU

BURNOUT SYNDROME IN EMERGENCY DEPARTMENT WORKERS IN TURKEY

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ÖZET

ABSTRACT

AMAÇ: Stres insan hayatının her alanında ortaya çıkar. İş hayatında artan stres tükenmişlik sendromuna neden olur. Tükenmişlik sendromu sağlık çalışanları, özellikle acil servis çalışanları arasında daha yaygındır. Bu çalışmada Türkiye'de acil servis çalışanlarında tükenmişliği etkileyen faktörleri belirlemeyi amaçladık.

GEREÇ VE YÖNTEM: Yerel etik onayı alındıktan sonra demografik verileri ve Maslach Tükenmişlik Envanterini içeren bir anket kullanıldı. Acil durum personeline telefon uygulamaları, e-posta ve acil durum derneklerinin web siteleri kullanılarak ulaşıldı. Ankete katılan 812 kişiden 792'si çalışmaya dahil edildi. Veriler SPSS 23.00 programı kullanılarak analiz edildi.

BULGULAR: Çalışmada katılımcıların %35,9'u 25 yaşın altında olup yaş ortalaması 29,79±5,82 olarak tespit edildi. Çalışma grubun yarısı (%49,9) doktorlardan oluşmaktaydı. Meslek yılındaki kıdem ortalaması 5,57±5,31 olarak tespit edilirken acil servisteki calısma yılı 4,29±4,18 olarak belirlendi. Katılımcıların %51'i bekar ve %64,6'sının çocuğu yoktu. Ortalama aylık gelir 6435,20±4156,51 ₺ (1608,75±1039 \$) olarak tespit edildi. Ayrıca %92,8'inin herhangi bir psikiyatrik hastalık tanısı almadığı, %71,2'sinin ise herhangi bir bağımlılığının bulunmadığı kaydedildi. Ortalama haftalık çalışma süresi 54,39±14,15 saat olarak belirlendi. Günlük muayene edilen/bakılan hasta sayısı ortalaması 70,99±19,15'ti. Duygusal tükenmenin kadınlarda ön planda olduğu belirlendi. Duyarsızlaşma ve azalmış kişisel başarı ile cinsiyet arasında anlamlı bir fark saptanmadı. Kişisel başarı 26-35 yaş aralığındaki katılımcılar arasında en yüksekti. Duyarsızlaşma ve duygusal tükenme yaşla birlikte istatistiksel olarak anlamlı bulunmadı.

SONUÇ: Acil durum personelinin bir ekip olarak çalışması gerekir. Bu uyumu bozan faktörlerden biri de tükenmişlik sendromudur. Bu çalışmada tükenmişlik sendromunun görülme sıklığı, tükenmişliği etkileyen faktörleri ve bu faktörlerin acil servis ekibinde yer alan uzman, doktor, hemşire, sekreter, güvenlik personeli ve temizlik personeli gibi çalışanlar üzerindeki etkilerini araştırdık. Sağlık çalışanlarının çalışma koşulları, çalışma saatleri ve ücretlerinin iyileştirilmesi durumunda daha üretken olabileceklerini düşünmekteyiz.

ANAHTAR KELİMELER: Tükenmişlik sendromu, Duyarsızlaşma, Acil servis, Duygusal tükenme.

OBJECTIVE: Stress occurs in all areas of human life. Increased stress in business life causes burnout syndrome. Burnout syndrome is more common among healthcare workers, especially emergency service workers. In this study, we aimed to determine the factors affecting burnout in emergency department workers in Turkey.

MATERIAL AND METHODS: After obtaining local ethical approval, a survey questionnaire including demographic data and the Maslach Burnout Inventory was used. Emergency personnel were reached by using telephone applications, e-mail, and the websites of emergency associations. Of the 812 people surveyed, 792 were included in the study. The data were analyzed using the SPSS 23.00 program.

