



Relationship Between Compassion Fatigue in Nurses, and Work-Related Stress and the Meaning of Life

Hakime Aslan¹ · Behice Erci² · Hatice Pekince³

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Abstract

This research was conducted in order to examine the correlation between work-related stress and meaning of life in association with compassion fatigue of nurses, as well as to determine the factors that affect compassion fatigue. The research is cross-sectional. The population of the research is comprised of nurses working at a university hospital in the east of Turkey. The research was carried out with 336 nurses. “Introductory information form,” “Work-related strain inventory,” “Professional quality of life scale and compassion fatigue subscale” and “Life attitude profile” were used for data collection. It was identified that correlation between compassion fatigue and attitude to life profile is negative ($r = -.542^{**}$, $p = 0.000$), while the correlation between work-related stress and compassion fatigue is positive ($r = .204^{**}$, $p = 0.000$). Moreover, it was determined that attitude to life profile, work-related stress, work manner, amount of time working at one occupation, service held and gender have effect on compassion fatigue.

Keywords Compassion fatigue · Stress · Meaning of life · Nurse

✉ Hakime Aslan
hakime.aslan@inonu.edu.tr

Behice Erci
behiceerci@hotmail.com

Hatice Pekince
hatturk23@hotmail.com

¹ Department of Fundamentals of Nursing, Faculty of Nursing, Inonu University, Malatya 44280, Turkey

² Department of Public Health Nursing, Faculty of Nursing, Inonu University, Malatya 44280, Turkey

³ Department of Nursing, Firat University, Elazığ 23000, Turkey

Introduction

Nurses are the largest and the most significant professional group in the health sector. They work in an increased workload in the healthcare system in order to meet the complex necessities of patients and are at risk of the compassion fatigue (Smith 2012:1). According to Figley, the compassion fatigue is a cost of caring (Figley 1995). A general expression of compassion fatigue is described as a result of a continuous and intense contact with patients, constantly giving something of themselves and being subjected to a lot of stress, that afterwards turns into a progressive process that manifests as a stress compassion (Coetzee and Klopper 2010).

A compassion fatigue is a natural consequence of witnessing those who are sick, suffering, etc. Apart from that, it is also known as the result of the stress of trying to assist someone who have had a traumatic experience and who is important to the person, and of the desire to help the person who is suffering or traumatized (Şirin and Yurttaş 2015). A compassion fatigue is a statement that measures the level of health worker's burnout. Health workers need to have a sense of compassion toward patients they take care of (Polat and Erdem 2017). However, the feeling of compassion is replaced by compassion fatigue over time, due to the fact that they (health workers) are always there when patients suffer or have a delay in recovery time (Figley 2002). Compassion fatigue seen in health workers causes desensitization to patients and care (Figley 2002).

A compassion fatigue is defined as a feeling resulted in experiencing an event that includes of a work-related stress (Figley 1995). For this reason, it is important to evaluate nurses' work-related stress and tension. According to research works about factors causing stress in nurses, the factors can be sorted as following: patient care, feeling the responsibility for deadly ill, knowledge-skill level, lack of communication between interdisciplinary and multidisciplinary staff members, relationship with management, conditions related to the work environment, role conflict with health team members, lack of social support and increased density of patients (Aylaz and Durmuş 2000; Topuz 2006; Garrosa et al. 2010; Chayu and Kreitler 2011). All of these factors increase the level of stress and tension at nurses.

Nurses' view on the meaning of life may change negatively due to increased compassion fatigue and stress. It is difficult to put meaning of life in one common sense, because the perception of it changes from person to person. Frankl stated that people who still do not understand the meaning of life and think that there's no such thing as purpose in life are aimless and uncertain about their own future (Frankl 2017). On the other hand, Klinger emphasizes that the meaning of life is in importance of mental problems (Klinger 1998). The attempt to find a purpose of life is very individual. For an individual, to find the meaning of life means to find the most appropriate solution to the issues and troubles of life and to fulfill his/her responsibility (Ajit 1998). As long as a person does these, his/her life will start to make sense and his/her mental health will be protected.

Materials and Methods

Research Type This research is cross-sectional.

