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ARAŞTIRMA MAKALESİ

The Relationship between Compassion Fatigue and Quality of Life in Surgical Nurses

Senan MUTLU[1], Emel YILMAZ[1]

[1]Manisa Celal Bayar University, Faculty of Health Science, Department of Surgical Nursing, Manisa, Türkiye
Senan Mutlu https://orcid.org/0000-0002-0409-5209
Emel Yılmaz https://orcid.org/0000-0002-5127-6651

Abstract
Objective: The aim of this study is to determine the relationship between compassion fatigue and quality of life of nurses working in surgical clinics**.**
Materials and Methods: The study is of a descriptive cross-sectional type. Surgical nurses working in university hospitals in the western part of Turkey were reached via WhatsApp groups, in which the research team is also registered. The study was completed with 216 surgical nurses who agreed to participate in the research. An online questionnaire was sent to the participants to collect data. The data collection tools used were the personal information form, SF-12 Quality of Life Scale, and Compassion Fatigue Scale. Descriptive statistics, Student t test, one- way ANOVA, and Pearson's correlation coefficient were used for data evaluation.
Results: The nurses' Compassion Fatigue Scale total score was 65.37±25.00. The sub-dimension mean scores were as follows: Secondary Trauma was 23.66±10.56, and Professional Burnout was 41.71±15.98. The SF-12 Physical Component Summary score was 41.74±5.29, and the Mental Component Summary score was 38.01±5.01. There was a high level of positive relationship between the Compassion Fatigue Scale total score and its sub-dimensions, while a negative low-level correlation was observed between the SF-12 sub-dimensions and the Compassion Fatigue Scale total score and sub-dimensions ($p<0.05$).
Conclusion: In line with the research findings, it was concluded that while the compassion fatigue of surgical nurses was found to be at an average level, their quality of life was found to be low. Thus, the study findings indicate that as surgical nurses' compassion fatigue increased, their life quality decreased.

Keywords: Compassion fatigue, life quality, nursing, surgical nurses

Cerrahi Kliniklerde Çalışan Hemşirelerde Merhamet Yorgunluğu ile Yaşam Kalitesi İlişkisi

Öz
Amaç: Çalışma, cerrahi kliniklerinde çalışan hemşirelerin merhamet yorgunluğu ile yaşam kaliteleri arasındaki ilişkiyi saptamak amacıyla yapıldı.
Yöntem: Çalışma, tanımlayıcı kesitsel türdedir. Türkiye'nin batı bölgesinde üniversite hastanelerinde görev yapmakta olan cerrahi hemşirelerine araştırma grubunun da kayıtlı olduğu Whatsapp grupları aracılığı ile ulaşıldı. Araştırmaya katılmayı kabul eden 216 cerrahi hemşiresi ile çalışma tamamlandı. Veriler, google form kullanılarak çevrimiçi anket yoluyla toplandı. Verilerin toplanmasında kişisel bilgi formu, Merhamet Yorgunluğu Ölçeği ve SF-12 Yaşam Kalitesi Ölçeği kullanıldı. Veriler tanımlayıcı istatistikler, Student t testi, one way ANOVA ve Pearson korelasyon analizi ile değerlendirildi.

Yazışma Adresi/Address for Correspondence:
Emel YILMAZ
Manisa Celal Bayar University, Faculty of Health Science, Department of Surgical Nursing, Manisa, Türkiye
Telefon/Phone: +90 236 233 0904 ***E-mail:*** emelyilmazcbu@gmail.com
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Bulgular: Hemşirelerin Merhamet Yorgunluğu Ölçeği toplam puanı 65.37±25.00, İkincil Travma alt boyut puan ortalaması 23.66±10.56 ve Mesleki Tükenmişlik alt boyut puan ortalaması 41.71±15.98 olarak bulundu. SF-12-Fiziksel Özet skor puanı 41.74±5.29 ve Mental Özet skor puanı 38.01±5.01 olarak saptandı. Merhamet Yorgunluğu Ölçeği toplam puanı ve alt boyutları arasında pozitif yönlü yüksek düzey ilişki bulunurken, SF-12 alt boyutları ve Merhamet Yorgunluğu ölçeği toplam puan ve alt boyutları arasında negatif yönlü düşük düzey ilişki belirlendi ($p<0.05$).
Sonuç: Cerrahi alanlarda görev yapan hemşirelerin merhamet yorgunluğu orta düzeyde bulunurken, yaşam kalitelerinin düşük olduğu saptandı. Ayrıca; araştırma bulguları hemşirelerin merhamet yorgunlukları arttıkça yaşam kalitelerinin düştüğünü gösterdi.

