

*Original research-Orijinal araştırma*

## Analyzing of factors related to burnout in health professionals of Sivas Numune Hospital

### *Sivas Numune Hastanesi sağlık personelinde tükenmişlik ile ilişkili faktörlerin analizi*

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#### **Abstract**

**Aim.** It is targeted to analyze burnout that cause various problems in individual and institutional sense on health professionals constituted of doctor, nurse and allied health professionals (such as laboratory assistant, technician). **Methods.** Data has been received by filling a form which include Maslach Burnout Inventory (MBI) and socio-demographic variables on totally 180 health professionals who are employed in Sivas Numune Hospital. **Results.** In our study, MBI mean scores of nurses when compared to doctors, amongst staff who work 9 hours or more when compared to staff who work 8 hours or less, in health professionals who had training in levels of secondary education and associate degree when compared to staff who had training in masters degree level, on women when compared to men and health professionals who are under 34-group of age when compared to over 45-group of age has been found significantly high in terms of emotional burnout score. In singles, individual success scores has been found meaningfully high when compared to married ones. Besides, in evaluations implemented according to years of labour and having children it is seen that there exist no significant difference. **Conclusion.** As a result of our study it is viewed that burnout is seen frequently in health professionals. In medical institutions, as well as satisfaction of the patient it is recommended to deal with problems of employees also and work out a solution.

**Keywords:** Burnout, health professionals, state hospital

#### **Özet**

**Amaç.** Bireysel ve kurumsal anlamda çeşitli sorunlara yol açan tükenmişliğin doktor, hemşire ve yardımcı sağlık personelinin (laborant, teknisyen gibi) oluşan sağlık çalışanlarında incelenmesi amaçlanmıştır. **Yöntem.** Veriler Sivas Numune Hastanesi'nde çalışan toplam 180 sağlık çalışanında Maslach Tükenmişlik Ölçeği (MTÖ) ve sosyodemografik değişkenleri içeren bir form doldurularak elde edildi. **Bulgular.** Çalışmamızda duygusal tükenme puanı açısından hemşirelerin puanı doktorlara göre, 9 saat ve üzeri çalışanlarda 8 saat ve daha az çalışanlara göre, ortaöğretim ve ön lisans düzeyinde eğitim alanların yüksek lisans düzeyinde eğitim alanlara göre, kadınların erkeklere göre ve 34 yaş altı yaş grubunun 45 yaş üstü grubuna göre anlamlı derecede yüksek bulunmuştur. Kişisel başarı puanları bekarlarda evlilere göre anlamlı derecede yüksek bulunmuştur. Çocuk sahibi olmalarına ve çalışma yıllarına göre yapılan değerlendirmelerde ise gruplar arasında anlamlı fark bulunmamıştır. **Sonuç.** Çalışmamızın sonucunda tükenmişlik sağlık çalışanlarında sık olarak görülmüştür. Sağlık kurumlarında hasta memnuniyetinin yanı sıra çalışanlarının sorunlarıyla da ilgilenilmesi ve çözüm üretilmesi önerilir.

**Anahtar sözcükler:** Tükenmişlik, sağlık personeli, devlet hastanesi

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## Introduction

Concept of burnout has been first suggested by Freudenberger [1], in 1974, and took part in mental health literature. Freudenberger has described this situation as “failure, get exhausted and tired by generating excessive demands on energy, power or sources.

Thereafter, concept of burnout has been defined by Maslach and Jackson [2] as a syndrome that appear in the way that individuals desensitize against people with whom they faced with as part of their job, feel themselves burnout emotionally, decrease in their personal success and sense of competence. Burnout that is defined by Sturges and Poulsen [3] that is “progressive idealism and loss of energy and goal which is experienced as a result of their duty who work in professions that serve to people”. It is denoted that because burnout is consisted from accumulation of stress factors relevant to occupational life, it is needed to separate burnout from anxiety [4].

According to Maslach and Jackson [2], burnout in an individual appears with increase in desensitization by way of emotional burnout and decrease in personal success and sense of achievement [5].

