Clinical and Experimental Health Sciences

Compassion Fatigue and Satisfaction in Nurses and Midwives During the COVID-19 Pandemic in Turkey

Ferdane Kocoglu[1], Ozlem Asci[2], Meltem Demirgoz Bal[3]

[1] Nigde Omer Halisdemir University, Zubeyde Hanim Faculty of Health Sciences, Department of Public Health Nursing, Nigde, Türkiye.
[2] Nigde Omer Halisdemir University, Zubeyde Hanim Faculty of Health Sciencesh, Division of Midwifery, Nigde, Türkiye.
[3] Marmara University, Faculty of Health Sciences, Division of Midwifery, Istanbul, Türkiye.

Correspondence Author: Ferdane Kocoglu
E-mail: ferdane_51@hotmail.com
Received: 21.09.2021 **Accepted:** 04.02.2022

ABSTRACT

Objective: To examine the levels of compassion fatigue and compassion satisfaction of nurses and midwives during the COVID-19 pandemic and the influencing factors.

Methods: This descriptive and cross-sectional study was carried out with the participation of Turkish midwives and nurses. In the study using the convenience sampling method, data were collected online using an online questionnaire. The questionnaire, created through the Google form, was shared between May and June 2021 in the midwife and nurse groups (Facebook, Instagram, WhatsApp) on electronic platforms. Compassion fatigue (CF) and compassion satisfaction (CS) consisting of the burnout (BO) and secondary traumatic stress (STS) subcomponents were assessed by the Professional Quality of Life scale. The study was completed with 402 nurses and midwives from various units. Descriptive statistics, and the Mann-Whitney U and Kruskal-Wallis tests were used in the analysis of the data.

Results: Among the participants, the rate of dissatisfaction with the clinic worked was 24.6% and the turnover intention rate was 70.6%. During the pandemic period, 75.6% of the participants reported that they were exposed to verbal violence, 7.7% to physical violence, and 74.4% to mobbing behaviors. Low CS was found in 24.9% of the participants, a high level of BO in 27.1%, and high STS in 32.8%.

Conclusion: Violence and mobbing against nurses and midwives should be prevented in order to increase the professional quality of life.

Keywords: Quality of Life, Burnout, Compassion Fatigue, Personal Satisfaction

1. INTRODUCTION

According to the data of the World Health Organization, as of June 2021, more than 170 million people worldwide have tested positive for SARS-CoV-2 and more than 3.7 million deaths have occurred due to Coronavirus disease (COVID-19) (1). Midwives have witness deaths among the patients they cared for during the COVID-19 pandemic and continue to face ambiguity, pain and fear (2). Similarly, nurses working at critical units such as intensive care and emergency care could suffer severe emotional difficulties such as compassion-related and general exhaustion in the future as they witness the long-term suffering of the patients they provide care to (3). In addition, the nurses and midwives encountered various occupational health risks and difficulties when providing care for and protecting the patients during the COVID-19 pandemic (2-4). The COVID-19 pandemic has resulted in nurses losing their colleagues and falling ill after being affected personally (5). It is said that the healthcare staff working on the front lines have suffered physical and mental loss together with the financial, economic and social effects of COVID-19 on the population due to the increased number of health care procedures, irrespective of the country (6). This has resulted in an overstretched health care system working under inadequate conditions (6) and severe pressure on the health care professional, which could cause physical and mental exhaustion (2-4,6). All these factors could have influenced the professional quality of life of the nurses and midwives during the pandemic (4).

Persons helping subjects exposed to traumatic stressors have been reported to have a risk of developing negative signs related to exhaustion, depression and post-traumatic stress (7). The healthcare staff have worked in the front lines during the pandemic and witnessed pain and trauma, and the importance of monitoring the changes in their professional quality of life is therefore emphasized (4). Stamm has explained the professional quality of life (ProQoL) within a contextual framework. Both the positive and negative aspects of the work performed can have an effect on the professional quality of life in this framework. The professional quality of life consists

DOI: 10.33808/clinexphealthsci.998790

of two parts: positive (compassion satisfaction) and negative (compassion fatigue). Compassion satisfaction (CS) defines the satisfaction with the work performed. CS enables the person to contribute more to his/her work and the society he/she lives in. Compassion fatigue (CF), which indicates the physical and emotional attrition of professionals providing health care service, is composed of the burn out (BO) and secondary traumatic stress (STS) components (7). BO is reflected with fatigue, anger, depressive mood, and decreased interest and enthusiasm towards the occupation at home (7,8). STS is the fear and trauma related to work (7). CF is associated with increased desire to quit work (9), emotional exhaustion, loss of sensitivity, and decreased personal success (8). CF is also said to have a negative effect not only on the employee but also on patient safety and the organization's financial profile (8). CS is reported to have a possible protective effect against unfavorable work conditions. CS is also said to have a partial softening affect on the relationship between the job demands and job strain, and high CS is said to decrease the perception of workload (10).