Anahtar Kelimeler: Merhamet yorgunluğu, yaşam kalitesi, hemşirelik, cerrahi hemşireleri

INTRODUCTION

The concept of compassion is fundamental to the care provided by healthcare professionals (1). In other words, compassion is the feeling of empathizing with and caring about people's suffering (2). Compassion fatigue is psycho-emotional distress resulting from prolonged exposure to difficult situations combined with prolonged self-sacrifice (3). Compassionate care can be thought of as the most important aspect of nursing practice (4). Nurses are among the healthcare professionals who experience the most compassion fatigue related to their basic caregiver duties and stressful work lives (5). The results of compassion fatigue include physical, intellectual, social, spiritual, and emotional effects (6). As a consequence of these effects, poor performance, occupational accidents, and application errors are seen in nurses (7,8). In addition, nurses' willingness to leave their jobs increases, a nurse shortage occurs, and care quality and patient satisfaction decrease (9,10). Nurses, a complementary part of health systems, are a society of professionals at the forefront of health care (11). Additionally, nurses are professional groups that compete with time, can work longer than normal working hours, and take responsibility for life-threatening risks (12). Life quality is a significant notion that enables nurses to work effectively. Moreover, nurses need to have a high quality of life to feel productive both mentally and physically (13).

Ruotsalainen and colleagues (2015) determined that institutional factors and low social support cause stress, resulting in a decrease in life quality and burnout (14). Another study stated that negative effects and stressful situations increase compassion fatigue and burnout in nursing (15). Alharbi and coworkers (2019) detected that developmental training for intensive care nurses can reduce compassion fatigue (16). Labraque and colleagues (2021) reported that increased compassion fatigue reduced the quality of care among nurses (17). Another study indicated that nurses with

low compassion fatigue provided better quality patient care (18). Compassion fatigue experienced by nurses working in units with critically ill patients affects their professional quality of life (19). There are not enough studies in the literature examining the relationship between compassion fatigue and quality of life in nurses. This research was applied to identify the relationship between quality of life and compassion fatigue among surgical clinic nurses.

MATERIAL AND METHODS

Design

The study performed on nurses working in the surgical field between November 2021 and February 2022 was a descriptive cross-sectional study.

Sample

Surgical nurses in university hospitals in the Western part of Turkey were reached via Whatsapp groups, in which the research team is also registered. The research was conducted using the online method, and the sample was considered as the population, and an attempt was made to reach the entire population. The trial was completed with 216 volunteer surgical nurses. Surgical nurses were asked to activate the link sent to their Whatsapp to participate in the study (WhatsApp Inc., Menlo Park, CA).

Inclusion criteria for participation were volunteering to attend in the study, having no communication barriers, and working in the same clinic for at least two months.

The nurses who were not volunteers and had been working in the same clinic for less than two months were excluded in the sample group.

Instruments

Personal information form, SF-12 Quality of Life Scale and The Compassion Fatigue Scale (CFS) were used to collect data.

Personel Information Form

This survey consists of a total of 24 questions, including demographic characteristics such as gender, weekly working hours, and educational background of the participants, as well as the number of nurses in their respective units and their satisfaction with the profession (20,21).

The Compassion Fatigue Scale

This scale was developed by Adams and colleagues (2006) (22). The scale is an evaluation tool that determines how much each scale item reflects the experiences of the individuals. It contains 13 items in total on a 10-point Likert-type scale ranging from uncommonly or never (1) to frequently (10). The Cronbach's alpha coefficients of the sub-dimensions of the scale range from 0.80 to 0.90, indicating sufficient internal reliability. In this study,

Cronbach's alpha coefficient of the scale was 0.91. It consists of two subdimensions: secondary traumatic stress and job burnout. While the scale scores range from 13 to 130, the higher the score, the higher the level of compassion fatigue. The validity and reliability of the CFS were examined by Dinç and Ekinci (2019) (23).

SF-12 Quality of Life Scale

The SF-12 is one of the most widely applied instruments for assessing self-reported life quality. The SF-12 is the shortened form of the SF-36. This scale includes a total of 12 items and the physical component summary (PCS) and mental component summary (MCS) scores. The Cronbach's alpha coefficients of the sub-dimensions of the scale range from 0.80 to 0.88, indicating sufficient internal reliability. In this study, Cronbach's alpha coefficient of the scale was 0.66. The summary scores range from 0 to100, and higher scores define better quality of life. The validity and reliability of the SF-12 was studied by Soysal Gündüz et al. (2021) (24).

