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Surgical Nurses' Burnout and Empathy

Cerrahi Hemşirelerinde Tükenmişlik ve Empati

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ABSTRACT

Objective: This descriptive study investigated the relationship between surgical nurses' empathy and burnout levels.

Methods: The study was conducted between May and October 2021 in the surgical units of a training and research hospital in İstanbul. The sample consisted of 100 surgical nurses with at least six months of work experience. Data were collected face-to-face using a personal information form, the Maslach Burnout Inventory (MBI), and the Basic Empathy Scale (BES).

Results: Participants had a mean MBI "emotional exhaustion" subscale score of 31.44±6.00, indicating high levels of burnout. Participants with limited social lives due to adverse working conditions had a mean MBI "emotional exhaustion" subscale score of 32.58±5.37 ($p<0.05$). Participants' MBI "depersonalization" subscale scores were negatively correlated with their BES total ($r=-0.220$) and "emotional empathy" subscale scores ($r=-0.244$) ($p<0.05$).

Conclusion: Surgical nurses with professional dissatisfaction, poor sleep quality, and limited sociability are likely to experience burnout. Surgical nurses who believe they are underpaid and viewed in a negative light by the public are also particularly susceptible to burnout.

Keywords: Nursing, burnout, empathy

ÖZ

Amaç: Bu araştırma cerrahi birimlerde çalışan hemşirelerde empati ve tükenmişlik düzeylerini ve bunlar arasındaki ilişkiyi değerlendirmek amacıyla gerçekleştirildi.

Yöntem: Araştırma, İstanbul'da bulunan bir eğitim araştırma hastanesinin cerrahi birimlerinde Mayıs-Ekim 2021 tarihleri arasında 100 hemşire ile tanımlayıcı olarak gerçekleştirildi. Çalışmaya dahil olma kriteri cerrahi birimlerde en az 6 ay çalışmış olmaktır. Veriler kişisel bilgi formu, Maslach Tükenmişlik Ölçeği (MBI) ve Temel Empati Ölçeği (BES) kullanılarak yüz yüze görüşme yöntemi ile toplandı.

Bulgular: Örneklem grubunun MBI "duygusal tükenme" düzeyi 31,44±6,00 olarak bulundu ve bu değer yüksek tükenmişlik değerini göstermektedir. Olumsuz çalışma koşulları nedeniyle sosyal yaşamları sınırlı olan katılımcıların ortalama MBI "duygusal tükenmişlik" alt ölçek puanı 32,58±5,37 idi ($p<0,05$). Hemşirelerin MBI "duyarsızlaşma" alt boyutu ile BES toplam puanı ($r=-0,220$) ve "duygusal empati" alt boyutu arasında ($r=-0,244$) negatif yönlü düşük düzeyde anlamlı bir ilişki olduğu tespit edildi ($p<0,05$).

Sonuç: Hemşirelerin tükenmişlik düzeylerini etkileyen faktörler incelendiğinde; mesleki memnuniyetsizlik, kötü uyku kalitesi, yetersiz gelir, sosyal yaşamın olumsuz etkilenmesi ve hemşirelik mesleğinin toplumsal imajının olumsuz algılanması, hem tükenmişlik düzeyiyle hem de düşük empati düzeyiyle ilişkili bulunmuştur.

Anahtar kelimeler: Hemşire, tükenmişlik, empati

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INTRODUCTION

Nursing is a special profession because nurses touch human life. However, nursing is challenging as it takes a toll on physical and mental health due to professional responsibilities, shifts, long working hours, and heavy workloads. Therefore, nurses experience high levels of job stress and burnout [1-5].

Surgical nurses provide seamless and holistic care. They are responsible for preparing patients for surgery, monitoring them postoperatively, and intervening in emergencies [6,7]. Surgical nurses work 8, 12, or 16-hour shifts without a break due to the high volume of patients. Dynamic, variable, and demanding working conditions make surgical nurses more susceptible to burnout [4,8].

Burnout comprises the components of emotional exhaustion, depersonalization, and reduced personal accomplishment [9]. Surgical nurses play a critical role in postoperative care [7], the quality of which depends on how much burnout they may be experiencing [6,8].