Some studies have reported an increased risk of CF or BO development with the stress created by the traumatic and complex work-related situations in health care workers (4,8). Increased rates of post traumatic stress disorder, anxiety, and BO have been reported among health care workers with the effect of the pandemic (11). It has therefore been emphasized that the indirect trauma caused by the COVID-19 pandemic should not be overlooked (12). Our country has reported more than 5 million confirmed cases and almost 50 thousand deaths since March 2020 but the effect of the pandemic on the professional quality of life of nurses and midwives is not clearly known. It is believed that determining the CS and CF (professional quality of life) of nurses and midwives is important in increasing the quality of care and its application. The aim of the study was to evaluate the CF and CS levels of nurses and midwives during the COVID-19 pandemic together with the influencing factors.

2. METHODS

2.1. Participants

This descriptive and cross-sectional study was carried out with the participation of Turkish nurses and midwives. This study was conducted with an online survey in order to facilitate the participation of nurses and midwives who have a busy lifestyle and to eliminate face-to-face interaction during the COVID-19 pandemic. The inclusion criteria of the study were working at a health care institution in Turkey, having at least six months of experience, and accepting to participate. The convenience sampling method was used. The survey to be completed via Google Forms was distributed to the midwife and nurse groups on electronic platforms (Facebook, Instagram, WhatsApp) during May and June 2021. The purpose of study, the inclusion criteria, and the informed consent information were clearly defined in this questionnaire form. The ProQoL 5 scores' standard deviations in the Turkish sample and the number of nurses and midwives working in Turkey were used to calculate the required sample size (13). Using a confidence interval of 95% and a margin of error of 5%, the minimum sample size was found to be 385. The study was completed with a total of 402 nurses and midwives from various units.

2.2. Data Collection

A questionnaire form and the Professional Quality of Life Scale were used to collect the data.

2.2.1. Questionnaire form

The questionnaire form was created by the study authors based on a review of the literature (4,9,13). The form contains 17 questions on the sociodemographic (age, educational status, occupation, years of experience, marital status etc.) and professional characteristics (the unit of employment and the satisfaction with it, being exposed to violence and mobbing, etc.).

2.2.2. The Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue (ProQoL) Version 5

This scale developed by Stamm is used to evaluate the professional quality of life. The Professional Quality of Life scale consists of the compassion fatigue (CF) and compassion satisfaction (CS) components. Compassion fatigue consists of the burnout (BO) and secondary traumatic stress (STS) sub-components (7). ProQoL is a 30-item self-report questionnaire and is designed to measure CS (the pleasure obtained from being able to do one's work well), BO (exhaustion, frustration, anger, and depression related to work), and STS (fear related to primary or secondary trauma associated with work) in order to help professionals. The five-item Likert-type scale is evaluated by adding the subscale item scores. The subscale scores can also be grouped as low, medium, and high based on the 25th-75th percentile values. A higher CS score means more satisfaction with the ability to be an effective caregiver while working. Higher BO and STS subscale scores indicate a higher risk for BO and STS (7).

The Turkish validity and reliability study of the scale has been conducted by Çınarlı and the Turkish form consists of 21 items (13). The specific items in the Turkish form of the ProQoL are distributed into the following subscales: CS (items 3,6,12,16,18,22,30), BO (items 1,10,19,21,26), and STS (items 5,7,9,11,13,14,23,25,28). Reverse scoring is used for only one item in the BO subscale of the Turkish ProQoL form. The CS score range is 7 to 35, BO score range 5 to 25, and STS score range 9 to 45. The following internal consistency coefficients have been reported for the original Turkish ProQoL 5 form subscales: α = .83 for CS, α = .68 for BO, and α = .78 for STS (13). The values calculated in the current study were α = .87 for CS, α = .83 for BO, and α = .87 for STS.