Data Collection

An online form was used to obtain the data. Questionnaire links are sent to participants via WhatsApp (WhatsApp Inc., Menlo Park, CA). After the forms were checked, the missing and incorrect ones were excluded from the trial.

Ethical Consideration

The study was accepted by the ethics committee of Manisa Celal Bayar University (Reference no: 30.06.2021/20.478.486-870). Permission was obtained from the participants using the online route. Also, the surgical nurses were informed about the research before filling out the survey form.

Data Analysis

The data were analyzed with SPSS 22.0 (Statistical Package for Social Sciences, Chicago, IL). Normal distribution was determined by using ShapiroWilk test. The data in the tables were shown as the standard deviation, number, mean and percentage of participants. Student t-tests and one-way ANOVA were used to determine the comparison between scale scores and sociodemographic characteristics. Also, a Pearson's Correlation Coefficient analysis was implemented to define the correlation between two scales.

RESULTS

The demographic data of the nurses participating in the study are presented in Table 1. Among the respondents, 83.8% were women, 83.4% held a bachelor's degree, 83.3% had an above-average income, 78.7% did not use drugs, and their average age was 32.7 ± 7.3 (Table 1).

Table 1: Sociodemographic Characteristics of the Participants (n=216)

Variables		
	Mean ± SD	**Min - Max**
Age	32.7 ±7.3	22.0-53.0
	n	**%**
< 32	119	55.1
> 33	97	44.9
Gender		
Female	181	83.8
Male	35	16.2
Education		
Vocational high school	18	8.3
Associate degree	18	8.3
Bachelor's degree	180	83.4
Income		
Above average	180	83.3
Below average	36	16.7
Drug Use		
Yes	46	21.3
No	170	78.7

SD: Standart Deviation, Min: Minimum, Max: Maximum

The characteristics of the nurses and their profession are reported in Table 2. It was determined that 92.1% of the participants were service nurses, 75% of them worked on the shift system, their average working hours were 48.61 ± 11.35, and their working year average was 10.4 ± 8.3. Of the nurses, 65.7% were satisfied with their working conditions, and 59.3% attended in-service training (Table 2).

The distribution of the mean scores for the total and sub-dimensions of the Compassion Fatigue Scale (CFS) and SF-12 Scale for the nurses is presented in Table 3. The total mean score of the nurses' CFS was determined to be 65.37±25.00. When examining the sub-dimensions of the CFS, it was found that 23.66±10.56 points were obtained for secondary trauma and 41.71±15.98 points for professional burnout. The SF-12 Physical Component Summary (PCS) score could be obtained as 41.74±5.29, while the SF-12 Mental Component Summary (MCS) score achieved was 38.01±5.01.

There was no significant difference between CFS and SF-12 Scale total and sub-

dimensional scores and sociodemographic data (p>0.05) (Table 4).

Table 2: The Characteristics of the Participants about Their Profession (n=216)

Variables	**Mean ±SD**	**Min -Max**
Total experiences (years)	10.4 ± 8.3	0.0- 43.75
Working hours per week	48.61 ± 11.35	5.0-96.0
	n	**%**
Position of work		
Responsible nurse	17	7.9
Service nurse	199	92.1
Type of work		
Day	54	25.0
Shift	162	75.0
Satisfaction with working conditions		
Yes	74	34.3
No	142	65.7
Participation in in-service training		
Yes	128	59.3
No	88	40.7

SD: Standart Deviation, Min: Minimum, Max: Maximum

Table 3: Total and Sub-Dimension Mean Scores on the Compassion Fatigue Scale and SF-12 Quality of Life Scale of the Participants (n=216)

Scales and Subdimensions	**Mean ± SD**	**Min - Max**
CFS-Total Score	65.37 ± 25.00	13.00-130.00
CFS-Secondary Trauma	23.66 ± 10.56	5.00-50.00
CFS-Professional Burnout	41.71 ± 15.98	8.00-80.00
SF 12 – PCS	41.74 ± 5.29	26.70-55.71
SF 12 – MCS	38.01 ± 5.01	25.51-51.84

SD: Standart Deviation, Min: Minimum, Max: Maximum, CFS: Compassion Fatigue Scale, PCS: Physical Component Summary, MCS: Mental Component Summary

Table 4: Comparison of the Participants' Compassion Fatigue Scale and SF-12 Quality of Life Scale Total and Sub-Dimensional Scores and Their Sociodemographic Characteristics (n=216)

