

ARAŞTIRMA/RESEARCH

DETERMINATION OF JOB STRESS AND BURNOUT LEVEL OF NURSES WORKING IN INTERNAL MEDICINE AND SURGICAL UNITS

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ABSTRACT

Aim: To determine the relationship between job stress and burnout level of nurses and identify any factors affecting job stress and burnout level.

Methods: The population of this cross-sectional, descriptive study consisted of the nurses working in internal medicine and surgical units (n=80), and the sample was the nurses willing to participate in the study (n=58). The data were obtained by face to face interview method using "Participant Identification Form", "Maslach Burnout Inventory (MBI)" and "Work-Related Strain Inventory (WRSI)".

Results: The nurses 58.6% were in the 30-39 age group. The nurses' MBI total score was 48.27±11.66 and WRSI score was 42.10±4.81. The scores of the MBI subscales were as follows: personal accomplishment (PA) 21.74 ± 5.74, emotional exhaustion (EE) 21.55 ± 7.20, depersonalization (DP) 5.08 ± 4.42. There was a significant relationship between WRSI and MBI subscales (p<0.05). The WRSI score increased with increasing MBI, EE and DP scores.

Conclusion: The WRSI scores increased with increasing EE, DP scores and MBI total score. It is recommended that the factors affecting the level of burnout and job stress of the nurses are identified and that these factors are taken into consideration in reducing job stress and burnout in the work environment.

Keywords: Burnout; Job Stress; Medical-Surgical Nursing

ÖZET

Dahili ve Cerrahi Birimlerde Çalışan Hemşirelerin İş Stresi ve Tükenmişlik Düzeylerinin Belirlenmesi

Amaç: Hemşirelerin iş stresi ve tükenmişlik düzeyi arasındaki ilişkinin ve iş stresi ve tükenmişlik düzeyini etkileyen herbir faktörün belirlenmesidir.

Yöntem: Kesitsel, tanımlayıcı nitelikteki araştırmanın evrenini dahili ve cerrahi birimlerinde çalışan hemşireler (n=80), örneklemini ise çalışmaya katılmaya istekli hemşireler (n=58) oluşturdu. Veriler yüzyüze görüşme yöntemi kullanılarak "Katılımcı Tanılama Formu", "Maslach Tükenmişlik Ölçeği (MBI)" ve "İşe Bağlı Gerginlik Ölçeği (İBGÖ)" aracılığı ile elde edildi.

Bulgular: Hemşirelerin %58.6'sı 30-39 yaş gurubundaydı. Hemşirelerin MBI toplam puanı 48,27±11.66, İBGÖ puanı 42.10±4.81 idi. MBI alt boyutlarının puanları sırasıyla; kişisel başarı (KB) 21.74±5.74, duygusal tükenme (DT) 21.55±7.20, duyarsızlaşma (DP) 5.08±4.42 idi. İBGÖ ile MBI alt boyutları arasında anlamlı bir ilişki saptandı (p<0.05). İBGÖ puanı arttıkça MBI, EE ve DP puanları artmaktadır.

Sonuç: İBGÖ puanları arttıkça EE, DP ve MBI toplam puanı artmaktadır. Hemşirelerin tükenmişlik ve iş stress düzeyini etkileyen faktörlerin saptanması, çalışma ortamında iş stresi ve tükenmişliği azaltmada bu faktörlerin göz önünde bulundurulması önerilir.

Anahtar Kelimeler: Tükenmişlik; İş Stresi; Dahili-Cerrahi Hemşireliği

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INTRODUCTION

It is important to deal with job stress and burnout in every profession. However, factors including intensive work conditions, irregular work hours, role uncertainties, low salary, negative communication in the team, inadequate professional reputation increase work stress in the nursing profession. This may result in loss of experienced personnel, financial damage to the organization, increased patient costs, increased number of occupational accidents, early retirement, insomnia, problems in family relations, psychological disorders and burnout syndrome (Akyüz 2015; Tuna ve Baykal 2013; Hayes and Bonner 2010; Flynn, Thomas-Hawkins and Clarke 2009). Internal medicine and surgical clinics are areas of continuous patient circulation in which care for acute and chronic diseases is provided. Therefore, this study was conducted to determine the relationship between job stress and burnout level of nurses and identify any factors affecting job stress and burnout level.