### ***Burnout is analyzed by emotional burnout, desensitization and size of personal success:***

*a) Concept of emotional burnout:* Defines burnout of individual’s emotional sources and decrease in energy. Employees who feel emotional burnout, can not work efficiently in terms of emotion and consider themselves as over loaded and exhausted due to their profession.

*b) Desensitization:* Describes negative and unserious attitudes and feelings without considering and taking into account, which they reflect tendency objectively that an individual, against what they serve.

*c) Lack of personal success:* It defines the tendency of negative evaluation of himself. Motivation to work has been decreased, feels lack of control and desperation; head towards activities other than work [2, 6]. It is expressed that a long-term work results with physical, spiritual and mental burnout [7]. Indications of burnout syndrome are physical, emotional and mental:

Physical indications are chronic fatigue, infirmity, loss of energy, to be sensitive to diseases, headache, sleep disturbances; emotional signs are depressive affection, feel unsecure, feeling of inevitability, anger, impatience, anxiousness, sensitiveness, decrease in self confidence; mental signs are dysmnnesia and fail in notice [7].

Burnout is especially seen in health professionals very often. Factors such as workload, excess stress, necessity for emotional support, inadequacy in health services, low wages, role uncertainty, lack of self confidence are all amongst causes [8].

Main purpose of this study is to examine burnout that cause various problems in individual and institutional sense, on doctor, nurse and allied health professionals (such as laboratorian, technician). Relation between the profession of health professionals, age, sex, educational background, marital status, children, work hours and year and burnout levels of them has been examined.

## Material and methods

*The place of study:* This research was conducted in Numune Hospital, in Sivas. Sivas is a semi-rural city and the general population has traditional culture. In Sivas Numune Hospital, almost one million people give the general health service.

*Sample:* Totally 180 health staff who are employed actively in Sivas Numune Hospital and who accepted participating in the research are involved in the sample of this study. The sample was explained the aim of the study, the characteristics of the data form and Maslach Burnout Inventory, was taken informed consent. In Numune Hospital, there are

515 staff, 130 of them physician, 250 of them nurse, 135 of them allied health staff. The forms were given all of staff who are work on study day, and voluntary (totally 352).

Data collection tools: Data forms and Maslach Burnout Inventory which determine variables has been given to participants.

Maslach Burnout Inventory (MBI) that is improved by Maslach and Jackson in 1981 in order to measure burnout level and validity and reliability study has been implemented by Ergin [9] in Turkey, is used in this study. There exist three subscale of this scale emotional burnout (EB), desensitization (D) and personal failure (PF). MBI consists of Likert type (fivefold) totally 22 questions and the scores are calculated seperately for every subscale. Because there exists no cutoff score in received scores, existance of burnout or the reverse can not be distinguished.

In individuals who live through burnout it is expected that EB and D scores shall be high and PF scores shall be low.

Maslach and Jackson's [2] reliability coefficient of subscales relevant to Maslach Burnout Inventory is for emotional burnout 0.89 and 0.86, for desensitization 0.77 and 0.72 and finally for personal success is 0.74 and 0.74. Cronbach's alpha coefficients of tests that are adapted in Turkish by Ergin [2] are 0.83 for emotional burnout, 0.65 for desensitization and 0.72 for personal success.

*Statistical evaluation:* SPSS 17.0 (Statistical Package for Social Sciences) package programme is used for analysis of received data. Descriptive statistics, one way variance analysis (One way ANOVA), Tukey multiple comparisons in order to determine the source of diversity and multiple variance analysis are used.