Population-Sampling

The population of the research includes 957 nurses who work at a university hospital in the East of Turkey. The sample of the study comprised 330 nurses with 0.95 representation power, 0.05 error and 0.95 confidence interval in the power analysis. A simple random sampling method was used to select a sample from the population. The study was conducted with total of 336 nurses. Those who were on leave during the research (49), not meeting research criteria (28) and did not want to participate (65) were excluded from the sample.

Data Collection

The data were collected by the researcher using face-to-face meetings technique. All the necessary explanations about the research were given in nurse rooms, oral or verbal consents were taken from the nurses. Forms were distributed to the nurses to be filled in a needed time period (10–15 min). Nurses who did not want to take part or were on a leave were excluded from the research. Four separate forms were used as means of data collection. The researcher used for evaluate socio-demographic features of nurses "Introductory information form," and "Work-related strain inventory," "Professional quality of life scale and compassion fatigue subscale" and "Life attitude profile."

Professional Quality of Life Scale (ProQOL)

This was developed by Hudnall Stamm (Stamm 2005). The scale that works as self-notification tool of three subscales and 30 items. Those three subscales are compassion satisfaction, burnout and compassion fatigue. The evaluation of items is done upon Likert scale from t "Never (0)" to "Very often (5)", on a 6 points basis. Compassion fatigue subscale was used in this research. The compassion fatigue subscale is a test designed to measure the symptoms that occur as a result of an encounter with a stressful event. Workers who score high on this scale are advised to receive support or assistance. 2, 5, 7, 9, 11, 13, 14, 23, 25, 28 items on the scale are developed to measure this situation. The adaptation of this scale to Turkish, its validity and reliability was done by Yeşil et al. The Cronbach Alpha value of compassion fatigue subscale is found as 0.80 (Yeşil et al. 2010). The Cronbach Alpha value of compassion fatigue subscale of the current research was found to be 0.83.

Work-Related Strain Inventory (WRSI)

Work-related strain inventory is a self-notification Likert type scale which consists of 4 subscales with 18 items. It was developed by Revicki and friends in 1991 with

an aim to identify work-related stress and tension of healthcare system (Revicki et al. 1991). The lowest score is 18, the highest one is 72. The scale doesn't have cut-off values; work-related tension level varies in direct proportion to the score taken from scale. The adaptation of this scale to Turkish, its validity and reliability was done by Aslan and colleagues in 1998 (Aslan et al. 1998). The Cronbach Alpha value of the scale of the current research was found to be 0.74.

Life Attitude Profile (LAP)

The validity and reliability of the Life attitude profile scale (life Attitude Profile Revised 'LAP-R'), developed by Reker, in Turkish was made by Erci (2008). Life attitude profile scale is used to evaluate general feelings about the belief that life has a purpose and that events in your life have a meaning at the time when a person faces a life-threatening illness or distressed events (global purpose). The scale developed by Reker has 48 items in it. Cronbach Alpha reliability coefficient of Reker Life attitude profile was determined to be 0.91 (Reker 1981). Since the 18th item had low correlation values, it was excluded from the scale during the validity work done by Erci. In a 7-subscale Likert type scale 7 stand for "absolutely agree" and 1 stands for "absolutely disagree." The Life attitude profile has 4 subscales, those are: Purpose of life, Meaning of life, Choice/Responsibility for life and Research on the meaning of life. If an individual gets high scores from Purpose of life, Meaning of life, Choice/Responsibility for life and Search of the meaning of life scales, it means that he/she has appositive Life attitude profile. The high score at Research on the meaning of life shows the correlation between meaning of life and its meaninglessness. The Cronbach Alpha value of 4 subscales of Erci's study changed between 0.73–0.82, so the Cronbach Alpha value of the scale found to be 0.91 (Erci 2008). The Cronbach Alpha value of the scale of the current research was found to be 0.92.

Research Variables

The Dependent Variable Compassion fatigue.

Independent Variables Work-related stress, the meaning of life and demographic variables.

Data Analysis

The data were analyzed through SPSS 23.0 package software. The suitability of the data to normal distribution was analyzed by Kolmogorov-Smirnov and Shapiro–Wilk tests. It was determined that the data did not match the normal distribution. Weight, mean, standard deviation, Pearson correlation tests and regression analysis were used in a statistical analysis of the research. Statistical significance was accepted as $p < 0.05$.