METHOD

Study Design: The study was based on a cross-sectional, descriptive study.

Population and Data Collection: The population of this study was nurses working in internal medicine (chest diseases, infection diseases, neurology, cardiology, general internal medicine) units and surgical (cardiovascular surgery, general surgery, otolaryngology, plastic surgery and orthopedics) units (n=80) between November 2014- January 2015, while the sample was nurses willing to participate in the study (n = 58).

Data Collection Tools

1. Participant Identification Form: The form contains a total of 17 questions on sociodemographic, work environment and occupational characteristics of the participants.

2. Maslach Burnout Inventory (MBI): To developed by Maslach, Jackson and Leiter (1996) the adaptation of the survey to Turkish was carried out by Ergin (1992). In a validity-reliability study conducted with Turkish society, the Cronbach's alpha (CA) values of the subdimensions of the Maslach Burnout Inventory were found as: 0.83 for emotional exhaustion (EE), 0.72 for depersonalization (DP), and 0.67 for personal accomplishment (PA), respectively. The scale consists of 22 different 5-point Likert-type items. It has three subscales: Emotional exhaustion (EE) (0-36 points), depersonalization (DP) (0-20 points) and personal accomplishment (PA) (0-32

points). The EE and DP scores are expected to be high and the PA scores are expected to be low in individuals experiencing burnout (Ergin 1992; Maslach, Jackson ve Leiter 1996). In our study, the CA values of the subdimensions of the Maslach Burnout Inventory were found as: 0.81 for EE, 0.74 for DP, and 0.78 for PA, respectively.

3. Work-Related Strain Inventory (WRSI): To developed by Revick, May and Whitley (1991) the adaptation of the survey to Turkish was carried out by Aslan, Alparlan, Aslan, Kespara, Ünal (1998). The scale is an 18-item 4-point Likert type scale, and minimum and maximum scores that can be obtained from the scale are 18 and 72 points, respectively (Aslan, Alparlan, Aslan, Kespara ve Ünal 1998; Revicki, May and Whitley 1991). As the scale score increased, work-relates score increased as well. In a validity-reliability study conducted with Turkish society, the Cronbach's alpha (CA) value of the WRSI were found as: 0.83 (Aslan, Alparlan, Aslan, Kespara ve Ünal 1998). In our study, the CA values of the subdimensions of the WRSI were found as 0.80.

Data Analyses

The study data were transferred to Package for Social Science for Windows (SPSS 21.0) software package and analyzed using mean, percentage calculation, Kruskal Wallis-H, Mann-Whitney U tests and Spearman's Correlation Coefficient.

Ethical Considerations

Ethical permission of the study was obtained in writing from the Ethics Committee of the University of Amasya (30640013-044-43). Written consent of the institution was obtained (395). Verbal consent was obtained from the nurses.

RESULTS AND DISCUSSION

1. Sociodemographic characteristics and opinions about the profession of the nurses: Mean age of the nurses was 33.9±36, 98.3% of the nurses was female, 44.8% had associate's degree and 62.1% were residing in the same city as their families (Table 1). The nurses 43% engaged in the nursing profession for 10-19 years, 60.3% provided care to 6-10 patients daily, 39.72% worked more than 40 hours a week, 63.8% were employed in a clinic other than the one they prefer, 37.9% were not satisfied with work environment, 74.1% experienced violence inflicted by patients and their relatives (Table 2).