2.3. Ethical considerations

Ethical approval was obtained from the Ethics Committee of the relevant (Niğde Ömer Halisdemir University) University (decision 2021/10-14 dated May 27) and the Turkish Ministry of Health (decision no T20_52_34 dated May 16) before starting the study.

2.4. Data Analysis

The SPSS (24.0) software was used to evaluate the study data. Data were presented using descriptive statistics such as numbers (n) and percentages (%), mean±standard deviations (X±SS), and medians and 25th-75th percentiles. ProQoL reliability was evaluated with the Cronbach alpha value. Normal distribution and homogeneity of the values was evaluated with the Shapiro–Wilk test and the Levene test, respectively. The Mann-Whitney U and Kruskal-Wallis tests were used to compare the ProQoL subscale scores regarding the subject characteristics and occupational variables.

3. RESULTS

The study was conducted on a total of 176 midwives and 226 nurses, of which the majority (90.8%) were female. The mean age of the subjects was 32.4±8.39 (min-max: 21-59) years. According to the declarations of the subjects, 41.8% had a professional experience of ≤ 5 years, 55.2% were married, and 81.6% had received an education of bachelor's degree and above. The rate of experiencing a COVID-19 and losing a close one due to COVID-19 were 37.3% and 30.3%, respectively. The mean weekly work duration of the subjects was 47.89±10.14 (min-max: 8-80) hours, and 55.2% reported working in rotating day and night shifts. The place of work was emergency care in 21.4% of the subjects, primary care in 20.2%, the COVID-19 clinics in 15.2%, and the maternity ward in 10.4%. The rate of dissatisfaction with the clinic was 24.6% and the turnover intention rate 70.6%. Exposure to verbal violence during the pandemic was reported by 75.6% of the subjects, physical violence by 7.7%, and mobbing by 74.4%. The rate of needing to receive professional psychological support was found to be 6.7% among the subjects.

The ProQoL subscale scores are presented in Table 1. Low CS was detected in 24.9% of participants, and approximately eight out of ten participants had a moderate to high risk of BO and STS (CF).

Table 1. *Participants' ProQoL subscale scores (n=402)*

*ProQoL sub-scale	X̄±SD	Median (Min-Max)	Percentiles (25th-75th)	Low (%)	Medium (%)	High (%)
Compassion satisfaction	26.43±5.65	27(7-35)	22.8-31	24.9	53.2	21.9
Burnout	17.48±4.77	18 (5-25)	14-21	21.6	56.3	22.1
Secondary traumatic stress	26.45±7.61	27(9-45)	21-31	22.4	55.5	22.1

** ProQoL: The Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue (Version 5)*

Table 2. *The distribution of the ProQoL subscale scores by subject characteristics (n= 402)*

Characteristic	n (%)	Compassion satisfaction	Burnout	Secondary traumatic stress
Age				
21-34 years	264(65.7)	26.15±5.76	17.59±4.76	26.23±7.46
35 years ↑	138(34.3)	26.96±5.43	17.26±4.78	26.86±7.91
*P**		0.298	0.476	0.618
Sex				
Female	365(90.8)	17.50±4.72	26.47±5.64	26.74±7.57
Male	37(9.2)	17.24±5.32	25.97±5.88	23.59±7.58
*P**		0.518	0.954	**0.014**
Occupation				
Nurse	226(56.2)	26.04±5.76	17.82±4.87	26.71±7.86
Midwife	176(43.8)	26.93±5.49	17.04±4.62	26.11±7.29
*P**		0.140	0.076	0.709
Professional experience (years)				
≤ 5 years	168(41.8)	26.44±5.64	17.01±4.89	25.58±7.17
6-9 years	83(20.6)	25.80±6.00	18.46±4.74	27.49±8.23
≥ 10 years	151(37.6)	26.76±5.48	17.45±4.59	26.84±7.68
P**		0.542	0.076	0.290
Marital status				
Married	222(55.2)	26.96±5.13	17.35±4.65	26.69±7.58
Unmarried	180(44.8)	25.77±6.19	17.64±4.92	26.15±7.66
*P**		0.133	0.427	0.490
Educational level				
Associate degree and below	74(18.4)	26.68±5.65	18.79±4.75	26.47±8.05
Bachelor and above	328(81.6)	26.37±5.66	17.18±7.73	26.44±7.52
*P**		0.734	**0.005**	0.804

**Mann-Whitney Test **Kruskal-Wallis Test*

Table 2 presents the distribution of the ProQoL subscale scores by subject characteristics. The STS scores of the women were higher. The BO scores were higher in those with an educational level of associate degree or less. This result indicated that the CF risk was increased in women and those with an educational level of associate degree or less ($p < 0.05$). There was no statistically significant relationship between the ProQoL scores and the other variables evaluated ($p > 0.05$).

