Original Article

Examination of Traumatic Stress Symptoms, Compassion Satisfaction, Burnout and Compassion Fatigue in Nurses

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Abstract
Objective: In this study, it was aimed to examine professional satisfaction, traumatic stress symptoms, burnout and empathy fatigue in nurses.
Materials and Methods: The study was carried out between February and June 2021, and its population consisted of all nurses working in a city hospital in a province in eastern Turkey. The sample of the study consisted of 244 nurses. Ethical approval was obtained from the ethics committee of the Faculty of Medicine before starting the study. The data were collected by using the Questionnaire Form created by the researchers by reviewing the literature, Professional Quality of Life Scale and Traumatic Stress Symptoms Checklist, and numbers and percentages or mean and standard deviation were used according to the data type in the evaluation of the data. The relationship between sociodemographic data and scales, was evaluated by correlation analysis, the differences between groups were evaluated by ANOVA and t test.
Results: In the study, it was found that the average professional satisfaction score of nurses was above the medium level; It was found that there was an inverse and strong relationship between the sub-dimensions of job satisfaction and burnout (r=-0.155; p=0.000). On the other hand, there is a positive and significant relationship between the PIQS burnout sub-dimension and the empathy fatigue sub-dimension (r=0.114; p<005). A positive and significant and strong relationship was determined between the nurses' total PTSD score and empathy fatigue. (r=0.446; p:000)
Conclusion: This study demonstrated that traumatic stress symptoms cause burnout and compassion fatigue in nurses.

Keywords: Compassion Satisfaction, Burnout, Nursing, Fatigue, Traumatic Stress

Introduction

Nursing is a profession that meets the physical, mental and social needs of the individual, family and society and provides the necessary care in line with these needs (Dost and Bahçecik,2005), it is also a spiritually charged profession that provides care in environments where people experience constant pain, suffering and weakness that accompany them during the most difficult periods of their lives (Pektekin,2013). In working life, nurses are frequently faced with stressful situations and as a result, they are exposed to work stress, causing deterioration in their physical/mental health. Nurses often have to move quickly between life and death, make critical decisions quickly, and maintain patient care in environments which are not very safe. This intense stress brought about by the working environment can cause them to experience problems such as burnout and compassion fatigue (Yesil et al., 2014; Hicdurmaz & Figen, 2015). This may lead to medical errors, a decrease in work performance, service quality, and satisfaction level of patients (Gunusen, 2017). It is stated that nurses should be satisfied with their working environment in order to provide effective and appropriate nursing care to their patients (Han et al., 2020). Burnout is common in individuals who work face-to-face with people and provide services, where emotions are used intensely, and who have an intense desire to provide good and quality

service (Durmus et al., 2018). Low job satisfaction causes burnout in nursing; and this leads to problems such as general hopelessness, anxiety and anxiety disorders (Celik & Kılıc, 2019). According to the results of a systematic review and meta-analysis of studies conducted with nurses, more than half of the nurses were found to experience burnout and secondary traumatic stress (Zhang et al., 2018). Similarly, as a result of a study conducted in our country, it was determined that nurses experienced professional burnout (Yılmazer & Buldukoglu, 2021).

Although nursing is a difficult field of study, it contains many valuable experiences. Many opportunities such as contributing to human life, relieving pain, protecting from diseases, supporting independence can be the source of compassion satisfaction. Compassion satisfaction can be defined as the feeling of pleasure and satisfaction that occurs in the nurse as a result of interventions and helping an individual in need (Stamm, 2005). Another and most important feature contributing to nursing in difficult conditions is the ability to provide empathetic care (Pektekin,2013). The ability to empathize has an important place in helping others (Hiçdurmaz & Figen, 2015; Figley., 2002). However, when the ability to empathize cannot be adjusted correctly and when it co-occurs with work stress, it can cause emotional, psychological and spiritual burnout in individuals who work with people who are suffering, and ultimately it can cause compassion fatigue (De Sio. et al., 2020; Sinclair et al., 2017; Lombardo & Eyre, 2011). It is stated that compassion fatigue develops as the cost of helping people who need help, experience a traumatic event, or suffer from pain (Sirin &Yurttas, 2015). Concepts such as compassion and empathy, which are behaviours of positive and virtuous orientation towards other people, are fundamental values to keep in mind in patient care, and they are actually a necessity. Compassion fatigue has negative effects on both nurses and the values of nursing profession, as well as on patients (Alan, 2018). In a systematic review covering 19 different countries, Cavanagh found that nurses were predisposed to compassion fatigue syndrome (Cavanagh et al., 2020).