Table 1. Distribution of Characteristics of Nurses (n = 58)

	Characteristics	n (%)
Age	20-29	14 (24.1)
	30-39	34 (58.6)
	40-49	10 (17.2)
Educational Status	High School	6 (10.3)
	Associate Degree	26 (44.8)
	Bachelor's Degree	24 (41.4)
	Postgraduate Degree	2 (3.4)
Marital Status	Single	16 (27.6)
	Married	42 (72.4)
Number of Children	None	13 (22.4)
	2-3	31 (53.4)
Do you reside in the same city as your family?	Yes	36 (62.1)
	No	22 (37.9)
For how many hours do you sleep per day?	< 8 hours	32 (55.2)
	> 8 hours	26 (44.8)
Do you smoke?	Yes	12 (20.7)
	No	46 (79.3)
Do you have any health issues?	Yes	37 (63.8)
	No	21 (36.2)
Do you receive moral support from your family?	Yes	35 (60.3)
	Occasionally Yes	14 (24.1)
	No	9 (15.5)
Have you participated in any training related to burnout?	Yes	20 (34.5)
	No	33 (56.9)
	I don't remember.	5 (8.6)
Do you think that you experience burnout?	Yes	23 (39.7)
	Occasionally Yes	32 (55.2)
	No	3 (5.2)

Table 2. Work Status of the Nurses and Their Occupational Characteristics (n=58)

	Characteristics	n (%)
Service where he/she works	Internal Medicine Unit	33 (56.9)
	Surgical Unit	25 (43.1)
Years spent in nursing profession	1-9	19 (32.8)
	10-19	25 (43.1)
	20-29	14 (24.1)
Total Hours of Work per Week	< 40	35 (60.3)
	≥ 40	23 (39.7)
Are you asked to work in addition to your compulsory work hours per week?	No	26 (44.8)
	I work when there is personnel shortage, during leave of absence periods, when it's busy in the service.	23 (39.6)
	I am asked to work 8 hours additionally every week	9 (15.5)

Table 2. (Continuation) Work Status of the Nurses and Their Occupational Characteristics (n=58)

Work Time at Their Existing Service	< 1 year	6 (10.3)
	1-4 Years	31 (53.4)
	5-9 Years	11 (19)
	10-14 Years	8 (13.8)
	15 years and above	2 (3.4)
Number of nurses working in night shifts	One	39 (72.2)
	Two	15 (27.8)
Are you satisfied with your profession?	Yes	7 (12.1)
	Occasionally Yes	19 (32.8)
	No	20 (34.5)
	Occasionally No	12 (20.7)
Are you satisfied with the work environment?	Yes	12 (20.7)
	Occasionally Yes	16 (27.6)
	No	22 (37.9)
	Occasionally No	8 (13.8)
Did you choose to work in your existing work unit?	Yes	21 (36.2)
	No	37 (63.8)
Average number of patients per nurse	2-5	11 (19)
	6-10	35 (60.3)
	10 +	12 (20.7)
Did you choose your profession yourself?	Yes	29 (50)
	No	29 (50)
Do you think that your profession suits you?	Yes	20 (34.5)
	Occasionally Yes	15 (25.9)
	No	15 (25.9)
	Occasionally No	8 (13.8)
Do you take your leave of absence?	Yes	19 (32.8)
	Occasionally Yes	20 (34.5)
	No	10 (17.2)
	Occasionally No	9 (15.5)
Do you have difficulty in finding transportation?	Yes	4 (6.9)
	Occasionally Yes	31 (53.4)
	No	22 (37.9)
Have you ever suffered violence inflicted by patients or their relatives?	Occasionally No	1 (1.7)
	Yes	43 (74.1)
	No	15 (25.9)

2. Comparison of Demographic and Occupational Characteristics, MBI Total Scores and Sub-Scores of the Nurses: The nurses' MBI total score was 48.27 ± 11.66 and WRSI score was 42.10 ± 4.81 . The scores of the MBI subscales were as follows: PA= 21.74 ± 5.74 , EE= 21.55 ± 7.20 , DP= 5.08 ± 4.42 .

2.1. Comparison of MBI Total Scores and Demographic and Occupational Characteristics of the Nurses: A statistically significant difference was identified between the nurses' MBI total score and sleep ($p=0.042$), satisfaction with the profession ($p = 0.034$), willingness to work in one's existing unit ($p=0.046$), number of patients per nurse ($p=0.014$), number of nurses working in night shifts ($p = 0.048$), residing in the same city as

one's family ($p=0.029$), thinking one's occupation is suitable for him/her ($p=0.015$) ($p<0.05$).