Table 3 presents the distribution of the ProQoL scores according to some occupational variables. We found dissatisfaction with the clinic of employment, turnover intention, and a history of exposure to mobbing to be associated with decreased CS and increased CF risk ($p < 0.01$). The risk of CF was increased in those who reported being exposed to physical or verbal violence and also in those who had needed psychological support (by a psychologist or psychiatrist) ($p < 0.05$). There was no statistically significant relationship between the ProQoL subscale scores and the other variables evaluated (clinic/unit of employment, work shift) ($p > 0.05$).

Table 3. *The distribution of the ProQoL scores according to some occupational variables (n= 402)*

Characteristic	n (%)	Compassion satisfaction	Burnout	Secondary traumatic stress
The place of work				
COVID-19 clinics/ intensive care	61(15.2)	26.78±5.43	17.57±4.88	26.80±8.97
Maternity ward	42 (10.4)	27.11±5.54	18.35±4.13	27.66±7.02
Primary care	81(20.2)	27.24±5.48	17.74±4.97	25.88±8.20
Emergency care	86(21.4)	25.33±5.64	17.04±4.80	25.90±6.84
Other hospitalization care	132(32.8)	26.26±5.86	17.28±4.78	26.60±7.26
*P***		0.165	0.665	0.633
Work shift				
Day and night shift rotation	222(55.2)	25.94±5.82	17.76±4.62	26.49±7.62
Fixed morning shift	180(44.8)	27.03±5.40	17.13±4.94	26.40±7.63
*P**		0.062	0.182	0.810
Satisfaction with the employed clinic/unit				
Yes	303(75.4)	27.47±5.11	16.59±4.73	26.11±7.64
No	99(24.6)	23.24±6.06	20.19±3.76	27.47±7.49
*P**		**<0.001**	**<0.001**	0.087
Turnover intention				
Yes	284(70.6)	24.55±5.16	18.78±4.30	27.57±7.30
No	118(29.4)	30.95±3.99	14.35±4.39	23.75±7.70
*P**		**<0.001**	**<0.001**	**<0.001**
Exposure to mobbing				
Yes	299(74.4)	25.95±5.77	18.19±4.66	27.24±7.84
No	103(25.6)	27.81±5.09	15.41±4.49	24.15±6.42
*P**		**0.007**	**<0.001**	**<0.001**
Exposure to physical violence				
Yes	31(7.7)	23.90±7.42	19.16±4.95	27.22±7.98
No	371(92.3)	26.64±5.44	17.34±4.73	26.38±7.59
*P**		0.067	**0.037**	0.344
Exposure to verbal violence				
Yes	304(75.6)	26.24±5.84	17.82±4.73	26.99±7.68
No	98(24.4)	27.02±5.03	16.42±4.76	24.78±7.17
*P**		0.418	**0.012**	**0.008**
Professional psychological support need				
Yes	27(6.7)	25.88±5.41	19.74±3.63	29.62±7.43
No	375(93.3)	26.47±5.68	17.32±4.80	26.22±7.58
*P**		0.519	**0.010**	**0.013**

**Mann-Whitney Test ** Kruskal-Wallis Test*

4. DISCUSSION

The CS and CF levels of the nurses and midwives during the pandemic were evaluated together with the effects of some individual and occupational variables in the current study. Our results indicated that the CS level was low in 24.9% of the participants, and approximately 8 out of every 10 subjects had a moderate or high level of CF risk. In addition, the CS and CF levels of the nurses and midwives were similar in this study. Similarly, a study conducted in Spain during the pandemic has found that the CS rate in health care professionals (physicians and nurses) was 15.6%, and approximately 9 out of every 10 subjects experienced a moderate or high level of CF (4). The results of this study and various previous studies (4,14) indicate that most of the nurses and midwives suffered from low CS and moderate to high levels of CF in their professional work during the pandemic.