The presence of traumatic stress symptoms, compassion dissatisfaction, burnout and compassion fatigue in nurses negatively affect the mental health of nurses, while at the same time, they cause conflicts in the workplace, frequent relocations, and turnover. As a result, the quality of patient care decreases and nurses make more mistakes in the treatment process (Hicdurmaz & Figen, 2015; Sirin &Yurttas, 2015). It is expected that despite the many difficulties brought about by the work area, nurses will not give up their professional approach and experience burnout, they will provide qualified care and be satisfied with their work. While there are studies in literature investigating compassion satisfaction and burnout levels of nurses (Yılmazer & Buldukoglu, 2021; Kavlu & Pinar, 2009; Gunusen, & Ustun, 2010; Jenkins & Warren ,2012; Cam, 2017; Dikmen & Aydın, 2016; Gouveia et al., 2017), there are few studies on compassion fatigue (Sirin &Yurttas, 2015; Dikmen & Aydın, 2016). Although there were previous studies on empathy fatigue, professional satisfaction and burnout, a study that dealt with all of them together could not be reached (Yılmazer & Buldukoglu, 2021; Sirin &Yurttas, 2015; Kavlu & Pinar, 2009; Gunusen, & Ustun, 2010; Jenkins & Warren ,2012; Cam, 2017; Dikmen & Aydın, 2016; Gouveia et al., 2017). The present study discussed different concepts together and aimed to examine compassion satisfaction, traumatic stress symptoms, burnout and compassion fatigue in nurses.

Material and Methods

Study design: This study was conducted to examine the levels of traumatic stress symptoms, compassion fatigue and burnout in nurses. The study was carried out between February and June 2021, and its population consisted of all nurses working in a city hospital in a province in eastern Turkey. Sample was not selected in the study, and 244 nurses who agreed to participate in the study during the data collection dates were included in the sample. Ethical approval was obtained from the ethics committee of the Faculty of Medicine before starting the study. (No: B.30.2.ATA.0.01.00/200). The data were collected by the researcher through face-to-face interview method.

Data Collection Instruments: The data were collected by using Descriptive Information Form, ProQOL and TSSC. Numbers, percentages, or means were used to evaluate the data. The relationship between the variables was evaluated by correlation analysis, the

differences between groups were evaluated by ANOVA and t test.

Descriptive Information Form: The questionnaire form consists of a total of 7 questions (such as age, marital status, education level, economic income status, position at the place of employment, working year and unit) questioning the socio-demographic characteristics of the participants (Hicdurmaz & Figen, 2015; Kavlu & Pinar, 2009).

Professional Quality of Life Scale (ProQOL): ProQOL was developed by Hudnall Stamm in 2005. The scale consists of 30 items and 3 sub-dimensions. The Cronbach Alpha reliability values of the scale were found to be α=0.87 for the compassion satisfaction subscale, α=0.72 for the burnout subscale, and α=0.80 for the compassion fatigue subscale (Yeşil et al., 2010). The values in this study are α=0.89, 0.79, 0.83, respectively. It is a self-report assessment tool consisting of 30 items and three subscales. Professional satisfaction (compassion satisfaction) expresses the feeling of satisfaction and satisfaction that an employee feels as a result of helping another person who needs help in a field related to his/her profession or job. A high score on this subscale indicates the level of satisfaction or satisfaction as a helper.