2.2. Comparison of MBI Subscale Scores and Demographic and Occupational Characteristics of the Nurses

2.2.1. Factors affecting DP subscale: There was a statistically significant difference between DP and age groups ($p = 0.037$) and number of nurses working in night shifts ($p = 0.027$) ($p < 0.05$). Those from the age group 20-29 had higher DP scores than other groups.

2.2.2. Factors affecting EE subscale: There was a statistically significant difference ($p<0.05$) between EE and being satisfied with the profession ($p = 0.002$), willing to work in one's existing work unit ($p = 0.003$), having health problems ($p = 0.027$) and residing in the same city

as one's family ($p = 0.013$). Those residing in the same city as their family, those satisfied with their profession, those who voluntarily chose their existing work unit and those without any health issue had low emotional burnout score.

2.2.3. Factors affecting PA subscale: A statistically significant difference was found between PA and thinking oneself as having burnout ($p = 0.044$) and exercising the right of leave of absence ($p = 0.023$) ($p < 0.05$). The PA score was low in those who thought that they had burnout and high in those exercising the right of leave of absence.

No statistically significant difference was identified between MBI and the subscales, including marital status, educational status, number of children, the person babysitting for him/her, existing work units, hours of work per week, the number of years worked in the service, the status of choosing the profession voluntarily, difficulty in finding transportation, being exposed to violence inflicted by patients and their relatives,

hours of work per week, status of thinking that one's income is sufficient, receiving support from one's family ($p > 0.05$).

3. Comparison of Demographic and Occupational Characteristics, WRSI Total Scores of the Nurses: A significant difference ($p < 0.05$) was identified between WRSI and being satisfied with the work environment ($p = 0.023$), number of nurses working in night shift ($p = 0.029$) and status of smoking ($p = 0.022$). Work-related strain inventory scores of smokers, those working as two nurses in night shift, those unsatisfied with work environment were high. No significant difference was found between the other demographic and occupational characteristics and WRSI ($p > 0.05$).

4. The Relationship Between WRSI and MBI Total Score and its subscales: There was a positive weak correlation between WRSI score and MBI ($r = 0.306$), EE ($r = 0.409$) and DP ($r = 0.354$) scores ($p < 0.05$). WRSI score increased with increasing MBI, EE and DP scores (Table 3).

Table 3. The Relationship Between Work-Dependent Strain Inventory and Maslach Burnout Inventory Total and Subscale Scores

		Personal Accomplishment	Emotional Exhaustion	Depersonalization	Maslach Burnout Inventory Total
Work- Dependent Strain Inventory	r	-0.155	0.409	0.354	0.306
	p	0.246	0.001	0.006	0.020
	n	58	58	58	58

In our study, there was no statistically significant relationship between the status of working in internal medicine and surgical units and the levels of burnout and job stress. However, the nurses working in the surgical clinics had higher MBI and subscale scores but lower WRSI scores compared to the nurses working in the internal medicine clinic. We can say that the type of service where nurses work does not affect burnout and job stress. This may be ascribed to presence of similar problems in both types of clinic. However, it has been reported that the burnout level of nurses working in surgical clinics is higher and the difference between them is statistically significant (Solana, Martos, Hernández, Urquiza, Fuente and García 2019; Zahiri, Mahboubi, Mohammadi, Khodadadi, Mousavi and Jalali 2014; Çilingir, Gürsoy ve Çolak 2012). It was reported that EE and DT scores of the nurses working in the psychiatry clinic were significantly higher than the scores of the nurses in other clinics (surgery, internal

medicine and burn units) (Sahraian, Fazelzadeh and Mehdzadeh 2008).

In our study, a weak positive correlation was established between WRSI and MBI, PA and DP. We can say that job stress is an effective factor in burnout. Our findings were consistent with the literature (Zahiri, Mahboubi, Mohammadi, Khodadadi, Mousavi and Jalali 2014; Sünter, Canbaz, Dabak, Öz ve Peşken, 2006).