Ethical Issues of the Research

Ethical approval for the research was obtained from Scientific Research and Publication Ethics board of a University. In addition, permission was given by Medical Center. Nurses were informed about the study and written or oral consents were obtained from those who agreed to participate.

Findings

The socio-demographic features of nurses who participated in the research are given in Table 1. The average age of nurses was 33.6 ± 6.7 years and their duration of work in the profession was 6.7 ± 3.4 years. Out of the respondents 81.5% were female, 71.7% were married, 72.9% had bachelor's degree, 69% were service nurses, 81.2% worked mixed day and night and 31.5% served in medical units (Table 1).

The nurses received a score of 14.3 ± 7.7 on the compassion fatigue scale and it was seen that they have a low level of compassion fatigue. Stress level was found to be moderate, with a score of 40.8 ± 6.1 on the work-related strain inventory. They received a score of 162.3 ± 20.9 on the Life attitude profile scale and had a positive outlook on life. It was seen that they scored 42.1 ± 7.5 points from the purpose of life subscale, 35.6 ± 5.8 points from the meaning of life subscale, 43.5 ± 7.1 points from the choice/responsibility of life subscale and 40.9 ± 4.9 points from the research on the meaning of life subscale (Table 2).

Looking at the correlation between them, it was seen that a positive correlation between compassion fatigue and work-related stress ($r=0.204$, $p=0.000$). It was determined that the relationship between them was in a positive direction at a weak level. In other words, compassion fatigue of nurses increases when work-related stress does. There was a negative correlation between work-related strain and life attitude profile ($r=-0.169^{**}$, $p=0.002$), and increased tension was found to negatively affect the meaning of life. It was determined that the relationship between them was in a negative direction at a weak level. Moreover, it was determined that there is a negative correlation between compassion fatigue and life attitude profile ($r=-0.542^{**}$, $p=0.000$), i.e., that attitudes toward life were negatively affected as compassion fatigue increased. It was determined that the relationship between them was in a negative direction at a moderate level (Table 3).

Firstly, it was defined that difference in compassion fatigue scale according to the gender was statistically significant ($p < 0.05$) and that women had a higher level of compassion fatigue. Secondly, the difference in compassion fatigue scale in accordance with marital status was statistically significant ($p < 0.05$) and the level of compassion fatigue was higher in singles. Thirdly, the difference in compassion fatigue scale and educational level was not statistically significant ($p > 0.05$); however, nurses who possess post-graduate degree were found

Table 1 The socio-demographic features of nurses who participated in the research

Socio-demographic features	Amount	Percentage
<i>Age</i> 33.6 ± 6.7		
<i>Duration of work in the profession (years)</i> 6.7 ± 3.4		
<i>Gender</i>		
Female	274	81.5
Male	62	18.5
<i>Marital status</i>		
Married	95	28.3
Single	241	71.7
<i>Education Level</i>		
Vocational high school	61	18.2
Associate degree	21	6.3
Bachelor's degree	245	72.9
Master's degree	9	2.7
<i>Duty at the Clinic</i>		
Nurse in charge	19	5.7
Unit nurse	232	69.0
Intensive care nurse	85	25.3
<i>Work Manner</i>		
Only daytime	63	18.8
Mixed day and night	234	81.2
<i>Working Unit</i>		
Medical unit	106	31.5
Surgical unit	90	26.8
Intensive care unit	63	18.8
Emergency unit	45	13.4
Pediatric unit	32	9.5

Table 2 Average scores of nurses on compassion fatigue, work-related strain inventory and life attitude profile

Scale	Possible Min–Max values	Min–Max values taken from the scale	X ± SS
Scale of compassion fatigues	0.0–50.0	1.0–35.0	14.3 ± 7.7
Work-related strain inventory	18.0–72.0	27.0–88.0	40.8 ± 6.1
Life attitude profile	30.0–210.0	56.0–192.0	162.3 ± 20.9
Purpose of life	8.0–56.0	13.0–55.0	42.1 ± 7.5
Meaning of life	7.0–49.0	12.0–47.0	35.6 ± 5.8
Choice/responsibility of life	8.0–56.0	19.0–55.0	43.5 ± 7.1
Research on meaning of life	7.0–49.0	12.0–48.0	40.9 ± 4.9