CF and CS are influenced by many variables such as age, marital status, economic status, gender, and education (4,14,15). The CF level was higher in females in our study, similar to a study from Spain (4). This finding could be explained by the different stress regulation methods and reactions to stress in females and males. It has been reported that the stress factor creates an emotional response but the male and female participants show their response differently over time and this leads to greater changes in the females while males show significantly lower emotional variance (16). Our results show that the increase in the professional education level of nurses and midwives has a positive effect on their ability to develop strategies for coping with stress.

A higher rate of STS, CF, and psychological problems has been reported in health care staff working in departments directly related to COVID-19 (4,17-19). However, working with COVID-19 patients was not a factor that affected the professional quality of life of nurses and midwives in this study. Similarly, another study from Italy, a country severely affected by the pandemic, has shown that the work-life balance is not affected by providing care to a COVID-19 patient. The same study has postulated that this finding could be explained by the perceived support or the relationship within the team. However, the CF level was found to increase and the CS level to decrease in those who were not satisfied with the clinic they worked at in the same study (20). The possible reasons for this findings are the fact that COVID-19 is still not under control in our country, the need to provide care for a patients with a diagnosis/suspicion of COVID-19 at every step due to the structure of our health care system, and the changing of the units the nurses and midwives work in without asking for their permission. Having the nurses and midwives work in departments they do not want to be employed in has a negative effect on their professional quality of life.

Violence against healthcare employees is gradually increasing both in Turkey and globally. Liu et al. have found in their meta-analysis that 62% of healthcare workers had been exposed to at least one type of violence (21). The rate was 75% for verbal violence and 7% for physical violence during the pandemic in the current study. Unfortunately, these high rates of violence were similar to the findings of other studies from our country (22,23). The current study also demonstrated that the risk of CF increased in those exposed to violence. It was therefore not surprising that nurses and midwives who are exposed to such a high rate of violence experienced CF in this study, in accordance with previous reports (24-26). Violence against

healthcare professionals is reported to occur more frequently in underdeveloped countries like ours. Various initiatives by politicians are needed to tackle the problem of violence in healthcare, one of the causes of CF.

Mobbing refers to any kind of systematic unethical behavior with humiliation as its objective. Mobbing is reported to occur frequently among healthcare professionals. Being exposed to mobbing was declared by 75% of the participants in the current study. Previous studies (27-29) in nurses have also reported rates of up to 90% for being exposed to job-related bullying or mobbing. We were able to demonstrate a relationship between mobbing, BO, and STS. Similarly, other studies (9,30,31) have reported a negative effect of mobbing on the professional quality of life.

A previous study has found that being exposed to mobbing decreases CS and increases turnover intention in nurses (9). The turnover intention rate was similarly very high (70%) in our study. This rate has been reported to be 49% in Korea (32), 60% in Japan (33) and 53% in Switzerland (34). It is obvious that the pandemic process has had a negative affect on the nurses and midwives in our country. We also found that turnover intention decreased CS and increased the CF risk in this study. Other studies have reported similar findings (9,32). A study from Korea has reported significantly lower turnover intention levels in nurses with a high CS. The same study has determined STS to increase turnover intention 1.14 times and BO 1.54 time (32). The turnover intention and professional quality of life are therefore very closely associated. Current OECD data show Turkey to be in the fourth from last place for the number of nurses per 1000 persons, with a value of 2.3. Norway takes first place with a value of 18 (35). The high turnover intention rates in our study could be associated with the further increase during the pandemic of the workload that was already heavy beforehand.

The CF risk was found to be higher in the subjects who stated needing psychological support in this study. Other studies have reported a lower CF level (37) and increased CS (17) in nurses with higher perceived social support. It is also stated that the types of social support including the corporate culture and climate in addition to the support provided by peers and the supervisor can potentially protect employees faced with a risk of STS (36). Based on the current study and various previous studies (15,17,37) we believe that a supportive work environment plays an important role in the professional quality of life. Awareness-based activities (body screening, conscious movement, walking and sitting meditation, etc.) are said to be a tool for health care providers to fight the symptoms of compassion exhaustion. These activities are reported to positively influence the participants with lower stress and a more relaxed state, better awareness of the environment and their attitudes and emotions, and more positive thinking with higher awareness of their thoughts (38). Consistent with the literature (10,38), we suggest that managers should focus on activities that support better coping strategies (such as the use of organizational support, mindfulness-based stress reduction program, and provision of hospital counseling services), including improving their employees' social support system.