RESULTS: In this study, 35.9% of the participants were under the age of 25 and the average age was 29.79±5.82. Half of the group (49.9%) were doctors. While the seniority in years of experience was 5.57±5.31, the working years in the emergency department was 4.29±4.18. 51% of the participants were single and 64.6% had no children. Average monthly income was 6435.20±4156.51 ₺ (1608.75±\$1039 \$). It was also noted that 92.8% hadn't been diagnosed with a psychiatric disease and 71.2% did not have any addiction. The average weekly working time was 54.39±14.15 hours. The mean number of patients examined/looked after daily was 70.99±19.15. Emotional exhaustion was determined to be at the forefront in women. There was no significant difference between depersonalization, reduced personal accomplishment and gender. Personal success was highest among participants aged 26-35. Depersonalization and emotional exhaustion were not statistically significant in relation to age.

CONCLUSIONS: Emergency personnel are required to work as a team. One factor that disrupts this harmony is burnout syndrome. In this study, we investigated the prevalence of burnout syndrome, the factors affecting it, and the effects of these factors on employees such as specialists, doctors, nurses, secretaries, security personnel, and cleaning staff in the emergency department. We think that healthcare workers could be more productive if their working conditions, working hours and wages were improved.

KEYWORDS: Burnout syndrome, Depersonalization, Emergency department, Emotional exhaustion.

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INTRODUCTION

Stress is a natural factor that gives you the ability to focus and deal with problems in human life. However, it is known that high stress causes some problems in physical, mental and social areas (1). This problem affecting professional life was first described by American psychologist Herbert Freudenberg in 1974 as the mental and physical burnout of a person (2, 3). Later, burnout was defined by Maslach et al. (4) in three major categories as "emotional exhaustion (EE), depersonalization (D), personal accomplishment (PA)".

The risk of burnout, which affects all areas of life, is more common in people engaged in human-oriented occupations (2). Therefore, burnout among healthcare workers is reported more than the general population (5, 6). Because of intense work pressure, stress and changing working conditions, it is thought to increase the burnout tendency in health workers in the long term (7). Besides the physiological effects of burnout on healthcare workers, social life problems such as marital problems, insomnia, increased stress, increased alcohol and substance use, violence and suicidal tendencies, and absenteeism in business life, changing jobs frequently, working with low morale and motivation also lead to a decrease in work quality (4, 5, 8). In some studies, the prevalence of burnout syndrome among healthcare professionals is reported to be approximately 50% and even this rate is up to 76% in emergency workers (3, 9, 10). Emergency personnel are considered as the highest risk groups in terms of burnout because of negative reasons such as excessive patient circulation, long patient waiting time, witnessing deaths and injuries, insufficient equipment, intense working hours, insufficient number of personnel, problems in the team, situations with life risks requiring rapid diagnosis and treatment and close contact with the nervous relatives of patients (6, 7, 11 - 14).

Emergency personnel are required to work as a team. The factor that disrupts this harmony is burnout syndrome. In this study, we aimed to investigate the prevalence of burnout syndrome; the factors affecting burnout, and the effects of these factors on employees in all teams such as doctors, nurses, secretaries, security personnel, and cleaning staff in the team in the emergency department (ED).

MATERIALS AND METHODS

The target group of the research is consists of the emergency service personnel working in Turkey. The data were collected using the created questionnaire. The survey included 22 questions, evaluating the demographic information of the employees, their educational status, occupation, years in the profession, employment level, marital status, monthly income, work experience, psychiatric illness, average working hours, and substance use and abuse. Participants were contacted through the survey platforms (SurveyMonkey, STG Partners, LLC, Menlo Park, California), e-mail and the websites of emergency medicine associations. Since the data are personal, the information in the questionnaire was filled only if the participants gave their consent. Those who did not want to participate in the study did not fill out the questionnaire. Eight hundred fourteen participants responded to our survey. Twenty-two people who provide incomplete answers to the questions were excluded from the study. Seven hundred ninety-two of the participants almost completely answered the questions in the survey.

Maslach Burnout Inventory (MBI) is divided into 3 major categories and comprises 22 questions: emotional exhaustion (9 questions), depersonalization (5 questions), and personal accomplishment (8 questions). The responses to the questions of the MBI have been graded between 1-7 as "I don't think at all", "I think several times a year", "I think a few times a month", "I think once a month", "I think several times a week", "I think once a week", "I think every day". A Likert type scale was performed. Statistical analyses were conducted between different occupational groups working in the ED and exposed to similar stressor factors.