Scales	n	CFS- Total Score	CFS- Secondary Trauma	CFS Professional Burnout	SF 12 - PCS	SF 12 - MCS
		Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Age						
< 32	119	67.66±24.53	23.97±10.56	43.68±15.74	42.21±5.46	37.66±4.85
> 33	97	62.56±25.41	23.27±10.60	39.28±16.02	41.15±5.05	38.45±5.20
t/ p		t=1.494, p=0.582	t=0.481, p=0.066	t=2.027, p=0.144	t=1.466, p=0.261	t=-1.156, p=0.503
Gender						
Female	181	65.13±24.85	23.71±10.75	41.41±15.64	41.63±5.15	37.97±5.00
Male	35	66.62±26.09	23.40±9.68	43.22±17.84	42.26±6.05	38.25±5.12
t/ p		t=-0,323, p=0.747	t=0.160, p=0.873	t=-0.612, p=0.541	t=-0.640, p=0.523	t=-0.303, p=0.762
Education Status						
Vocational high school	18	70.66±23.59	25.55±10.90	45.11±14.66	40.21±5.04	38.14±5.26
Associate degree	18	64.31±25.21	23.28±10.48	41.03±16.19	42.04±5.30	37.99±4.98
Bachelor's degree	180	65.37±25.00	23.66±10.56	41.71±15.98	41.74±5.29	38.01±5.01
F/ p		F =1.943, p=0,165	F =1.390, p=0.240	F =1.960, p=0.163	F =3.628, p=0.058	F =0.027, p=0.870
Income						
Above average	180	64.43±24.62	23.66±10.55	40.77±15.55	41.76±5.33	38.07±4.98
Below average	36	70.05±26.72	23.63±10.76	46.41±17.48	41.62±5.19	37.75±5.22
t/ p		t=-1.232, p=0.510	t=0.014, p=0.712	t=-1.946, p=0.237	t=0.142, p=0.887	t=0.350, p=0.921
Type of work						
Day	54	58.55±25.11	22.31±10.38	36.24±15.71	41.61±4.90	38.82±5.12
Shift	162	67.64±24.63	24.11±10.61	43.53±15.70	41.78±5.43	37.74±4.96
t/ p		t=-2.338, p=0.965	t=-1.082, p=0.490	t=-2.956, p=0.848	t=-0.204, p=0.235	t=1.371, p=0.769
Satisfaction with working conditions						
Yes	74	77.56±23.98	26.81±9.98	50.75±15.19	40.92±5.23	37.53±4.73
No	142	59.02±23.17	22.02±10.52	37.00±14.31	42.16±5.30	38.27±5.15
t/ p		t=5.515, p=0.880	t=3.230, p=0.467	t=6.563, p=0.800	t=-1.632, p=0.904	t=-1.028, p=0.704

t: Student t Test, F: One Way ANOVA, CFS: Compassion Fatigue Scale, PCS: Physical Component Summary, MCS: Mental Component Summary,p>0.05*

The relationship between the Compassion Fatigue Scale and the total and sub-dimensions of the SF-12 Quality of Life Scale is presented in Table 5. In terms of the CFS total score, there was a significant and very high positive correlation with CFS secondary trauma (r=0.911, p<0.001) and CFS professional burnout (r=0.962, p<0.001). However, a low negative correlation was observed between the CFS total score (r=-0.136, p<0.001; r=-0.249, p<0.001), CFS secondary trauma (r=-0.072, p<0.001; r=-0.229, p<0.001), CFS professional burnout (r=-0.166, p<0.001; r=-0.238, p<0.001), and the sub-dimensions of SF-12 (Physical Component Summary and Mental Component Summary). It was identified that as nurses' compassion fatigue increased, their quality of life decreased.

Table 5: Relationship between Compassion Fatigue Scale and SF-12 Quality of Life Scale Total and Sub-Dimensions (n=216)

Scales	CFS- Total Score	CFS- Secondary Trauma	CFS Professional Burnout	SF 12 - PCS	SF 12 - MCS
CFS -Total Score	-				
CFS -Secondary	r=0.911	-			
Trauma	p<0.001				
CFS- Professional	r=0.962	r=0.764	-		
Burnout	p<0.001	p<0.001			
SF 12 – PCS	r= -0.136	r= -0.072	r= -0.166	-	
	p<0.001	p<0.001	p<0.001		
SF 12 – MCS	r= -0.249	r= -0.229	r= -0.238	r= -0.312	-
	p<0.001	p<0.001	p<0.001	p<0.001	

r: Pearson's Correlation Coefficient CFS: Compassion Fatigue Scale, PCS: Physical Component Summary, MCS: Mental Component Summary

