

## Research

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# Factors Affecting Burnout and Job Satisfaction in Turkish Emergency Medicine Residents

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### ABSTRACT

**Objective:** Despite the increasing concerns on burnout and job satisfaction in health-care professional, very few studies have examined resident physicians in Turkey. This study was aimed to determine the factors affecting burnout and job satisfaction among emergency medicine residents in Turkey.

**Method:** An number of 410 emergency medicine residents including e-mail addresses registered to Emergency Medicine Associations received questionnaire forms previously prepared on an internet-based questionnaire site. Participants were asked to fill out Maslach Burnout Inventory (MBI), Job Satisfaction Scale (JSS) and socio-demographic data form.

**Results:** Decrease in depersonalization grades and increase in personal accomplishment grades with the advancing age were found. Residents who had an experience greater than 10 years in the profession showed lower depersonalization grades in comparison with the beginners. Residents who could not reach a consultant for patient evaluation presented higher emotional exhaustion grades. Also residents who felt appreciated in work place and work in concert with the staff had lower burnout grades and higher job satisfaction grades. An increase in the average number of patients seen per day was found out to boost emotional exhaustion grades. Also the visible increase in the time spent for social activities during the week reduced emotional exhaustion and depersonalization grades while increasing personal accomplishment grades. Residents who were exposed to daily violence had lower job satisfaction grades and higher emotional exhaustion and depersonalization grades than those experienced violence on a monthly basis. Increase of job satisfaction was accompanied by a decreased burnout level.

**Conclusion:** Emergency medicine residents have high burnout levels. For diminished burnout level and enhancement of job satisfaction in emergency medicine, adjustments like social support, workload, workplace stress and prevention of violence would be useful.

**KEYWORDS:** Burnout; Job satisfaction; Emergency department.

**ABBREVIATIONS:** MBI: Maslach Burnout Inventory; JSS: Job Satisfaction Scale; PA: Personal Accomplishment; EE: Emotional Exhaustion; JS: Job Satisfaction; DP: Depersonalization.

## INTRODUCTION

The concept of burnout was coined by Freudenberger and later was developed by Maslach. Burnout consists of a three-scale frame of an emotional detachment of individual from his profession; exhaustion (emotional), depersonalization and decrease of personal accomplishment.<sup>1,2</sup> Emotional Exhaustion (EE) describes the exhaustion of individual's emotional resources and eradication of his stamina. Depersonalization (DP) is the negative, unserious attitude and emotional representation shown against those to whom physicians serve without regard to their individual esteem. Inadequacy of Personal Accomplishment (PA) is the tendency of individual to misinterpret in a negative fashion himself. Burnout is oftentimes observed in professions in which the service directly targets people and to which the human factor is determinant in service quality.<sup>2,3</sup> The high point levels in EE and DP with the low points in PA subscales refers burnout.

Job Satisfaction (JS) is defined as "the positive emotional reactions and attitudes that individuals have towards their job".<sup>4</sup> JS is the affective orientation that an employee has towards his or her work. It can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job.<sup>5</sup> Job satisfaction is reported as the most eminent one amongst the factors that display the impact on burnout.<sup>6</sup>

This study was aimed to determine the factors affecting burnout and job satisfaction among emergency medicine residents in Turkey.

## METHODS

The written consent was received from Mersin University Faculty of Medicine Ethics Committee. 410 emergency medicine residents including their e-mail addresses were registered to Emergency Medicine Associations received questionnaire forms previously prepared on an internet-based questionnaire. The objective in the study was to reach the entire population.

### Scales

**Socio-demographic data form:** This form includes questions on age, sex, marital status, institution, children, occupational information, working conditions, social activities, making up a total of 33 questions. The form was developed by researchers.

**Maslach burnout inventory (MBI):** This inventory was developed by Maslach.<sup>7</sup> Its validity study for Turkey was carried out by Ergin.<sup>8</sup> The inventory, consisting of 22 articles, evaluates burnout in three subscales, namely emotional exhaustion (EE), depersonalization (DP) and sense of personal accomplishment (PA). In the scale, 9 items number 1, 2, 3, 6, 8, 13, 14, 16, 20 are used for the calculation of "emotional exhaustion" (EE), 5 items

number 5, 10, 11, 15, 22 are for depersonalization (DP) and the remaining 8 items 4, 7, 9, 12, 17, 18, 19, 21 are calculated the grades belonging to the subscales of "personal accomplishment" (PA). Frequency of emotions experienced in relation to all subscales were reported using Likert scaling method, numerating the increase of density of emotional experience as 0 being the least and 4 the most. Articles in the subscales EE and DP were graded using the same method, while the articles in PA subscale were added after reverse grading, thus acquiring a different grade for each subscale. Because that there hasn't been a cut-off value set for the subscale points, a certain discrimination cannot be done whether burnout is present or not. In our study, the cut-off values of the subscales are set as high, medium, low according to statistical levels.