Empathy, with its cognitive, emotional, and behavioral components, is understanding and sharing the experiences and emotions of others [10]. The cognitive components refer to the ability to perceive and understand the communication and experiences of others. In contrast, the emotional components include emotional sensitivity and the ability to feel the emotions of others. The behavioral components is the ability to communicate and understand things from another person's perspective [10-12]. Empathic sensitivity is innate but can be developed over time. In the nurse-patient relationship, empathy is critical because it enables nurses to understand their patients' experiences and emotions. Empathy is also associated with positive therapeutic outcomes, and its absence may contribute to burnout [10-12].

There is both a positive and negative relationship between burnout and empathy. Some studies show that empathy makes healthcare professionals susceptible to emotional exhaustion [13,14]. Zenasni et al.[15] focused on the relationship between burnout and empathy in primary care and proposed three different hypotheses. First, clinicians experiencing burnout are less likely to have empathy for patients. Second, empathy causes burnout because one needs to use personal resources to develop empathy. Third, empathy protects clinicians from burnout. Impaired empathy may be a feature of burnout, but we cannot state that burnout is a feature of low empathy [14].

There is a large body of research on empathy and burnout experienced by nurses. However, only a few studies investigate the relationship between empathy and burnout in surgical nurses. Therefore, this study investigated the relationship between surgical nurses' empathy and burnout.

MATERIAL AND METHOD

This descriptive study investigated the relationship between empathy and burnout in surgical nurses. The study was conducted between May and October 2021 in the surgical units (neurosurgery, pediatric surgery, general surgery, orthopedics, urology, otolaryngology, and ophthalmology) of a training and research hospital in İstanbul. The sample consisted of 100 nurses with at least six months of work experience. All participants worked 12-hour day and night shifts.

Data were collected face-to-face using a personal information form, the Maslach Burnout Inventory (MBI), and the Basic Empathy Scale (BES).

Research Questions

What is the burnout level of surgical nurses?

What is the empathy level of surgical nurses?

Is there a relationship between burnout and empathy among surgical nurses?

Personal Information Form

The personal information form was based on a literature review conducted by the researchers [5,6,14-25]. It consisted of items on socio-demographic and professional characteristics (Table 1).

MBI

The inventory was adapted to Turkish by Ergin [16]. The inventory consists of 22 items and three subscales: Emotional exhaustion (9 items), reduced personal accomplishment (8 items), and depersonalization (5 items). The items are rated on a five-point Likert-type scale (0 to 4). The original "emotional exhaustion", "reduced personal accomplishment" and "depersonalization" subscales have Cronbach's alpha (α) values of 0.90, 0.79, and 0.71, respectively. In the present study, the "emotional exhaustion", "reduced personal accomplishment" and "depersonalization" subscales had Cronbach's alpha (α) values of 0.88, 0.82, and 0.82, respectively.

BES

BES was developed by Jolliffe and Farrington [17] and adapted to Turkish by, Topcu et al. [18]. It is the latest instrument to assess both cognitive and emotional empathy levels in healthcare professionals. The scale consists of 20 items and two subscales: emotional empathy (α=0.76) and cognitive empathy (α=0.80). In the present study, the BES "emotional empathy" and "cognitive empathy" subscales had Cronbach's alpha values of 0.77 and 0.76, respectively. Higher scores indicate higher levels of basic empathy.

Statistical Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS for Windows, v. 22.0) at a significance level of 0.05. The Kolmogorov-Smirnov test was used for normality testing. The data were analyzed using the descriptive tests, Independent Samples t-test and one-way analysis of variance. Pearson's correlation coefficient was used to determine the relationship between scale scores.

Ethical Considerations

The study was approved by the Ethics Committee of Okan University (approval no.: 133, date: 17.02.2021). All nurses were

informed about the research purpose, procedure, confidentiality. They were briefed that participation was voluntary and that they could withdraw at any time. Also written consent was obtained from participation. The study adhered to the ethical principles outlined by the Declaration of Helsinki. Authorization was obtained from the developers of the scales.

RESULTS

Almost half of the participants were between the ages of 25 to 30 (48%). More than half of the participants were women (69%) (Table 1). Participants had a mean MBI "emotional exhaustion" subscale score of 31.44±6.00, indicating high levels of burnout (>27: high-level burnout). They had a mean MBI "depersonalization" subscale score of 11.97±3.45, indicating normal levels of depersonalization. They had a mean MBI "reduced personal accomplishment" subscale score of 28.26±3.33 (0-31: highly reduced personal accomplishment) (Table 2).