DISCUSSION

The study aims to identify the relationship between quality of life and compassion fatigue among surgical nurses. However, there was no significant difference between scale scores and sociodemographic data. Our results stated that the majority of the nurses are younger than 32 years old, female, have an above-average income, and have a bachelor's degree. Contrary to study findings, Jakimowicz and coworkers (2018) reported that nurses between the ages of 20-35 had high levels of compassion fatigue (25). Sacco and colleagues (2015) also reported that nurses aged 50 and over had lower compassion fatigue compared to young nurses and stated that the life

experiences of older nurses were effective in coping with the difficulties in intensive care (26). Another study determined that nurses between the ages of 26-35 had higher compassion fatigue scores (27). It can be thought that the difference between the study findings and the literature is due to the sample.

In this study, no significant difference was stated between the income status of nurses and compassion fatigue. Andriani and coworkers (2017) showed that income levels of nurses did not affect compassion fatigue. Another study reported that wage satisfaction did not affect compassion fatigue (28). Study findings are parallel with the literature.

In the study, SF 12 – PCS average score was found 41.74±5.29 and SF 12 – MCS average score was 38.01±5.01. As a result, it was determined that the scores obtained from the sub-dimensions of the quality of life scale were below the average. Şahin (2014) indicated that the quality of life scores of the nurses working in the emergency and intensive care units were below the average (29). Similarly, it was determined that the quality of life of nurses in high-intensity units such as the emergency department is lower compared to general unit nurses (13). The findings are consistent with the literature. It is thought that where the nurses work affects their quality of life. Improving nurses' workplaces can increase their quality of life. Most of the surgical nurses in this study reported that they were not satisfied with their working conditions. However, no significant difference was found between the total and sub-dimensions of the scales and satisfaction with the working conditions. Contrary to our study findings, Kelly and coworkers (2015) study on nurses determined that thinking about quitting a job is an effective factor in compassion fatigue (30). In the study of Kılıç and colleagues, it was stated that nurses with compassion fatigue were more willing to leave their jobs (31). Research findings are not compatible with the literature.

Another result obtained from this study is that nurses working in surgical clinics experience moderate compassion fatigue. A study indicated that most of the nurses working in the surgical intensive care unit experienced moderate compassion fatigue (32). Uslu and Korkmaz (2020) determined that compassion fatigue was seen at a moderate level in cardiovascular surgery intensive care nurses (33). The results of the study are compatible with the literature. A literature review reported that nurses working in emergency services, intensive care units, surgery, and oncology clinics experience more compassion fatigue (26,34-36). It is thought that the long and difficult working conditions of surgical

nurses working in intensive care and emergency departments increase their compassion fatigue.

LIMITATIONS

The trial was implemented only with nurses in surgical units. Therefore, the results of the study can only be generalized to nurses working in these units. Another limitation may be that the study is online and nurses did not meet the researcher. Despite all these limitations, since the research evaluates compassion fatigue and quality of life together, it is thought that the findings of the trial may illuminate future research.

Implications for Practice

Nurses working on a shift system in the surgical field may experience negative effects on their job satisfaction. Consequently, as compassion fatigue increases among nurses working in this field, their quality of life tends to decrease. It is advisable to enhance professional satisfaction by organizing work schedules that minimize exhaustion and long working hours. Implementing strategies to reduce compassion fatigue and designing work programs aimed at improving the quality of life for nurses can also be beneficial. Furthermore, conducting the study with a larger sample group would be advantageous for future research.

CONCLUSION

This study revealed the correlation between compassion fatigue and quality of life among surgical nurses. While compassion fatigue of surgical nurses was stated at an average level, their life quality was identified to be low. In other word, the trial findings indicate that as nurses' compassion fatigue increased, their life quality decreased. The quality of care provided by nurses to the patient is substantial for the patient's recovery and discharge in a shorter time. It is recommended to reduce the workload of nurses and improve working conditions.

Ethical Approval: This study was approved by Manisa Celal Bayar University Medical Faculty of Health Science Ethics Committee with (Date:30/06/2020) and (Decision no: 20.478.486-870). The principles of the Declaration of Helsinki were complied with in the study.

Author(s) Contributions: *Idea and concept:* SM, EY; *Design* SM, EY; *Supervision and consultancy:* EY; *Data collection and/or processing:* SM; *Literature review:* SM, EY; *Analysis and/or interpretation:* SM, EY; *Writing the article:* SM, EY; *Critical thinking:* SM, EY

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