Table 3 Correlation between compassion fatigue, work-related strain and meaning of life

	Scale of compassion fatigues	Life attitude profile
Work-related strain inventory	$r = .204^{**}$ $p = .000$	$r = -.169^{**}$ $p = .002$
Scale of compassion fatigues		$r = -.542^{**}$ $p = .000$

** $p < 0.05$

to have a higher level of compassion fatigue. Fourthly, the difference in compassion fatigue scale and work manner as well as working unit was statistically significant ($p < 0.05$), nurses who worked mixed day and night and worked in intensive care were found to have a higher level of compassion fatigue. Lastly, there was a positive correlation between age/ duration of work in the profession and compassion fatigue, and that the difference between them was statistically significant ($p < 0.05$), i.e., compassion fatigue is increasing when the age and working time of nurse increases (Table 4).

Linear regression stepwise model was used to determine the actual factors affecting compassion fatigue. Total of life attitude profile, work-related strain inventory (WRSI), age, gender, marital status, education level, working time, duty at the clinic, work manner and working unit were taken as independent variables. Total score of compassion fatigue was taken as a dependent variable. According to the results of the regression analysis, it was found that the following factors had these much effect magnitudes on compassion fatigue: Life attitude profile total at 0.29 impact size; life attitude profile total and work-related strain total at 0.30 impact size; life attitude profile total, work-related strain total and work manner total at 0.31 impact size; life attitude profile total, work-related strain total, work manner and duration of work in the profession total at 0.33 impact size; life attitude profile total, work-related strain total, work manner, duration of work in the profession and working unit total at 0.33 impact size; life attitude profile total, work-related strain, work manner, duration of work in the profession, working unit and gender at 0.35 impact size, ($p < 0.001$). The effect of qualitative data-dependent characteristics on compassion fatigue has been determined and $R = .594$, $R^2 = .353$. It was determined that 35.3% of the total variance in the dependent variable of the compassion fatigue scale was statistically significant ($p < 0.001$) as described by these variables. Total score of the life attitude profile was found to have the greatest impact on compassion fatigue alone. Such variables as age, education level, marital status and duty at the clinic were excluded from the model due to the ineffectiveness on compassion fatigue (Table 5). In the first analysis, it was found that there were significant differences between age and marital status and compassion fatigue, but they were not effective in regression analysis.

Table 4 Average scores comparison of socio-demographic features of nurses and compassion fatigue

	Scale of compassion fatigues (CF) $\bar{X} \pm SD$
<i>Gender</i>	
Female	14.94 \pm 7.72
Male	11.98 \pm 7.50
Test (t)	2.740
<i>p</i>	0.006*
<i>Marital status</i>	
Married	13.04 \pm 7.35
Single	15.99 \pm 8.67
Test (t)	1.346
<i>p</i>	0.023*
<i>Education level</i>	
Vocational high school	12.73 \pm 7.14
Associate degree	16.14 \pm 6.10
Bachelor's degree	15.53 \pm 7.97
Master's degree	17.88 \pm 7.76
Test (KW)	7.038
<i>p</i>	0.071
<i>Duty at the clinic</i>	
Nurse in charge	12.78 \pm 6.10
Unit nurse	12.42 \pm 7.33
Intensive care nurse	13.25 \pm 7.90
Test (KW)	8.462
<i>p</i>	0.744
<i>Work manner</i>	
Only daytime	12.26 \pm 7.62
Mixed day and night	15.89 \pm 7.78
Test (t)	-1.775
<i>p</i>	0.003*
<i>Working unit</i>	
Medical unit	14.83 \pm 8.15
Surgical unit	12.96 \pm 8.15
Intensive care unit	16.50 \pm 8.46
Emergency unit	13.50 \pm 7.50
Pediatric unit	11.44 \pm 6.42
Test (KW)	8.826
<i>p</i>	0.006*
Age	$r = .137$ $p = 0.032^*$
Duration of work in the profession (years)	$r = .359$ $p = 0.000^*$