Ethical Committee

This study was conducted with the approval of the local ethics committee of Van Regional Training and Research Hospital with the decision number 2018/1.

Statistical Analysis

The analysis of research data used Statistical Package for the Social Sciences (SPSS) 23.00. Frequency distribution to determine the personal characteristics of health workers from the sample was examined. Participants of EE, D and PA to determine their level of descriptive statistics were used. The distribution of the data was examined to determine other analysis techniques to be used, and the results of the normality test were presented. Although there is no missing value in the variables, ±2 is accepted as the threshold value for skewness and kurtosis in terms of normal distribution criteria. The skewness and kurtosis no problem requiring normalization intervention was observed. In line with this analysis, it is carried out using parametric tests. The t-test was used to compare independent binary groups, and the LSD Test, one of the ANOVA and Post Hoc tests, was used to compare three or more independent groups. The findings were evaluated at 95% confidence interval and 5% significance level.

RESULTS

In this study, 35.9% of the participants were under the age of 25 and the average age was 29.79±5.82. According to the survey, 55.3% were male and 69.5% received language/postgraduate education. Half of the group (49.9%) composed of doctors. While the seniority in job year was 5.57±5.31, the working year in the ED was 4.29±4.18. 51% of the participants were single and 64.6% had no children. It was also noted that 92.8% were not diagnosed with a psychiatric disease and 71.2% did not have any addiction. The average weekly working time was 54.39±14.15 hours (**Table 1**). The mean number of patients examined/ daily was 70.99±19.15.

EE is more prevalent among women. There was no significant difference between D and PA and based on gender. PA was highest among participants aged 26-35. D and EE were not statistically significant with age (**Table 2**).

The level of education in healthcare professionals at the forefront is undergraduate or under education. The level of PA comes to the fore in master's and doctorate degrees (**Table 3**). Table 1: Socio-demographic characteristics of the participants

Age	n/%
≤25 years	284 / 35,9%
26-35 years	249 / 31,4%
≥36 years	259 / 32,7%
Gender	
Male	438 / 55,3%
Female	354 / 44,7%
Job seniority	
≤1 years	305 / 38,5%
2-6 years	223 / 28,2%
≥7 years	264 / 33,3%
Seniority in the emergency department	
≤1 years	276 / 34,8%
2-4 years	293 / 37%
≥5 years	223 / 28,2%
The level of the emergency department	-, .,
3rd level education research hospital	188 / 23,7%
Provincial central public hospital	202 / 25,5%
County public hospital	224 / 28,3%
Private hospital	32/4%
University Hospital	146 / 18,4%
Marital status	.,,
Single or widow	404 / 51%
Married	88 / 49%
Number of children	,,
No children	512 / 64,6%
Single child	129 / 16,3%
2 or more children	151 / 19,1%
Presence of psychiatric illness	, 17,170
Yes	57 / 7,2%
No	735 / 92,8%
Weekly working time	, 55 / 72,070
48 hours and under	400 / 50,5%
49-60 hours	202 / 25,5%
61 hours and over	190 / 24%
Substance and alcohol addiction	1 70 / 2470
Yes	228 / 28,8%
No	564 / 71,2%
NO	504 / /1,2%

Table 2: Descriptive Maslach Burnout Inventory statistics

n	MinMax.	X±sd
792	1-7	2,78±1,5
792	1-7	4,12±1,68
792	1-7	3,92±1,23
	792 792	792 1-7 792 1-7

Table 3: Comparison of burnout with educational status

	n-%	X±sd	р	Difference
Emotional exhaustion				
High school ¹	63-8%	3,26±1,86		
Undergraduate	280-34,5%	2,77±1,48		
education ²			0.066	
Graduate education ³	270-34,1%	2,70±1,48		
Doctoral education ⁴	179-22,6%	2,77±1,41		
Depersonalization				
High school ¹	63-8%	4,63±1,66		1>3
Undergraduate	280-34,5%	4,36±1,67		1>4
education ²			<0.001	
Graduate education ³	270-34,1%	3,93±1,63	NO.001	2>3
Doctoral education ⁴	179-22,6%	3,86±1,71		
				2>4
Personal				
accomplishment				
High school ¹	63-8%	3,33±1,35		2>1 4>1
Undergraduate	280-34,5%	3,77±1,35		3>1 4>2
education ²				
Graduate education ³	270-34,1%	4,09±1,12	< 0.001	3>2
Doctoral education ⁴	179-22,6%	4,12±1,07		