Limitations

The study is limited by the statements of the subjects. Conducting the study online has increased the access of subjects from various regions of Turkey and also increased the generalizability of the results. However, it may also have resulted in the exclusion of nurses and midwives who have no internet access and/or work in rural areas. The authors have only evaluated the current status of the professional quality of life of the nurses and midwives during the pandemic, and have not evaluated other traumatic events that could also have an influencing role.

5. CONCLUSION

This study has revealed that the professional quality of life of the nurses and midwives in Turkey was at a moderate level and 8 out of every 10 subjects had a tendency to experience moderate to high levels of CF while conducting professional work. There was a high rate of turnover intention and dissatisfaction with the clinic of employment among the nurses and midwives and this was associated with decreased CS and increased CF risk. Nurses and midwives were found to experience violence (both physical and verbal) and mobbing behavior at a level that could negatively affect their professional quality of life during the pandemic. The CF risk was also higher in the nurses and midwives who stated needing professional support.

Implications for Research, Policy and Practice

The first thing to do to increase the professional quality of life of nurses and midwives is to ensure their increased satisfaction (prevention of mandatory assignment to clinics they do not want to work in, decreasing the workload, etc.). It is important to take every precaution to protect health care staff from any kind of verbal, physical or emotional violence and enforce punitive measures. The issue of mobbing and its effects must be recognized by the administrators and internal audit mechanisms should be enforced with preventive measures. Mobbing should be checked for at regular intervals, mobbing-preventing measures put into place, and regular training provided for effective coping. Violence, mobbing and professional quality of life should be monitored regularly and a supportive environment and relevant events should be planned and put into action. We recommend urgently studying the reason for the increased turnover intention in nurses and midwives and decreasing their workload.

Acknowledgements

We thank all the nurses and midwives who participated in our study.

Our study was presented as an oral presentation at the 4th International 5th National Istanbul Midwifery Days Congress held online between 24-26 September 2021.

Declaration of Competing Interest

None

Funding sources

This study did not have any financial or material support.

Conflict of Interest Statement

The authors report no actual or potential conflicts of interest.

Authors' contributions

Ozlem ASCI (ÖA) and Meltem Demirgoz BAL (MDB) designed the study. OA, MDB and Ferdane KOCOGLU (FK) recruited participants and collected data. Data analysis was performed in collaboration with OA, MDB and FK. MDB drafted the manuscript, which OA and FK critically revised. All authors read, contributed to, and approved the final manuscript.

REFERENCES

[1] World Health Organization (WHO). WHO Coronavirus (COVID-19) Dashboard. Available from: https://covid19.who.int/ (Accessed 8 June 2021).

[2] Murphy PA. Midwifery in the time of COVID-19. J Midwifery Womens Health 2020;3(65):299-300.

[3] Alharbi J, Jackson D, Usher K. The potential for COVID-19 to contribute to compassion fatigue in critical care nurses. J Clin Nurs 2020;29(15-16):2762–2764.

[4] Ruiz-Fernández MD, Ramos-Pichardo JD, Ibáñez-Masero O, Cabrera-Troya J, Carmona-Rega MI, Ortega-Galán ÁM. Compassion fatigue, burnout, compassion satisfaction and perceived stress in healthcare professionals during the COVID-19 health crisis in Spain. J Clin Nurs 2020;29(21-22):4321–4330.

[5] Keles E, Bektemur G, Baydili KN. COVID-19 deaths among nurses: a cross-sectional study. Occup Med (Lond) 2021:71(3)131-135.

[6] Lynch MA, Pusey-Murray A. The effects of Covid-19 in the healthcare system. Public Health Research 2021; 11(1): 15-18.

[7] Stamm BH. The Concise ProQoL Manual: The concise manual for the Professional Quality of Life Scale, 2nd Edition. 2010. Available from: https://www.researchgate.net/publication/340033923.

[8] Xu H, Kynoch K, Tuckett A, Eley R. Effectiveness of interventions to reduce emergency department staff occupational stress and/or burnout: a systematic review. JBI Evid Synth 2020;18(6):1156-1188.

[9] Kim Y, Lee E, Lee H. Association between workplace bullying and burnout, professional quality of life, and turnover intention among clinical nurses. PLoS One 2019;14(12):1-13.