A statistically significant difference was identified between sleep and MBI total score in our study. Although the relationship between WRSI and sleep was not statistically significant, the scale scores of those who sleep less than 8 hours per day were higher. Sleep deprivation is common among health care workers and it affects not only nurses but also doctors and medical students (Stewart and Arora 2019). Sleep is important for the individual to be healthy and physiologically healthy. Burnout increases with increasing sleep problems. This result was in good

agreement with the literature (Şentürk 2014; Zencirci ve Arslan 2011; Bakker, Le Blanc and Schanfeld 2005; Merey, Boysan ve Ateş 2005). Although there is no significant relationship between WRSI score and sleep duration in physicians and nurses, WRSI scores were reported to increase with decreasing sleep duration (Tel, Karadağ, Tel ve Aydın 2003).

In our study, 63.8% of the nurses did not voluntarily choose the unit in which they worked and DT and their MBI total scores were significantly high. In Turkey, demands of the organization, rather than nurses' preferences, are taken into consideration while assigning them to their work clinics. The low burnout level of those who voluntarily chose their work clinic can be associated with the fact that they perform their work willingly and voluntarily. A previous study reported that there was no statistically significant relationship between the status of ICU nurses' preference of the unit where they worked and MBI subscales, and 67.9% of the nurses voluntarily chose the unit where they worked (Şentürk 2014). Assignment of nurses to their work units by the administration causes increased emotional burnout and job stress (Tuna ve Baykal 2013; Muşlu, Baltacı, Kutanis ve Kara 2012; Tayca, Kutlu, Çimen ve Aydın 2006; McVicar 2003; Stordeur, Bhoore and Vandanberg 2001).

In our study, the mean WRSI scores of smoking nurses were statistically higher compared to non-smoking nurses. The effects of stress and strain on feelings, thoughts and level of behavior are increased tendency to smoke and drink alcohol (Fernandes, Nitsche and Godoy 2018; Nakata, Swanso and Caruso 2010). Mean work-related strain scores of smoking and drinking nurses were reported to be higher than non-smoking and non-drinking nurses (Arıkan ve Karabulut 2014; Tel, Karadağ, Tel ve Aydın 2003).

In our study, a significant relationship was found between the number of nurses working in night shift and DT and WRSI scores. Job stress and burnout level of nurses increased with increasing number of patients per nurse. There is a significant correlation between the number of nurses per patient and burnout and job satisfaction (Minmin, Hui, Xing and Hu 2015).

In our study, there was a significant relationship between being away from family and EE and MBI total scores. Nurses who get

unfavorable support from their family and in their workplace setting are more likely to have job burnout symptoms (Shahzad, Ahmed and Akram 2019, p. 937). Social support reduces the risk of burnout in individuals and makes an individual feel safe (Liu and Aunguroch 2019; Avcı, Öztürk, Azaklı ve Çekinmez 2018; Öztürk, Özgen, Şişman, Baysal, Sarıakçalı, Aslaner ve ark. 2014; Altay, Görener ve Demirkıran 2010).

In our study, there was a statistically significant relationship between satisfaction with the profession and emotional burnout and WRSI. Those unsatisfied with their profession had higher emotional burnout and work-related strain levels. Choosing the profession willingly is an important factor affecting satisfaction. Our finding was consistent with the literature (Erçevik 2010).

In our study, MBI scores increased with increasing number of patients per nurse. Many studies conducted with different occupational groups established a significant relationship between excessive work load and burnout (Kakemam, Raeissi, Raoofi, Soltani, Sokhanvar, Visentin et al. 2019; Kanbur 2018; Tayfur ve Arslan 2012; Turgut 2011; Erçevik 2010; Gümüştekin ve Öztemiz 2005).

Although there was no statistically significant difference between the number of patients cared for daily and WRSI in our study, WRSI scores increased with increasing number of patients. Workload causes an increase in job stress of healthcare professionals (Tel, Karadağ, Tel ve Aydın 2003).

CONCLUSION

There was a significant positive relationship between job stress and burnout level. Working either in the internal medicine or surgical clinic did not affect burnout level and job stress. Residing in the same city as the family, voluntarily choosing the clinic where one works, being satisfied with one's profession, taking leave of absence, sleeping time, being satisfied with the unit where one works affect burnout. It is recommended that work conditions of nurses should be improved and they should be given the opportunity to choose the clinic where they will work and be supported for their personal development.

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