Traumatic Stress Symptom Checklist (TSSC): The scale developed by Basoglu et al., consists of 23 items (Basoglu et al., 2001). The first 17 items of the scale are related to post-traumatic stress symptoms, and the last 6 items are related to depression. In the validity and reliability analyses, the internal consistency coefficient of the overall scale was found as .94, the internal consistency coefficient of 17 items measuring post-traumatic stress disorder was found as .92, and the internal consistency coefficient of 6 items measuring depression was found as .84 (Newell & MacNeil, 2010). The scale, in which individuals evaluate themselves for the last month, consists of 20 items and is of four-point Likert type. Item scores range from 0 to 3 and a total score is obtained. The first 17 items of the scale evaluate the symptoms of PTSD (according to DSM-IV), and the last six items evaluate the symptoms of depression. A total score of 25 and above indicates PTSD. In the present study, only the 17-item part of the scale measuring traumatic stress symptoms was used and the internal consistency coefficient was found to be 90.

Results

Information on the sociodemographic characteristics of the patients is presented in Table 1. The mean age of the nurses in the study was 27.89±5.24 years. A great majority of the nurses (67.2%) were women and married (62.3%). 46.8% of the nurses work in internal clinics, 36% in surgical clinics and 17.2% in emergency or intensive care units. Of the nurses, 76.6% of whom had a bachelor's degree, 76.6% had 1-5 years of working experience, 56.1% had income equal to their expense, and 90.8% worked as service nurses.

There was no statistically significant difference between nurses' TSSC mean scores and ProQOL subscale mean scores according to their marital status ($p>0.05$). In the comparison made in terms of the genders of the nurses, while no significant relationship was found between mean TSSC score and mean scores of ProQOL compassion satisfaction and compassion fatigue subscales ($p>0.05$), the relationship between mean burnout subscale score was found to be significantly higher in female nurses than in male nurses ($p<0.05$).When the mean scores of the nurses according to education and income level were compared, while no statistically significant difference was found between the groups' ProQOL subscale mean scores ($p>0.05$), the statistically significant difference found between mean TSSC scores and the high education level and low perceived income cause an increase in nurses' total stress symptoms scores ($p<0.05$). In the comparison made according to working positions of the nurses who participated in the study, no statistically significant difference was found between mean TSSC score and mean ProQOL subscale scores ($p>0.05$). In the comparison made according to the working years of nurses, while no statistically significant difference was found between mean TSSC scores and mean ProQOL burnout and satisfaction subscale scores ($p>0.05$), a statistically significant difference was found between compassion fatigue ($p<0.05$) and it was concluded that nurses experienced more and more compassion fatigue as their working years in the profession increased. While the scores of the nurses from the TSSC scale according to the units they work in were statistically significant ($p<0.005$); no statistically significant correlation was found between ProQOL Compassion Satisfaction, Burnout and Compassion Fatigue Subscale

(p>0.005).

Table 2 shows the statistical relationship between TSSC and ProQOL subscales and between the subscales of PROQOL. When the table is examined, it can be seen that there is a statistically significant and negative strong relationship between TSSC and PROQOL Compassion Satisfaction subscale **(p<0.005).** A statistically significant positive correlation was found between TSSC and ProQOL Burnout and Compassion Fatigue Subscales **(p<0.005).** While a statistically significant negative correlation was found between ProQOL Compassion Satisfaction subscale and ProQOL Burnout subscale (p<0.05), a statistically significant high positive correlation was found between ProQOL Burnout subscale and ProQOL Compassion Fatigue subscale (p<0.005).

Table 3 shows the distribution of the scores of nurses who participated in the study from the scales. Total mean score of Traumatic Stress Symptom Checklist (TSSC) of the nurses who participated in the study was 37.19±10.08. Professional Quality of Life Scale (ProQOL) Compassion Satisfaction subscale mean score was 25.09±5.35, while Burnout subscale mean score was 23.12±3.94, and Compassion Fatigue subscale mean score was 17.63±5.68.