**Job satisfaction scale (JSS):** Developed by Hackman and Oldham to evaluate job satisfaction (JS), JSS is a self-report scale, consisting of 5 options, 14 items and unfinished positive statements, which is adapted to Turkish and validated by Güler.<sup>9,10</sup> JSS uses a 5-point likert scale for grading. Because all the items are positive the highest grade was 70 and the lowest was 14. The higher the grades the better the job satisfaction. Grades showing job satisfaction were considered low in the grades 14-32, normal in 33-52, and high for 53-70.

### Statistical Evaluation

Statistical analysis was performed by using SPSS v. 11.5.0 and MedCalc v. 12.3.0 package programs. Descriptive quantitative data were expressed as mean±SD. Independent sample t test was used in the comparison of two groups for continuous variables which are competent with normal distribution. For comparisons involving more than two groups ANOVA was used, and to determine the location of the difference between the variant groups Tukey-HSD post-hoc statistic was chosen. For variables that are incompetent with normal distribution non-parametric Mann Whitney-U test was used for two-group comparisons and for more than two-group comparisons Kruksal Wallis test was picked and Conniver post-hoc statistics was used to determine the differential group/groups. In addition, Pearson and Spearman correlation coefficients were used in relationship control between continuous variables. Statistically analysis value of  $p < 0.05$  was accepted to be significant by confidence interval of 95%.

## RESULTS

The response rate for this study was 40.7% (n=167). In the examination of distribution of the participants according to age groups, the majority was between the ages of 25 and 29(48.5%), and the second group was between 30-34 ages (30.5). Of the participants, 59.3% were males. While 62.3% of the participants were married, 35.3% were single and 2.4% were divorced. A percent of 54.5% of the residents were occupied in university hospitals and the rest 45.5% were from research and

training hospital. Review of distribution of participants according to seniority showed that 26.3% were between 3 to 5 years and 22.8% 5 to 10 years. Socio-demographic properties belonging to participants are presented in Table 1.

Socio-demographic Properties	n	%
<b>Age</b>		
<26	1	0.6
25-29	81	48.5
30-34	51	30.5
>35	34	20.4
<b>Sex</b>		
Male	99	59.3
Female	68	40.7
<b>Marital Status</b>		
Married	104	62.3
Single	59	35.3
Divorced	4	2.4
<b>Institution</b>		
University Hospital	91	54.5
Training and Research Hospital	76	45.5
<b>Spent years in the profession</b>		
0-1 year	21	12.6
1-3 years	33	19.8
3-5 years	44	26.3
5-10 years	38	22.8
>10 years	31	18.6
<b>Total</b>	<b>167</b>	<b>100.0</b>

Table 1: Socio-demographic properties of emergency medicine residents.

EE, DP, PA and JS Scale mean scores of all participants were found to be  $21.3 \pm 6.4$  (2-36),  $10.2 \pm 3.9$  (2-20),  $19.8 \pm 3.9$  (8-31),  $36 \pm 9.1$  (14-62) respectively.

Our research revealed no statistically significant difference in terms of sex and marital status with burnout subscales and JS grades ( $p > 0.05$ ). A statistical significance was acquired between age groups in terms of DP and PA grades ( $p < 0.05$ ). DP decreased as the physician aged and PS increased the same way also.

In comparison of beginner physicians between 10 or more years of service experience; experienced ones have lower DP grades ( $p < 0.05$ ).

A statistically meaningful difference was found out from the respondents of the question "Is there a nearby consultant available during patient evaluation in the emergency department?" in terms of EE grades ( $p < 0.05$ ). Residents who answered "never" had lower EE grades than those that answered "always" ( $p < 0.05$ ). Residents who felt appreciated by superiors and co-workers, by the patients and their relatives had

significantly lower burnout grades and high JS levels ( $p < 0.05$ ). Residents who work in a compliant environment in terms of in-group relations showed significantly lower burnout levels and high JS ( $p < 0.05$ ). A statistically significant difference was found in terms of EE, DP and JS grades according to exposure to violence (daily, weekly and monthly) ( $p < 0.05$ ). EE and DP grades of those facing violence on a daily basis were much higher than those who are exposed to it once in a month. Those who face daily exposure to violence had lower JS grades than those who experience it once in a month. Table 2 demonstrates EE, DP, PA and JS grades comparison in terms of sex, marital status, age, service life, presence of consultant, appreciation and exposure to violence.