* $p < 0.05$

Table 5 Examination of the effect of life attitude profile, work-related strain and demographic variables on the compassion fatigue with a regression analysis

Model	Unstandardized coefficients		Standardized coefficients						
	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>T</i>	<i>Sig</i>	<i>F</i>	<i>Sig</i>	<i>R</i>	Adjusted R square
1 (Constant)	47.011	2.789		16.854	.000				
Life attitude profile total	-.201	.017	-.542	-11.788	.000	138.96	.000 ^b	.542 ^a	.292
2 (Constant)	39.866	3.984		10.007	.000				
Life attitude profile total	-.194	.017	-.523	-11.289	.000	73.675	.000 ^c	.554 ^b	.303
Work-related strain total	.146	.059	.115	2.494	.013				
3 (Constant)	36.538	4.200		8.700	.000				
Life attitude profile total	-.194	.017	-.523	-11.368	.000	51.653	.000 ^d	.564 ^c	.312
Work-related strain total	.153	.058	.121	2.621	.009				
Work manner	1.806	.764	.107	2.363	.019				
4 (Constant)	33.423	4.309		7.757	.000				
Life attitude profile total	-.193	.017	-.522	-11.464	.000	41.42	.000 ^e	.578 ^d	.334
Work-related strain total	.137	.058	.108	2.367	.019				
Work manner	2.618	.812	.155	3.225	.001				
Duration of work in the profession	1.005	.363	.134	2.765	.006				
5 (Constant)	34.670	4.306		8.052	.000				
Life attitude profile total	-.190	.017	-.512	-11.291	.000				
Work-related strain total	.123	.058	.097	2.122	.035				
Work manner	2.845	.811	.169	3.508	.001	34.86	.000 ^f	.588 ^e	.336
Duration of work in the profession	.954	.361	.127	2.641	.009				
Working unit	-.579	.235	-.112	-2.462	.014				
6 (Constant)	36.292	4.366		8.313	.000				
Life attitude profile total	-.185	.017	-.501	-10.991	.000				
Work-related strain total	.123	.058	.097	2.141	.033				
Work manner	2.757	.809	.164	3.408	.001	29.94	.000 ^g	.594 ^f	.353
Duration of work in the profession	.953	.360	.127	2.650	.008				
Working unit	-.615	.235	-.119	-2.621	.009				
Gender	-1.765	.897	-.088	-1.968	.050				

Dependent variable: compassion fatigue total

^aPredictors: (constant), life attitude profile total

^bPredictors: (constant), life attitude profile total, work-related strain total

^cPredictors: (constant), life attitude profile total, work-related strain total, work manner

^dPredictors: (constant), life attitude profile total, work-related strain total, work manner, duration of work in the profession

^ePredictors: (constant), life attitude profile total, work-related strain total, work manner, duration of work in the profession, working unit

^fPredictors: (constant), life attitude profile total, work-related strain total, work manner, duration of work in the profession, working unit, gender

Discussion

Our study identified that nurses scored 14.3 ± 7.7 on the compassion fatigue scale and experienced low levels of compassion fatigue, while Kim's research found that nurses experience moderate levels of compassion fatigue (Kim 2013). The results of the research in Turkey showed that the nurses had moderate levels of compassion fatigue (Yeşil et al. 2010; Kara and Çitak 2018; Hür and Ekinçi 2018; Arkan et al. 2020). There was a positive correlation between nurses' work-related stress and compassion fatigue. In the research of Meyer and colleagues, it was found that stress levels increase compassion fatigue, which in turn affects job satisfaction (Meyer et al. 2015). In their study, Meadors and Lamson found that higher frequency of stress in healthcare providers was associated with higher compassion fatigue (Meadors and Lamson 2008). Alongside, nurses' burnout and compassion fatigue levels were associated with anxiety and depression levels as it was found by Hegney and colleagues (Hegney et al. 2014). In the research of Hinderer and colleagues, it was determined that there was a positive relationship between burnout and compassion fatigue (Hinderer et al. 2014). Compassion fatigue is one of the concepts expressed in the concept analysis of prolonged exposure to stress (Jepkins and Warren 2012).