Discussion

While positive indicators of professional quality of life are compassion satisfaction, its negative indicators are burnout and compassion fatigue (McHugh et al., 2011). In this study, statistically significant results were found in terms of nurses' compassion satisfaction, burnout and compassion fatigue levels and the related factors. The mean age of the nurses in the study was 27.89±5.24 years. A great majority of the nurses (67.2%) were women and married (62.3%). 46.8% of the nurses work in internal clinics, 36% in surgical clinics and 17.2% in emergency or intensive care units. Of the nurses, 76.6% of whom had a bachelor's degree, 76.6% had 1-5 years of working experience, 56.1% had income equal to their expense, and 90.8% worked as service nurses. In the study, it was found that the ProQOL burnout subscale mean score of women was higher than that of men. Although it is stated in literature that burnout is experienced in almost every professional group, it is stated to be more common in professions that are carried out through one-to-one human relations such as health workers (Aydın &Agacdiken, 2021; Cakir & Tan, 2018; Kulakci et al., 2015; Karsavuran, 2014; Ozsoylu et al., 2017) and similarly, it was concluded that female nurses had higher burnout mean scores (Vitale et al., 2020; Ocak et al., 2021; Ay-Alper & Icen, 2021; Barello et al., 2020). Our result is in parallel with the literature. The fact that the majority of the sample in our study is composed of women suggests that women may look at problems more emotionally in terms of their personality traits and may experience more burnout as a result. Unlike this result, some studies show that gender does not affect burnout (Durmus et al., 2018; Kekec & Tan, 2021). It can be said that this difference is due to the difference in sample.

When the mean scores of nurses who participated in the study were compared according to their educational level and economic status, it was concluded that there was a statistically significant relationship between the nurses' total TSSC mean scores and nurses with low level of education and those who stated that their economic income was lower than their expense had higher TSSC mean scores and they experienced more stress. When studies on the topic are examined, it can be seen that many negative situations such as the difficulty of working conditions, being exposed to mobbing in the workplace, physical inadequacies of the working areas, the system of working in shifts, insufficient wages and administrative problems cause both traumatic stress symptoms in nurses and also cause a loss in the interest in profession by getting caught in negative emotions such as helplessness and hopelessness (Dursun et al., 2010; Karakus, 2011). This result is in line with the literature. In our study, it is thought that higher burnout in nurses with a low level of education may be due to reasons such as they may have a lower awareness of their legal rights and responsibilities than nurses with a higher level of education, the fact that they have limited professional development opportunities and they cannot predict what to do when faced with stressful situations and which way to seek their rights. It is not a surprising result that nurses experience burnout as a member of a professional group who cannot get the wage they deserve and cannot earn a satisfactory income as a result of intense working conditions and long working hours in Turkey

Table 1. Distribution of nurses' scores from the scales in terms of some characteristics (n:244)

Characteristics of the participants		Traumatic Stress Symptoms Checklist	ProQOL Compassion Satisfaction Subscale	ProQOL Burnout Subscale	ProQOL Compassion Fatigue Subscale
	n (%)	X±SD	X±SD	X±SD	X±SD
Marital Status (n)					
Single	52 (37.7)	36.45±10.95	24.48±5.31	23.61±3.91	16.42±5.26
Married	192 (52.3)	37.64±9.53	25.46±5.36	22.82±3.94	18.37±5.81
p*		0.374	0.170	0.126	0.009
Gender					
Female [1]	164 (67.2)	37.81±9.95	25.33±5.28	25.73±4.05	18.51±5.16
Male [2]	80 (32.8)	35.89±10.31	24.60±5.50	23.91±3.61	17.90±6.65
p*		t:-1.382 p:0.168	0.315	**0.029 1>2**	0.618
Educational Status (n)					
High school [1]	40 (16.4)	40.70±8.83	23.20±4.10	22.92±4.00	17.62±5.02
Undergraduate [2]	187(76.6)	36.96±9.98	25.37±5.45	23.20±3.94	17.84±5.72
Post graduate [3]	17 (7.0)	31.47±11.40	26.41±6.01	22.64±3.92	15.41±6.54
p**		**.005 1>2-3**	.037	.805	.241
Economic status (n)					
Income < expense [1]	74(30.3)	40.41±10.16	24.12±4.79	23.74±3.88	18.01±6.12
Income = expense [2]	137(56.1)	35.82±9.85	25.51±5.71	22.75±3.97	17.41±5.53
Income > expense [3]	33(13.5)	35.54±9.44	25.54±4.83	23.27±3.87	17.72±5.36
p**		**.004 1>2-3**	.174	.214	.765
Position					
Service nurse	236 (90.8)	37.09±10.03	25.07±5.32	23.10±3.97	17.54±5.50
Head nurse	24 (9.2)	40.71±9.94	26.07±6.09	23.64±3.22	20.78±6.72
p*		**.**192	.501	.618	.036
Working years (n)					
1-5 years [1]	187 (76.6)	**37.63**±9.43	25.17±5.43	23.00±3.85	18.29±5.64
6-10 years [2]	35 (14.4)	**37.05**±12.84	24.74±4.52	23.31±3.93	15.65±5.71
≥11 years [3]	22 (9.0)	**33.72**±10.34	25.00±6.09	23.86±4.74	15.22±4.74
p**		.229	.907	.596	**.003 1>2>3**
Age (X ± SD)	27.89±5.24				