X⁻: Mean value, sd: Standard deviation

In emergency workers, EE is seen more in the other group, D nurse and in the other group, PA doctors (**Table 4**). As the total length of time in the job and the working year in the ED increases, the EE rate increases. No significant difference was found between EE, D, and PA according to the type of ED in healthcare workers. It was observed that marital status had no effect on burnout.

The mean of participants with EE having two or more children is significantly higher than the average of participants without children. Revenue decreases were observed to decrease D and PA percentage.Average monthly income was $6435.20\pm4156.51 \ddagger (1608.75\pm1039 \$)$, **(Table 5)**.

Table 4: Comparison of burnout with job

	n-%	X±sd	р	Difference
Emotional exhaustion				
Nurse ¹	189-23.9%	2,68±1,46		5>1
Assistant doctor ²	99-12.5%	2,77±1,32		5>1
Doctor ³	281-35.5%	2,65±1,44	0.002	5>2
*Expert/Consultant doctor4	114-14,4%	2,79±1,48		
Other ⁵	109-13,8%	3,32±1,80		5>4
Depersonalization				
Nurse ¹	189-23,9%	4,51±1,57		1>2
Assistant doctor ²	99-12,5%	3,80±1,55		1>3
Doctor ³	281-35,5%	3,93±1,66	< 0.001	1>4
*Expert/Consultant doctor4	114-14,4%	3,97±1,79		5>2
Other ⁵	109-13,8%	4,39±1,78		5>3
Personal accomplishment				
Nurse ¹	189-23,9%	3,66±1,25	<0.001	2-12-5
Assistant doctor ²	99-12,5%	4,07±1,03		2>1 3>5
Doctor ³	281-35,5%	4,10±1,14		2>5 4>1
*Expert/Consultant doctor4	114-14,4%	4,15±1,12		3>1 4>5
Other ⁵	109-13,8%	3,56±1,55		

*Expert /Consultant doctor: Emergency medicine specialist, other: Secretaries, patient transport personnel, security, and staff. \overline{X} : Mean value, sd: Standard deviation

Table 5: Comparison of burnout with monthly income (\$)

	n-%	X±sd	р	Difference
Emotional exhaustion				
750 \$ and less1	286-36,1%	2,88±1,62	0.375	
750-1100 \$ ²	254-32,1%	2,73±1,43		
1100 \$ and more ³	252-31,8%	2,72±1,43		
Depersonalization				
750 \$ and less1	286-36,1%	4,47±1,64	<0.001	1>2 1>3
750-1100 \$2	254-32,1%	4,02±1,66		
1100 \$ and more ³	252-31,8%	3,82±1,69		
Personal accomplishment				
750 \$ and less1	286-36,1%	3,66±1,35	<0.001	2>1 3>1
750-1100 \$2	254-32,1%	4,08±1,14		
1100 \$ and more ³	252-31,8%	4,07±1,14		3>1

The weekly average work hours and any dependencies had no effect on burnout. As the number of patients examined daily decreases, EE and D increase and PA decreases (**Table 6**).

Table 6: Comparison of burnout with number of patients examined/ workload daily

	n-%	X±sd	р	Difference
Emotional exhaustion				
65 and under ¹	258-32,6%	3,33±1,60		1>2
66-80 ²	292-36,9%	2,73±1,42	< 0.001	1>3
81 and over ³	242-30,6%	2,26±1,29		2>3
Depersonalization				
65 and under ¹	258-32,6%	4,62±1,62		1>2
66-80 ²	292-36,9%	4,09±1,63	< 0.001	1>3
81 and over ³	242-30,6%	3,62±1,66		2>3
Personal accomplishment				
65 and under ¹	258-32,6%	3,77±1,32		
66-80 ²	292-36,9%	3,91±1,14	0.010	3>1
81 and over ³	242-30,6%	4.10±1.23		