Participants had a mean BES score of 59.54±4.57 (median: 58). They had mean BES "cognitive empathy" and "emotional empathy" subscale scores of 29.50±2.70 (median: 27) and 30.04±3.63 (median: 33), respectively (Table 2).

Participants who were unhappy with their job had a mean MBI "emotional exhaustion" subscale score of 35.83±4.47 ($p<0.05$). Participants with poor sleep quality had a mean MBI "emotional exhaustion" subscale score of 33.79±5.41 ($p<0.05$). Participants who believed they were underpaid had a mean MBI "emotional exhaustion" subscale score of 32.15±5.41 ($p<0.05$). Participants with limited social lives due to adverse working conditions had a mean MBI "emotional exhaustion" subscale score of 32.58±5.37 ($p<0.05$). Participants who believed their profession had a negative image in the eyes of the public had a mean MBI "emotional exhaustion" subscale score of 32.06±5.63 ($p<0.05$) (Table 3).

Female participants (60.55±4.22) had a significantly higher mean total BES score than their male counterparts (57.29±4.58) ($p<0.05$). Female participants (30.07±2.27) had a significantly higher mean BES "cognitive empathy" subscale score than their male counterparts (28.22±3.16) ($p<0.05$) (Table 4).

Participants' MBI "depersonalization" subscale scores were negatively correlated with their BES total ($r=-0.220$) and "emotional empathy" subscale scores ($r=-0.244$) ($p<0.05$) (Table 5).

Table 1. Socio-demographic Characteristics

Age (years)	(n)	(%)
20-24	39	39.0
25-30	48	48.0
31-35	4	4.0
36-40	3	3.0
≥41	6	6.0
Gender		
Man	31	31.0
Woman	69	69.0
Marital status		
Married	30	30.0
Single	70	70.0
Education (degree)		
High school	4	4.0
Associate	9	9.0
Bachelor's	79	79.0
Master's	8	8.0
Work experience (year)		
0-5	67	67.0
6-10	23	23.0
11-20	3	3.0
≥21	7	7.0
Being happy with the job		
Yes	9	9.0
Most of the time	20	20.0
Sometimes	40	40.0
No	31	31.0
Finding the income adequate		
Yes	4	4.0
No	84	84.0
Undecided	12	12.0
The image of nursing in the eyes of the public		
Positive	11	11.0
Negative	82	82.0
No idea	7	7.0

DISCUSSION

Our participants had high MBI "emotional exhaustion" subscale scores. Li et al. [6] also reported that surgical nurses had high burnout levels and low quality of life, adversely affecting their productivity. Research, in general, shows that nurses experience high levels of burnout [19-25] due to occupational stress and adverse working conditions, resulting in unproductivity and malpractice [19-24,26,27].

Table 2. Scale Scores

Scale scores	**Mean ± SD**	**Min-Max**
Emotional exhaustion	31.44±6.00	13-45
Depersonalization	11.97±3.45	5-21
Reduced personal accomplishment	28.26±3.33	20-36
BES total	59.54±4.57	46-70
Cognitive empathy	29.50±2.70	18-34
Emotional empathy	30.04±3.63	19-38