*t test **One way ANOVA

Table 2. Comparison of nurses' TSSC total score and ProQOL Scale subscale mean scores

Correlation	Compassion satisfaction subscale	Burnout subscale	Compassion Fatigue subscale
TSSC Total Spearman's Correlation (r) Sig (p)	-.155 **.001**	.114 **.003**	446 **.000**
Compassion satisfaction subscale Spearman's Correlation (r) Sig (p)	_ _	-.155 **.004**	.207 **.000**
Burnout subscale Spearman's Correlation (r) Sig (p)	-.155 **.004**	_ _	.114 **.003**
Compassion fatigue subscale Spearman's Correlation (r) Sig (p)	.207 **.000**	.114 **.003**	_ _

Table 3. Distribution of Mean Scores of Nurses who participated in the Study from the Scales

Scales	X±SD	(Min-Max)
Traumatic Stress Symptoms Checklist (TSSC)	37.19±10.08	17- 61
Professional Quality of Life Scale (ProQOL)		
• Compassion Satisfaction Subscale	25.09±5.35	14-41
• Burnout Subscale	23.12±3.94	10-33
• Compassion Fatigue Subscale	17.63±5.68	6-34

In the comparison made according to the working hours of nurses, while no statistically significant difference was found between TSSC mean scores and compassion satisfaction and burnout mean scores of ProQOL scales, a statistically significant difference was found between compassion fatigue and nurses with less working years in the profession were found to experience more compassion fatigue. Studies conducted in literature show that compassion fatigue is associated with burnout and that compassion fatigue increases in nurses as burnout levels increase (Brewer et al., 2004; Kavlu & Pinar, 2009). The reason for this may be nurses' inability to use coping skills effectively since they are inexperienced and young. When some risk factors are examined together with compassion fatigue, it is argued that young and inexperienced nurses are more sensitive and therefore young nurses are considered to be at risk in terms of compassion fatigue.[43] While the scores of the nurses from the TSSC scale according to the units they work in were statistically significant ($p<0.005$); no statistically significant correlation was found between ProQOL Compassion Satisfaction, Burnout and Compassion Fatigue Subscale ($p>0.005$). Similarly, in studies on the subject, burnout levels of nurses working in emergency and intensive care units were found to be high (Kavlu & Pinar,2009; Kılıç, 2018). This result is compatible with the literature. Such results suggest that it may be related to the difficulties of working in units such as the emergency room

and intensive care unit, and witnessing traumatic events.

In our study, it was found that as the score from the Traumatic Stress Symptoms Checklist (TSSC) increased, burnout and compassion fatigue increased, while compassion satisfaction decreased (Table 2). Mean scores of the nurses who participated in this study in the subscales of compassion satisfaction, burnout and compassion fatigue are similar to the studies of Kılıc and Buldukoğlu (Kılıc, 2018, Yılmazer & Buldukoglu, 2021). In terms of scale maximum scores, it was found that nurses showed moderate level of traumatic stress symptoms. Studies have shown that considering the working environment of nurses and the individuals they care for, nurses often face traumatic cases and the fact that they have to intervene with their patients in an environment where vital and critical decisions must be made in a short time increases the symptoms of traumatic stress (Kavlu & Pinar,2009; Mary et al.,2017; Hendy, 2016; Kahraman et al., 2011). This result is in line with the literature. A study conducted in Turkey showed that one-fourth of the nurses could not identify the symptoms of stress and did not have knowledge about this[48] and nurses did not know the methods of coping with stress and could not express that they were vulnerable in this regard. In the light of these results, it is thought that the intense symptoms of stress in nurses may be related to the difficulty of working conditions and high number of responsibilities.