DISCUSSION

Burnout syndrome is a complex, multi-factorial condition that is common all over the world, directly affects workers in human-related professions, reduces productivity, increases costs, and negatively affects systems (3, 15). Besides the fact that this syndrome has become widespread among healthcare workers in recent years, it is known that the awareness rates on this issue have increased, and it is also a preventable condition (16, 17). The risk of burnout is higher compared to the community's population, especially due to emotional burden and stress situations such as intense working hours, heavy workload, critical patient care, and supporting the patients and their relatives when needed (18, 19). Studies on this subject have been conducted in units where critical patient follow-up is applied, such as EDs and intensive care units (20). Burnout rates in these units are reported to be between 25-60% (1, 20, 21).

EE, one parameter used in the scale, is accepted as the basis of burnout (3, 22). According to the meta-analysis conducted by O'Connor et al. (3), EE was at the forefront and this rate was stated to be 40%. Bell et al. reported that D was observed more frequently in those working in the ED for a long time (9). In the presented article, EE was found to be higher among healthcare workers, which is consistent with the literature. In addition, EE is more common in the group, comprising secretaries, patient transport personnel, security, and staff. We think the burnout levels of the employees in this group are higher because of their physically heavy work and fatigue.

The effect of gender on burnout is not clear in the literature. Although Iserson et al. it was stated that female gender is a predisposing factor, there are other studies stating that gender has no effect on burnout (19). In the study presented it was found that EE was more common in women and while there was no gender difference in D and PA. We think this is due to the fact that the female/male ratio of the participants in the studies is different, and that women are more inclined to have emotional and mental burnout than men, because women have more responsibilities such as home life/children.

The effect of age on burnout differs in studies. In a study conducted in our country, it is reported that PS decreases with increasing age (18). Akman et al. (22) study of nurses reported a decrease in burnout status, and studies conducted in South Korea and Iran showed similarities to Akman's study, with burnout decreasing with age (20, 21). Young, single, and childless people have more burnout than married, elderly and individuals with children (10). In the study presented, it was seen that age had no effect on EE and D, but PA was higher between the ages of 26-35. In this age group, we think that personal success is high, since academic and personal development is at the highest level and productivity is the greatest.

Long working times, inexperience, lack of knowledge and frequency of guard duties in healthcare professionals lead to burnout (20, 23). In studies conducted on doctors and nurses in our country and Egypt, EE and D ratios were significantly higher (24, 25, 26). In the study of Abdo et al., it is reported that working over 8 hours a

day increases EE and D and decreases PA, and it is stated that long working hours affect the level of PA, because enough time cannot be allocated for personal development (22). In the presented study, it is seen that the length of the average weekly working time does not affect the level of burnout. Although the number of personnel is not sufficient in our country, we think the employees are used to working intensively. However, in the absence of an extraordinary situation, shift times are maintained at 8 hours. This is a tolerable period. Since the time between shifts is long enough to rest in units with guard duty, we think that the fact that employees can engage in different activities during this time period does not increase the level of burnout. In a study in the USA, it is reported that emergency workers who are new to the profession have less burnout compared to older employees (16). As working time increases in working life, knowledge, and experience increase, so that the ability to deal with problems improves (9). O'Connor et al. (3) report that the level of PA and D may increase as the working time increases.

In the study of Aslan et al. (27) on assistant doctors, D and EE are more common in those with 5-9 years and 10-14 years of professional experience, and another study among anesthesiologists reported EE is more common in their employees after 16 years. However, there are studies claiming the opposite of this situation. In those who are newer and inexperienced in the profession, it is reported that burnout is higher compared to those who work longer and have more experience (9). According to our results, the EE level was significantly higher among those who worked at the ED for a long time. EE was significantly higher in all participants who just worked at the ED and were in the first year of their profession and in employees working for over 7 years. While EE is high in the first year because of inexperience, lack of knowledge and inability to adapt to the business environment, one of EE, D or PA may come to the fore in long-term employees due to the variability of working conditions and personal factors. It is reported that burnout in healthcare workers also causes negative consequences such as physical and emotional diseases, substance abuse, alcoholism, anxiety, and dissatisfaction by the patient (6). Addiction may cause burnout syndrome or may result from burnout (10). In a study conducted in 2018, it is reported that cigarette addiction increases the level of burnout and having at least one hobby reduces it (19). In our study, it is seen that addiction has no effect on burnout in all occupational groups.