## Results

Two hundred and thirty staff filled the forms (response rate 65.3%). Fifty forms were not assessed because they are incomplete, one hundred and eighty forms (51.1%) were assessed. When participants are examined in terms of demography, 37 of totally 180 worker were doctor, 99 nurses and 44 allied health professionals. In terms of marital status, 155 of them were married and 25 were single. As for children 137 of them have children and 43 childless. In terms of work hours 38 or them were working 8 hours or less and 142 were working 9 hours or more. As for educational background 32 of them were involved in secondary education, 81 associate degree, 31 bachelor's level and 36 were in the level of post graduate. In terms of work-period 27 staff 1-5 years, 40 staff 5-10 years, 35 staff 10-15, 49 staff 15-20 and 29 staff more than 20 years. 120 of them were women and 60 were men. As for age groups 92 of them were 20-34, 67 were in range of 35-44 and 21 were more than 45 years old.

Received results after examining burnout levels of the groups are presented below as tables. In the evaluation as for profession the difference between according to professions, is found meaningful (Table 1). Tukey multiple comparisons test has been executed in order to find the origin of the difference. According to this, as for emotional burnout scores, score of nurses is found significantly high when compared to score of doctors ( $p=0.01$ ). In terms of desensitization and personal success difference between professions was not statistically significant ( $p>0.05$ ).

**Table 1. Professions and burnout scores**

Professions groups	Doctors (37)	Nurses (99)	Allied health professionals (44)	F
Emotional burnout	24.70±6.35	28.33±5.92	25.68±7.10	5.51*
Desensitization	10.03±3.30	10.09±3.61	10.57±3.96	0.31
Personal success	28.49±5.12	27.53±4.25	26.41±6.01	1.83

\* $p<0.05$  ( $p=0.01$ )

As for marital status, difference between scores of groups is found to be statistically

significant (Table 2). Personal success mean scores were found to be statistically significant in singles when compared to married ( $p=0.004$ ). In terms of emotional burnout and desensitization scores in t test implemented on married and single groups, the difference between them was not statistically significant ( $p>0.05$ ).

**Table 2. Marital status and burnout scores**

Marital status	Married (155)	Single (25)	F	T
Emotional burnout	26.7±6.4	28.2±6.7	0.33	-1.038
Desensitization	10.3±3.7	9.6±3.2	0.819	0.991
Personal success	27.1±5.0	29.6±3.6	4.228*	-3.034

\* $p<0.05$  ( $p=0.004$ )

In the rating implemented according to having children, it was seen that there exists no difference between groups (Table 3).

**Table 3. According to having children and burnout scores**

According to having children	Have children(137)	Have no children(43)	F	T
Emotional burnout	26.6±6.3	28±6.9	0.181	-1.090
Desensitization	10.1±3.7	10.6±3.5	0.108	-0.874
Personal success	27.3±4.8	27.8±5.3	0.271	-0.561

As for work hours, difference between scores of groups was found to be statistically significant (Table 4). According to t test implemented, from the viewpoint of emotional burnout scores, it was found high in staff who work 9 hours or more when compared to health professionals who work 8 hours or less ( $p=0.001$ ). As for desensitization and personal success, there existed no difference between groups ( $p>0.05$ ).

**Table 4. Work hours and burnout scores**

Work hours	8 hours or less (38)	9 hours or more (142)	F	T
Emotional burnout	23.6±6.8	27.8±6.1	0.438*	-3.448
Desensitization	9.9±3.4	10.3±3.7	0.883	-0.602
Personal success	27.9±5.2	27.3±4.9	0.005	0.601

\* $p<0.05$  ( $p=0.001$ )

In the evaluation performed in terms of educational background, the difference between groups was found to be statistically significant (Table 5) ( $p=0.026$ ). Tukey multiple comparisons test is implemented in order to find the source of differentiation. According to this, when compared in terms of emotional burnout, mean scores of ones who took secondary education and associate degree were found significantly higher than the ones who took post graduate education ( $p=0.031$  and  $p=0.042$ ). Difference between scores of desensitization and personal success according to educational background was not found meaningful ( $p>0.05$ ).