It was determined by this research work that the life attitude profile was the most important factor affecting compassion fatigue and that there was a negative correlation between them. Satisfaction from life is an important factor for maintaining functioning in society (Akdeniz 2014). Recently, with the appearance of positive psychology, the number of studies made on topics such as what will improve a life and how to raise positive features began to increase. Relying on this opinion, if chronic emotional distress acts as a poison in different forms, a number of emotions that are against it can also act as an antidote to this extent. Compassion is one of the concepts that has gained a new place in this field (Akdeniz 2014). In this research, it was determined that those who understood the meaning of life and had a positive outlook on life had less compassion fatigue.

The work manner, duration of work in the profession, the working unit and gender were determined to be the other demographic variables affecting compassion fatigue by regression analysis results ($p < 0.001$). The difference between gender and compassion fatigue was significant ($p < 0.05$) and the women had a higher level of compassion fatigue. Many studies in the literature review have also shown that the difference between gender and compassion fatigue is significant (Yeşil et al. 2010; Mangoulia et al. 2015; Polat and Erdem 2017; Jakimowicz et al. 2018; Seven et al. 2019). It is thought that increased compassion fatigue may have been caused because the vast majority of nurses involved in the study were women and women are more emotional than men.

In this research work, it was identified that nurses working in intensive care experienced more compassion fatigue and that working clinic affected compassion fatigue. Mealer and colleagues found that intensive care unit (ICU) nurses caring for highly complex critical patients had higher levels of traumatic stress than medical and surgical nurses (Mealer et al. 2007). Whereas in another study, a

significant difference was determined between the working clinic and compassion fatigue level (Arkan et al. 2020). The literature review reports that nurses working in intensive care, emergency, oncology and surgical clinics experience greater compassion fatigue (Potter et al. 2010; Sacco et al. 2015; Jenkins and Warren 2012; Denk 2018). Intensive care units are areas where life-threatening, terminal patients are taken care of. It is believed that increased compassion fatigue is observed during the times of long-term work with patients suffering in these units, long-term stress and frequent experience of patient deaths despite the long and intensive care.

It has been determined that working time in the profession affects compassion fatigue, and compassion fatigue increases as the working time increases. The study by Potter et al. (2010) found that nurses with 11 to 20 years of experience had the highest compassion fatigue (Potter et al. 2010). Working manner was identified as another factor affecting the compassion fatigue. Compassion fatigue of the employees working day and night was found to have a higher level. Denk's research stated that nurses who worked continuously at night had a higher level of compassion fatigue (Denk 2018). It found that working shifts or shifts in pine, or mostly at night, increased exhaustion. Çam mentioned that working shifts or shifts in pine, or mostly at night, increased exhaustion (Çam 2001). The study of Erçevik found that nurses working with a shift (mixed day-night) system had higher burnout levels, desensitization and emotional exhaustion than nurses working during the day (Erçevik, 2010). It is thought that insomnia and fatigue caused by night seizures may have increased compassion fatigue.

Study Limitations

This research was carried out with nurses working in a single center. Therefore, the results cannot be generalized to the whole universe, this is the limitation of this research. The low rate of participation in the study due to the workload of nurses working in intensive care units is a limitation in this study. Another limitation of the study is that the cluster-weighted modeling is not used according to clinics in selecting the sample from the universe.

Conclusion and Recommendations

The results of this study showed that nurses had low levels of compassion fatigue, moderate levels of work-related stress and high life attitude profiles. It was determined that with an increased work-related stress compassion fatigue is also increased, and as a consequence, attitude toward life was negatively affected with an increased compassion fatigue. It was defined that gender, duration of work in the profession, work manner and clinical units affect compassion fatigue.

Savvy, empathetic and compassionate nurses are needed to carry out high-quality and humanistic nursing care. In order to protect nurses from compassion fatigue and to ensure that they cope, it is necessary to support them, especially to well

identify and reduce sources of stress in the work environment. It may be suggested to improve the working conditions of nurses in institutions and to support their personal development through in-service training programs, so as to reduce the stress at work environment.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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