In our study, we found out statistically significant relationship between burnout levels and JS ( $p < 0.05$ ). Increase of JS was accompanied by a decrease in EE and DP grades ( $p < 0.001$ ), and an augmenting PA ( $p < 0.05$ ). A statistically significant relation was found between the number of patients seen per day and EE ( $p < 0.05$ ). EE increased as the number of patients seen per day intensified. The increase in the time spent on weekly social activities bolstered a drop in EE grade and increase in JS ( $p < 0.05$ ). Variables related to burnout subscales and job satisfaction are given in the Table 3.

## DISCUSSION

Burnout syndrome is an important occupational concern affecting all physicians because of the nature of the emergency department; emergency medicine residents who make the first medical contact with patients are greatly under risk. In busy emergency departments, the residents are alone or have only little time attending physicians for counselling. These may be risks for high burnout and low job satisfaction levels by residents in emergency departments in our country. This study have determined that seniority, working with consultants in emergency medicine, and feeling appreciated in work place are factors in resident's satisfaction or burnout status. Also, patients number seen per day was found out to boost EE and social activities were found to be effective in increasing resident's PA. The interval of exposure to violence in work is also effecting the burnout level (except PA) and JS.

According to Maslach, of all the demographic variables studied the most consistent for burnout is age. Young staff members report higher burnout levels than those of 30 or 40 years of age.<sup>11</sup> In this study, emergency residents have higher PA scores and lower DP scores in increasing ages. Different results were revealed in studies examining the relation between age and burnout levels. Studies demonstrating the reduced burnout levels with aging show accordance with our study and are present in literature.<sup>6,12,13</sup> Studies that show no relation between aging and burnout levels also exist.<sup>14-16</sup>

In this study shows no difference between age groups

	EE Mean±SD	DP Mean±SD	PA Median(Min.-max.)	JS Mean±SD
<b>Sex</b>				
Male	21.1±6.8	10.1±3.9	21(12-31)	36.2±9.2
Female	21.7±5.9	10.5±3.8	20(8-25)	35.6±9.2
p	0.611	0.493	0.129	0.698
<b>Age<sup>†</sup></b>				
25-29	22.3±6.4	10.8±3.8	19(8-28)	36.7±8.9
30-34	21±6.8	10.3±3.8	21(12-27)	35.9±9.6
>35	19.2±5.8	8±3.7	22(13-31)	33.7±8.9
p	0.138	<b>0.01*</b>	<b>0.007*</b>	0.419
<b>Marital Status</b>				
Married	21.3±6.5	10.2±3.7	21(12-28)	36.4±9.1
Single	21.4±6.5	10.3±4.1	20(8-31)	35.1±9.4
p	0.961	0.869	0.058	0.454
<b>Spent years in the profession</b>				
0-1	24±5.2	11.8±3.2	21(8-23)	35.3±9.4
1-3	21.5±7.1	10.4±3.7	19(13-25)	38.9±9.5
3-5	22±6.5	10.9±3.7	19(12-26)	34.2±7
5-10	21±5.9	9.9±3.2	20(12-28)	35.6±9.8
>10	18.6±6.6	8.2±4.2	22(13-31)	35.8±11.1
p	0.151	<b>0.042*</b>	<b>0.015*</b>	0.366
<b>Presence of Consultant</b>				
Never	27.8±6	14.6±4	17(8-23)	31±18.2
Seldom	22±6.5	9.9±4.3	19.5(12-31)	34±8.6
Enough	23.2±5.2	11.2±2.9	20(13-28)	35.3±8.4
Usually	19.8±6.2	10.1±3.8	22(12-27)	38.7±8.4
Always	19.4±6.8	9.5±3.8	21.5(12-26)	37.6±9.1
p	<b>0.014*</b>	0.055	0.456	0.141
<b>Compliance with Personnel</b>				
Yes	20.4±5.9	9.7±3.6	21(12-31)	37.4±8.6
No	25.5±7.4	12.2±4.5	19(8-28)	30.4±9.3
p	<b>&lt;0.001*</b>	<b>0.004*</b>	<b>0.011*</b>	<b>0.001*</b>
<b>Appreciation (by patients and relatives)</b>				
Yes	16.5±6.3	7.6±3.4	22(13-28)	42.2±9.7
No	22.7±5.9	10.8±3.7	20(8-31)	34.2±8.3
p	<b>&lt;0.001*</b>	<b>&lt;0.001*</b>	<b>0.022*</b>	<b>&lt;0.001*</b>
<b>Appreciation (by supervisors and co-workers)</b>				
Yes	19.7±6.4	9.4±3.4	21(12-27)	40.3±7.7
No	22.9±6.1	11±4.1	19(8-31)	31.4±8.3
p	<b>0.004*</b>	<b>0.019*</b>	<b>0.006*</b>	<b>&lt;0.001*</b>
<b>Exposure to Violence</b>				
Daily	24.3±6.1	12.1±3.9	19.5(8-31)	32.6±8.8
Weekly	20±5.7	9.4±3.2	21(12-26)	36.9±8.8
Monthly	20±6.7	9.8±4	21(12-28)	37.4±9.3
p	<b>0.004*</b>	<b>0.003*</b>	0.447	<b>0.035*</b>