**Table 5. Educational background and burnout scores**

Educational background	Secondary education (32)	Associate degree (81)	Master (31)	Master of science (36)	F
Emotional burnout	28.5±5.9	27.6±6.2	26.7±7.4	24.2±6.1	3.157*
Desensitization	10.7±4.0	10.2±3.4	10.2±4.1	9.8±3.3	0.360
Personal success	26.4±5.2	27.2±5.0	27.8±4.1	28.6±5.2	1.245

\* $p<0.05$  ( $p=0.026$ )

Tukey: EB associate degree- master of science 0.031 and master- master of science 0.042

According to work period, difference between score averages of groups was not found meaningful ( $p>0.05$ ) (Table 6).

**Table 6. Work period and burnout scores**

Work years	1-5 years (27)	6-10 years (40)	11-15 years (35)	16-20 years (49)	21 + years (29)	F
Emotional burnout	26.9±7.2	27.5±6.5	28.2±5.1	26.6±6.6	25.2±7.1	0.920
Desensitization	10.7±4.1	10.0±4.1	9.5±2.9	10.5±3.5	10.3±3.6	0.660
Personal success	26.2±6.2	26.4±4.4	28.1±4.0	28.7±5.4	28.9±4.2	1.784

In viewpoint of gender, difference between burnout mean scores was found to be statistically significant (Table 7). Emotional burnout mean scores in women were found to be significantly higher when compared to men ( $p=0.004$ ). There exists no meaningful difference in terms of personal success and desensitization according to t test performed in women and men ( $p>0.05$ ).

**Table 7. Gender groups and burnout scores**

Gender groups	Women (120)	Men (60)	F	T
Emotional burnout	27.9±6.2	24.9±6.6	0.114*	2.921
Desensitization	10.1±3.7	10.3±3.6	0.001	-0.364
Personal success	27.4±4.6	27.5±5.6	1.933	-0.149

\* $p<0.05$  ( $p=0.004$ )

According to age groups, difference between mean scores was found to be statistically significant (Table 8). Tukey multiple comparisons test was implemented in order to find the source of differentiation. According to this, score of group that is less than 34 was found statistically significant when compared to the group who are more that 45 ( $p=0.038$ ). There was no significantly difference in distribution of scores according to age groups of desensitization and personal success ( $p>0.05$ ).

**Table 8. Burnout scores by age**

Age groups	20-34 (92)	35-44 (67)	45+ (21)	F
Emotional burnout	28.1±6.6	26.1±5.6	24.2±7.7	3.912*
Desensitization	10.0±3.8	10.4±3.4	10.4±3.6	0.246
Personal sSuccess	26.8±4.8	28.0±4.8	28.4±6.1	1.737

\* $p<0.05$  ( $p=0.022$ ) Tukey: EB (20-34)-(45+) 0.038

## Discussion

In our study, in the evaluation implemented in terms of profession, emotional burnout mean score of nurses was found to be significantly higher when compared to mean score of doctors. As for desensitization and personal success scores there exists no significant difference. Sayıl et al. [10] have found emotional burnout mean score significantly higher in their study they have performed on 109 nurse and 56 doctor who work in internal diseases service. Gülseren et al. [11] in the study they have implemented with 41 nurse and 16 health staff, have found emotional burnout mean score significantly higher in nurses when compared to group of technicians. Sharma et al. [12] have also indicated that nurses live through more burnout than doctors. In the study implemented by Oğuzberk and Aydın [13] on psychiatric care health professionals, burnout scores of nurses is found to be higher when compared to psychologists. There exists studies showing that doctors

have high desensitization scores [14, 15] when compared to midwife and nurses and there is no statistically significance even if just a little [16].

When emotional burnout and desensitization scores are compared in terms of marital status, it is seen that there is no statistically significant difference. Personal success scores have been found to be significantly higher in singles when compared to married health professionals. Study implemented by Yavuzyılmaz et al. [14] has given similar results. There are also opposite consequences in question [17]. Şahin et al. [8], and Aslan et al. [18] have found emotional burnout and desensitization scores in singles higher when compared to married ones and divorced. It is reported that singles live more burnout when compared to married [13, 14] but in some studies are also declared that there exists no statistically significance [19-26]. It is reported that marriage presents experience to the person for overcoming interpersonal relations and stress [9].