SD: Standard devitation, BES: Basic Empathy Scale, Min: Minumum, Max: Maxiumum

Table 3. The Distribution of MBI Scores by Descriptive Characteristics

		Emotional exhaustion				Depersonalization				Reduced personal accomplishment			
	n	Mean	SD	F/t	p	Mean	SD	F/t	p	Mean	SD	F/t	p
Sleep quality													
High	5	27.20	4.49	F: 8.54	0.01*	11.40	1.81	F: 0.46	0.63	30.20	2.16	F: 0.91	0.40
Medium	47	29.48	5.42			11.68	3.25			28.10	3.08		
Low	48	33.79	5.83			12.31	3.78			28.20	3.60		
Being happy with the job													
Yes	9	24.88	3.91	F: 23.13	0.01*	9.66	3.12	F: 3.88	0.01*	30.77	2.63	F: 6.99	0.01*
Most of the time	20	26.45	5.28			10.70	2.17			30.20	2.21		
Sometimes	40	32.00	4.57			12.17	3.09			27.67	3.20		
No	31	35.83	4.47			13.19	4.13			27.03	3.39		
Finding the income adequate													
Yes	4	22.25	2.06	F: 6.57	0.01*	7.75	1.25	F: 3.81	0.02*	32.50	1.29	F: 4.18	0.01*
No	84	32.15	5.41			13.01	3.32			27.21	3.21		
Undecided	12	29.50	7.94			12.08	3.98			28.16	3.51		
The image of nursing in the eyes of the public													
Positive	11	26.90	5.18	F: 3.77	0.02*	8.72	2.24	F: 7.75	0.01*	30.72	3.79	F: 4.30	0.01*
Negative	82	32.06	5.63			12.54	3.35			27.84	3.10		
No idea	7	31.28	8.84			10.28	3.14			29.28	3.54		
The impact of working life on social life													
Positive	5	24.60	9.60	F:10.12	0.01*	11.60	5.94	F: 0.64	0.52	30.60	3.43	F: 2.92	0.05*
Negative	82	32.58	5.37			12.14	3.41			27.90	3.34		
Undecided	13	26.84	4.45			11.00	2.64			29.61	2.46		

*p<0.05 F: ANOVA, t: Independent Samples t-test, MBI: Maslach Burnout Inventory, SD: Standard devitation

Table 4. The Distribution of BES Scores by Descriptive Characteristics

		Basic Empathy Scale total				Cognitive empathy				Emotional empathy			
	n	Mean	SD	F/t	p	Mean	SD	F/t	p	Mean	SD	F/t	p
Gender													
Man	31	57.29	4.58	t: -3.47	0.01*	28.22	3.16	t: -3.31	0.01*	29.06	2.87	t: -1.81	0.07
Woman	69	60.55	4.22			30.07	2.27			30.47	3.86		
Sleep quality													
High	5	56.00	2.64	F: 2.10	0.12	30.00	1.73	F: 0.11	0.88	26.00	3.74	F: 4.57	0.10
Moderate	47	60.19	3.93			29.40	2.63			30.78	2.84		
Low	48	59.27	5.14			29.54	2.88			29.72	4.03		
Being happy with the job													
Yes	9	59.88	5.13	F: 1.19	0.31	29.11	1.69	F: 0.61	0.60	30.77	4.54	F: 0.81	0.48
Most of the time	20	57.85	4.33			28.85	2.99			29.00	2.77		
Sometimes	40	60.15	3.81			29.72	2.77			30.42	3.52		
No	31	59.74	5.34			29.74	2.69			30.00	3.98		
Finding the income adequate													
Yes	4	58.75	5.73	F: 0.09	0.91	30.25	1.70	F: 0.17	0.84	28.50	4.79	F: 0.38	0.67
No	84	59.61	4.56			29.48	2.78			30.13	3.58		
Undecided	12	59.25	4.65			29.33	2.49			29.91	3.82		

Table 4. Continued

		Basic Empathy Scale total				Cognitive empathy				Emotional empathy			
	n	Mean	SD	F/t	p	Mean	SD	F/t	p	Mean	SD	F/t	p
The image of nursing in the eyes of the public													
Positive	11	60.00	4.79	F: 0.45	0.63	30.63	1.28	F: 2.32	0.10	29.36	4.20	F: 0.21	0.81
Negative	82	59.60	4.55			29.48	2.82			30.12	3.56		
No idea	7	58.00	4.76			27.85	2.11			30.14	3.97		
The impact of working life on social life													
Positive	5	57.00	6.32	F: 0.82	0.44	28.60	2.96	F: 0.30	0.73	28.40	4.92	F: 0.60	0.54
Negative	82	59.70	4.57			29.52	2.84			30.18	3.63		

*p<0.05 F: ANOVA, t: Independent Samples t-test, BES: Basic Empathy Scale

Table 5. The Correlation Between MBI and BES Scores

		BES Total	Cognitive empathy	Emotional empathy
Emotional exhaustion	r	-0.220*	0.172	0.149
	p	0.028	0.087	0.139
Depersonalization	r	-0.243*	0.083	-0.244*
	p	0.015	0.414	0.014
Reduced personal accomplishment	r	0.014	0.152	0.096
	p	0.890	0.131	0.344

*p<0.05; **p<0.001, p=significance, r=Pearson' correlation coefficient, BES: Basic Empathy Scale, MBI: Maslach Burnout Inventory