In this study, it was found that the mean compassion satisfaction score of nurses was above the medium level and there was a strong and inverse relationship between the subscales of compassion satisfaction and burnout. While compassion satisfaction in nursing increases productivity for work areas, it appears as a great improvement for public health. Polat and Erdem found a negative and strong relationship between compassion satisfaction and burnout in their study with healthcare professionals (Polat & Erdem, 2017). In this case, increasing the level of compassion satisfaction can be a method to reduce the level of burnout. Hinderer et al. stated that burnout and empathy fatigue can be reduced by examining the strategies that increase compassion satisfaction in nurses (Hinderer et al., 2014). Based on these results, it can be said that it may be beneficial to improve working environments and hours that will satisfy nurses professionally, to give rewards, and to direct nurses to activities that will reduce fatigue and burnout.

There is a positive and significant relationship between the ProQOL burnout subscale and compassion fatigue subscale of nurses. Various studies have shown that people working in health institutions experience burnout intensely and are at risk for burnout (Newell & MacNeil, 2010; Mangoulia et al.,2019; Lauvrud et al.,2009; Balci et al.,2013). In our study, burnout in nurses was measured to be above the average in terms of scale total scores. Studies have shown that burnout in nurses is caused by factors such as being dissatisfied with one's job, thinking that the income is not enough for the service provided, not following the developments in the field of nursing, total working time of 5 years or less, being single, long working hours, not working in the desired unit and working in intensive services (Kavlu & Pinar, 2009; Gunusen & Ustun, 2010; Balci et al.,2013). In order to prevent burnout and to eliminate its negative effects on health workers, legal and social improvements should be implemented.

It can be seen that there is a positive and significant and strong relationship between nurses' TSSC total score and compassion fatigue and nurses have moderate level of compassion fatigue and scale total scores. This result is similar to the literature findings.[10,44,49,54] Compassion fatigue is a new term that has begun to be used especially for healthcare workers. Compassion fatigue, which is seen as the price of helping a traumatized individual as a part of the nursing profession, has also been emphasized in similar studies (Dikmen & Aydin, 2016; Hendy, 2016; Baskale Et al., 2016). In most of the studies conducted, compassion fatigue was found to be moderate in nurses. Increasing education level, working unit and some sociodemographic characteristics are effective in forming compassion fatigue. Being very self-sacrificing and an overly empathetic approach are also the causes of compassion fatigue seen in nurses (Hicdurmaz & Ari,2015; Dikmen & Aydin, 2016; Mary et al., 2017; Abendroth & Flamery, 2006). Compassion fatigue causes nurses to feel burnout and to lose their determination to work and faith.

Conclusion: As a result, compassion satisfaction, burnout and professional satisfaction, which are indicators of quality of

life; associated with personal and professional characteristics. It is extremely important to protect the physical and mental health of nurses, to ensure that they are minimally affected by the harsh conditions of working life and workplace, and from harmful social factors. Considering the foresight that recognizing the risk factors and symptoms of compassion dissatisfaction, burnout and compassion fatigue will be the first step, and prevention and improvement studies will be the next step, it is thought that the results of the study will be a source of data in this context.

In line with the results obtained in the study, it may be useful to provide nurses with the skills to understand the symptoms of traumatic stress, burnout and compassion fatigue that may occur in them; to monitor the female nurses identified as a risk group in terms of traumatic stress, burnout and compassion fatigue, and to take special precautions; to improve the quality of nurses' working conditions and to make intervention programs that will prevent traumatic stress symptoms, burnout and compassion fatigue in nurses.

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