As for children, there is no significant difference between groups. As similar results have been indicated [8, 26]. Yavuzyılmaz et al. [14] have found desensitization level higher in health professionals who have no children. Üner et al. [16] have determined that personal success decreases with increase in the number of children. Aktuğ et al. [27] have determined a significant difference in EB, D and PF scores, in favour of participants who have children when compared to the health professionals who does not have children.

When emotional burnout scores are compared in terms of work hours, it was found significantly high in employees who work 9 hours or more when compared to employees who work 8 hours or less. As for desensitization and personal success mean scores there exists no significant difference between groups. This result is in accordance with many studies and the study implemented by Oğuzberk and Aydın [13] on mental health professionals [17, 21, 28-30].

In terms of educational background, emotional burnout mean scores of the staff who had education in level of secondary and associate degree were found to be higher when compared to ones who had post graduate level. As for desensitization and personal success scores, there exists no difference between educational background. Although there is no difference in some studies [8, 17, 26, 31]. Demir [19] whose study is similar to our study have indicated that nurses who are associate degree graduate have lived through more emotional burnout and licence programme graduate nurses have higher personal success scores.

In the evaluation implemented according to work-periods, it is seen that there is no difference between groups. Taycan et al. [17], Aslan et al. [18], Mutlu [32], Metin et al. [33] have determined that when work years increase emotional burnout scores decrease, but personal success score increases. Mollaoğlu et al.[25] has ascertained that while service life of nurses are increasing their burnout levels decrease. Kaya et al. [34] have determined that desensitization score is higher in the group who had worked 6 years or less. Consequences of our study show parallelism with study results of Şahin et al. [8], Sunter et al. [23], Kurçer [24] and Kavla [31] and it is also determined that work period does not affect burnout.

In the evaluation executed in terms of gender, emotional burnout scores were found to be statistically significant higher in women when compared to men. As for personal success and desensitization scores, according to gender there exists no significant difference. In some studies while results are similar [14, 26] in some studies it is seen that there is no difference [8, 10, 13, 35]. Karlıdağ et al. [28] has found level of desensitization and personal success in women more less than men. As a reason of why burnout levels in women is high, which it is suggested that in women job and things other than work factors determine burnout and in men factors only relevant to job determine burnout [36]. This finding is explained with that women, regarding their social roles, besides house work undertake a double role together with business life [18].

Emotional burnout scores were found to be statistically significant higher in 34 or less

age group when compared to 45 and higher age group ( $p=0.038$ ). In terms of desensitization and personal success scores, there exists no significant difference between age groups. Özbayır et al. [37], and Taycan et al. [17] have determined significant relation between age groups as for emotional burnout and desensitization scores. According to Kocabıyık and Çakıcı [26], 41-50 age-group can see their personal success better when compared to 30 and less group of age, but between them there exists no significant relation [8, 10, 13, 25].

In our study, score of nurses when compared to doctors, amongst staff who work 9 hours or more when compared to staff who work 8 hours or less, in health professionals who had training in levels of secondary education and associate degree when compared to staff who had training in masters degree level, on women when compared to men and health professionals who are under 34-group of age when compared to over 45-group of age has been found to be significantly higher in terms of emotional burnout score. In singles, personal success scores have been found significantly high when compared to married ones. Besides, in evaluations implemented according to years of labour and having children it is seen that there exist no significant difference.

When literature is examined it is seen that there may exist similar consequences as well as different results. We can explain this situation by influences of personal, regional, communal and social factors.

This study has some limitations. The first, it has relatively small response rate because all staff were not in hospital on study day. The second, the mental state of staff was not investigated.

In our era, it is expected that medical institutions that operate with total quality management, besides patient satisfaction have to deal with their health professionals problems and find solutions. It is important to analyze consequence of the study and implement necessary arrangements according to that, and our study is important in order to cast light upon such solutions in the future.

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