Our participants who were unhappy with their job had higher "emotional exhaustion" and "depersonalization" scores than those who were happy with their job. However, participants who were happy with their job had higher "reduced personal accomplishment" scores than those who were not. Stankovic et al. [28] found that healthcare professionals with psychological resilience were less likely to experience burnout. Adrienn et al. [29] argue that people with emotion regulation strategies and positive thinking skills are less likely to suffer from burnout and more likely to have personal accomplishments. The relationship between job satisfaction and emotional exhaustion seems to be consistent with the literature. However, we can better understand the relationship between satisfaction and burnout if we illuminate the personal and organizational factors that influence job satisfaction.

Our participants had moderate to poor sleep quality. Participants with poor sleep quality had higher "emotional exhaustion" scores than those with high sleep quality. Silva et al. [30] determined that transplantation nurses had poor sleep quality, adversely affected by work stress. Nurses often have to deal with stressors causing poor sleep quality and burnout. Stressors also result in fatigue and poor concentration [31,32].

Participants who believed they were underpaid had higher "emotional exhaustion" and "depersonalization" scores than those who did not. Participants who believed their profession had a negative image in the eyes of the public also had higher "emotional exhaustion" and "depersonalization" scores than those who did not. Income is essential for a high quality of life. Therefore, underpaid nurses have difficulty maintaining their living standards and accessing activities that help them cope with stress. Perceived low socio-economic status negatively affects self-esteem and causes burnout [33].

Participants who believed they had limited social lives due to adverse working conditions had higher "emotional exhaustion" scores than those who did not. Some nurses have little to no social life because they work day and night. Therefore, they have little energy to cope with stressors. The inability to juggle work and social life is a risk factor for burnout [34]. Decreased ability to cope with stress sometimes leads to emotional burnout [28,35].

All participants had a higher mean "cognitive empathy" score than the "emotional empathy" score, suggesting that surgical nurses, like emergency nurses, can make ethical decisions quickly. Du et al. [36] argue that emergency nurses have more cognitive empathy than nurses from other units because they can make ethical decisions. However, more research is warranted. Empathy is a measure of sensitivity. Women have more empathy than men due to their higher emotional sensitivity [10,12,37-39]. Our female participants were more empathetic than their male counterparts. Specifically, female participants had higher cognitive empathy scores than their male counterparts. This may be due to women's higher levels of empathy.

Our results showed a weak negative correlation between depersonalization and emotional empathy. Although our participants had a normal "depersonalization" score, their "emotional empathy" score was below the median, suggesting that they have higher depersonalization and lower emotional empathy. These findings are consistent with the literature. For

example, Catlow et al. [40] found that surgical and medical nurses avoided empathy because they experienced burnout. Excessive empathy can also lead to emotional exhaustion and burnout [14]. Although empathy positively affects the quality of care, healthcare professionals who are unable to cope with stressors experience burnout when they have excessive empathy [41].

Recommendations

We need to identify the factors that affect nurses' professional satisfaction and take steps to make them more satisfied with their job. We must also identify nurses' needs and provide recommendations to ensure they fulfill their duties without compromising their standards and social lives. Hospitals should provide healthcare professionals with training programs to help them develop empathy without burnout.

Study Limitations

The study had three limitations. First, the study was conducted only in one center. Second, we could not determine how different working conditions affect surgical nurses' burnout and empathy levels because they worked under standardized conditions. Third, the results are sample-specific and cannot be generalized to all surgical nurses. Since we conducted the study in a single center, we excluded institutional characteristics, which may have helped us identify the factors determining nurses' burnout and empathy levels.

CONCLUSION

Surgical nurses experience burnout due to occupational dissatisfaction, poor sleep quality, inadequate income, limited social life, and negative social image in the eyes of the public. In addition, there is a negative correlation between empathy and burnout.

Ethics

Ethics Committee Approval: The study was approved by the Ethics Committee of Okan University (approval no.: 133, date: 17.02.2021).

Informed Consent: Written consent was obtained from participation.

Footnotes

Author Contributions

Concept: SŞ, SA; Design: SŞ, SA; Data Collection or Processing: SŞ; Analysis or Interpretation: SŞ; Literature Search: SŞ; Writing: SŞ, SA.

Conflict of Interest: The authors declare that there is no conflict of interest.

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