Data are means (SD) and medians (min-max)

**Definition of abbreviations:** EE: Emotional exhaustion, DP: Depersonalization, PA: Personal Accomplishment, JS: Job Satisfaction

\*Statistically significant result

<sup>†</sup> Those under the age of 25 were excluded due to being 1 person and the divorced were excluded due to being 4 participants.

**Table 2:** Comparison of EE, DP, PA and JS in terms of sex, age, marital status, spent years in the profession, presence of consulting specialist, compliance with personnel, appreciation and exposure to violence.

in terms of job satisfaction. However, some studies reported an increase in job satisfaction as a result of increase of experience gained in the profession and compliance.<sup>6,17-19</sup>

	r	p
<b>EE</b>		
JS	-0.574 <sup>*</sup>	<b>&lt;0.001*</b>
Number of patients	0.188	<b>0.03*</b>
Social activities	-0.242	<b>0.005*</b>
<b>DP</b>		
JS	-0.385 <sup>*</sup>	<b>&lt;0.001*</b>
Number of patients	0.116	0.174
Social activities	-0.145	0.089
<b>PA</b>		
JS	0.413	<b>&lt;0.001*</b>
Number of patients	0.061	0.483
Social activities	0.136	0.118
<b>JS</b>		
Number of patients	-0.062	0.483
Social activities	0.268	<b>0.002*</b>

**Definition of abbreviations:** EE: Emotional Exhaustion, DP: Depersonalization, PA: Personal Accomplishment, JS: Job Satisfaction

r: Spearman correlation coefficient

†: Pearson correlation coefficient

\*Statistically significant result

**Table 3:** Variables related to burnout and job satisfaction.

Our study revealed no statistically significant difference in terms of sex, burnout subscales and job satisfaction grades. In literature, female physicians showed higher burnout levels.<sup>20-22</sup> Studies also showed no difference between gender in regard to burnout levels.<sup>14,23</sup> Ozyurt reported that male physicians have higher DP score.<sup>6</sup> These discordances can be explained through the weak predicting role of sex itself on burnout levels.

In literature, women have higher job satisfaction.<sup>24-26</sup> But, there are studies in concert with ours showing no difference between gender groups with regarding to job satisfaction.<sup>6,18</sup> On the other hand, some studies found higher job satisfaction in males in Turkey.<sup>27,28</sup>

Our study detected no relationship between marital status and burnout. According to Maslach and Jackson, marital status has a significant relation with emotional exhaustion, one of the burnout subscales. The single and divorced participants have higher burnout levels than those who are married.<sup>29</sup> Ozyurt found in his study that single physicians had higher EE grades than those who are married or divorced.<sup>6</sup> Studies in concert with ours showing no relationship between marital status and burnout also exist.<sup>13-15,22,28</sup> This result can be based on the socio-cultural difference in the society.