A negative correlation is reported between the increase in income level and the decrease in burnout level. In a study conducted by Lin et al. (16) on emergency workers, the timely and correct hospital payments, making the shifts more flexible for the employees, making the medical documentation electronically and reducing the chores will significantly reduce the incidence of burnout syndrome. A study which was performed in Turkey by Yavuz Yılmaz et al. (28), a positive correlation between income level and the satisfaction with the work by colleagues has been detected. In our study, results consistent with the literature were got regarding the correlation between increasing the level of income and decreasing the level of burnout. Increasing the income level will decrease the burnout level as it will increase the quality of life, increase purchasing power, decrease economic problems and individuals may be more active in social life.

The study conducted by Tavakoli et al. (20) on the emergency service professionals revealed the burnout level was higher among the single personnel than the married people. Similarly, Seo et al. (29) reported burnout level increased approximately 6 times. Another study reported that EE in singles was higher than in married (22). However, there are studies claiming that the marital status and the number of children does not impact the burnout status (26, 27, 30). In the presented study, it was determined that marital status did not affect burnout level. We think that marriage may be one of the effective factors in coping with stress. Among the factors related to burnout in healthcare professionals, the level of EE, D, PA varies by the daily number of patients/daily workload. A study conducted in the intensive care unit showed a positive correlation between the number of patients per capita and burnout (25). Significant correlation between increased workload and burnout among those working in the ED has been identified (3, 9). In additi-

on, the reason for the increase in burnout is not only due to the number of patients/workloads but also the low hope of recovery in patients, requiring a multidisciplinary approach, prolonged length of hospital stay in the relevant branch are among the reasons that increase burnout (24). Similar results were reported for those working in intensive care units and operating theater (19, 30). In the study conducted by O'Connor et al. (3) it has been revealed that the EDs being on the ground floor of the hospitals, they're being easy to access, the security being insufficient most of the time, the physical area being insufficient, the application of chronic and critical patients, overtime work, irregular nutrition of the employees, insufficient number of the employees, and high workload per person increase the burnout and job dissatisfaction. In our study, no positive correlation was found between the number of patients/workload and burnout. This may be because most of the emergency applications in our country consist of non-emergency patient groups (28), critical patients are referred to 3rd level hospitals, most of the respondents are employees in the 1st and 2nd levels, and these personnel mostly serve outpatient non-critical patients.

Burnout syndrome rates for healthcare professionals in different countries differ. This is because of the difference in health systems in those countries (7, 9, 24). In a study on health workers in Egypt, the burnout rate was very high. The reason for this is a lack of resources, lack of income, long working hours, insufficient security units, difficulty in advancing at the career and job dissatisfaction (26). Therefore, situational factors, one of the important parameters of burnout, should be reviewed by analyzing the systems of countries.

Since burnout stems not only from working life, that we cannot determine whether burnout is a cause, or a consequence is one limitation of the study. Various parameters can trigger burnout or burnout can trigger numerous problems.

The limitations of this study are: obtaining data in the form of a survey, subjective answers to survey questions, the participants participating in the survey are not equal in number and homogeneous and insufficient number of participants. In order to clarify the effect of burnout syndrome in different fields of work, especially those working in the health sector, it is necessary to conduct more extensive studies with people of different professions in different clinics and branches.

Burnout condition is observed at different rates among the employees working in the emergency and intensive care units, which are the busiest and most stressed hospital units in the world. As it is revealed by this study, it is understood that if the situational factors are improved, people will perform their jobs more willingly and more efficiently. As a result, burnout syndrome is a preventable condition. In order to reduce burnout in ED employees, we believe that increasing the number of employees, improving the physical areas in hospitals, reducing the number of patients applying, increasing the income status, rewarding the employees, and providing regular trainings will decrease these rates.

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