Marriage is the factors expected to yield higher job satisfaction by establishing a regular family life and providing a positive impact on work-life. In our study, we found no relationship

between marital status and job satisfaction. In the literature on job satisfaction and marital status have been mixed. There are also studies showing that married individuals have higher job satisfaction.<sup>6,19,28,30</sup>

Some studies show no relationship between “spent years in the profession” and burnout levels.<sup>14,31</sup> Our study found lower DP scores in physicians with 10 or more years experience than the beginners. In literature, some studies show relationship between burnout and years in profession.<sup>6,12,13,27,32</sup> Burnout is considered as a high risk factor in the early period of one’s career.<sup>11</sup> This result can be explained through professional experience, and increasing authority on patient guidance and management.

Supervision and supporting have effects on EE and DP.<sup>33</sup> Residents who answered as having no consultants during their shifts had higher EE grades compared to those who reported getting more consultants in work. Increase in number of attending physician in emergency departments could provide more bed-side applied education and thus higher self-confidence. In addition, low EE grades can be explained through the available help in patient management, sharing of responsibility and sense of security.

In this study, burnout and job satisfaction levels were examined according to compliance with nurses and other personnel in the working environment. Those working in a compliant environment had significantly lower EE and DP and high PA and job satisfaction grades. This result can be explained through the emergence of socially-related needs (being loved, respected, sense of belonging, approval) and the need to meet those, appearing after physiologic and security needs in Maslow’s hierarchy of needs theory. These results are also supportive of the notion that emergency workers must be a team for satisfaction.

According to Maslach, social support decreases the degree of relation between work-place stressors and burnout.<sup>11</sup> Likewise, approving support involves helping one through self-evaluation using approval and appreciation.<sup>34</sup> In our study, residents who felt appreciated by superiors and co-workers had significantly lower EE and DP grades and higher PA and job satisfaction grades. Same result was notified in those who felt appreciated by the patient and his relatives.

One study reported high EE and DP in employees who were exposed or witnessed to violence.<sup>35</sup> Merez, et al. detected significant relationship between exposure to violence by patients or fellow workers and burnout levels in their study which they carried out on nurses and social service personnel (EE, DP and reduced PA).<sup>36</sup> Winstanley and Whittington, participated by 375 health care professionals, found that those exposed to violence or threatening multiple times had higher EE and DP levels than those who never experienced such exposure.<sup>37</sup> In our study, residents exposed to daily violence had lower JS grades than those



experienced violence on a monthly basis. Residents exposed to daily violence had higher EE and DP grades than those experienced violence on a weekly or monthly basis. These results support that development of burnout is associated with an increased exposure to violence.

A statistically significant relation was shown between the number of patients seen per day and EE in residents enrolled to our study. There are other studies compliant with our results, demonstrating a direct proportion in increases of emotional exhaustion and number of patients seen per day.<sup>12,38,39</sup> This result can be explained through an increase of physical and mental exhaustion as a result of increasing work-load. Also, the factors such as the number of assisting personnel, availability of other consultants, patient admission rate and time on hospital and work environment related changes could affect the results. However, our study did not involve these.

The relation between the time spent for social activities, JS and burnout state is; an increase in spending time for social activities resulted with a decrease of EE and increase in JS.

#### LIMITATIONS

Despite the increasing internet use, the lack of a wide-base database registering emergency medicine residents across Turkey limited our access to all individuals the study targeted. The response rate for our study was 40.7%. Therefore we believe that further extensive studies are needed to determine the factors affecting burnout and job satisfaction among emergency medicine residents in Turkey.

#### CONCLUSION

Burnout is a syndrome that every physician across the world can experience especially if he/she is an emergency medicine resident. In order to increase job satisfaction and tackle burnout levels, it will be beneficiary to make provisions such as decreasing the number of patients seen per day, increasing the number of emergency department attending physicians and the time spent for social activities, encouraging the appreciation of residents, making adjustments to boost compliance with other personnel, taking measures to prevent violence.

#### CONFLICTS OF INTEREST

The authors have no commercial associations or sources of support that might pose a conflict of interest.

#### PARTICIPANT CONSENT STATEMENT

Physicians participated voluntarily; those who consented to participate gave socio-demographic data form, maslach burnout inventory (MBI) and the job satisfaction scale (JSS) via internet. Participants who filled in the forms are counted as consent givers

automatically.

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All authors contributed to the manuscript; İbrahim Toker and Didem Ovla contributed data acquisition, data analysis; İbrahim Toker, Cüneyt Ayrık, Feriye Çalışkan Tür, Seyran Bozkurt and Ayşe Devrim Başterzi contributed manuscript preparation, manuscript editing and manuscript review; Serkan Hacı contributed literature search and manuscript editing. All authors agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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