[10] Tremblay MA, Messervey D. The Job Demands-Resources model: Further evidence for the buffering effect of personal resources. SA Journal of Industrial Psychology 2011;37(2):10-19.

[11] Rodriguez RM, Montoy JCC, Hoth KF, Talan DA, Harland KK, Eyck PT, Mower W, Krishnadasan A, Santibanez S, Mohr N. Symptoms of anxiety, burnout, and PTSD and the mitigation effect of serologic testing in emergency department personnel during the COVID-19 pandemic. Ann Emerg Med 2021;78(1)35-43.

[12] Li Z, Ge J, Yang M, Feng J, Qiao M, Jiang R, Bi J, Zhan G, Xu X, Wang L, Zhou Q, Zhou C, Pan Y, Liu S, Zhang H, Yang J, Zhu B, Hu Y, Hashimoto K, Jia Y, Wang H, Wang R, Liu C, Yang C. Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control. Brain Behav Immun 2020;88: 916–919.

[13] Çınarlı T. Acil hemşirelerinde merhamet yorgunluğunu etkileyen faktörler. Ondokuz Mayıs Üniversitesi, Sağlık Bilimleri Enstitüsü, Acil Hemşireliği Anabilim Dalı, Yayınlanmamış Doktora Tezi, 2019:49-119.

[14] O'Callaghan EL, Lam L, Cant R, Moss C. Compassion satisfaction and compassion fatigue in Australian emergency nurses: A descriptive cross-sectional study. Int Emerg Nurs, 2020;48:100785.

[15] Mohsin Z, Shahed S, Sohail T. Correlates of professional quality of life in nurses. Annals of King Edward Medical University 2017;23(4):474-478.

[16] Goldfarb EV, Seo D, Sinha R. Sex differences in neural stress responses and correlation with subjective stress and stress regulation. Neurobiol Stress. 2019; 11:100177.

[17] Al Barmawi MA, Subih M, Salameh O, Sayyah NSY, Shoqirat N, Jebbeh RAAEA. Coping strategies as moderating factors to compassion fatigue among critical care nurses. Brain Behav 2019;9(4):e01264.

[18] Arpacioglu S, Gurler M, Cakiroglu S. Secondary traumatization outcomes and associated factors among the health care workers exposed to the COVID-19. Int J Soc Psychiatry 2021;67(1):84–89.

[19] Erkin Ö, Konakçı G, Duran S, Secondary traumatic stress in nurses working with patients with suspected/confirmed COVID-19 in Turkey. Perspect Psychiatr Care 2021; 57(4):1664-1672.

[20] Trumello C, Bramanti SM, Ballarotto G, Candelori C, Cerniglia L, Cimino S, Crudele M, Lombardi L, Pignataro S, Viceconti ML, Babore A. Psychological adjustment of healthcare workers in ıtaly during the COVID-19 pandemic: differences in stress, anxiety, depression, burnout, secondary trauma, and compassion satisfaction between frontline and non-frontline professionals. Int J Environ Res Public Health 2020;17(22):8358.

[21] Liu J, Gan Y, Jiang H, Li L, Dwyer R, Lu K, Yan S, Sampson O, Xu H, Wang C, Zhu Y, Chang Y, Yang Y, Yang T, Chen Y, Song F, Lu Z. Prevalence of workplace violence against healthcare workers: a systematic review and meta-analysis. Occup Environ Med 2019;76(12):927-937.

[22] Çevik M, Gümüştakim RŞ, Bilgili P, Ayhan Başer D, Doğaner A, Saper SHK. Violence in healthcare at a glance: The example of the Turkish physician. Int J Health Plann Manage 2020;35(6):1559-1570.

[23] Ayranci U, Yenilmez Ç, Balci Y, Kaptanoglu C. Identification of violence in Turkish health care settings. J Interpers Violence 2006;21(2):276-296.

[24] Hee Jun K, Youngjin L, Moon Sook Y. The relationship between experience of verbal abuse, compassion fatigue, and work engagement in emergency nurses. J Korean Acad Soc Home Care Nurs 2019;26(3):300-308.

[25] Adeyemo Sunday O, Omoaregba Joyce O, Aroyewun Bushura A, Modebe Vera O, James Bawo O, Uteh Blessing E, Ezemokwe Chinedu O.. Experiences of violence, compassion fatigue and

compassion satisfaction on the professional quality of life of mental health professionals at a tertiary psychiatric facility in Nigeria. Open Science Journal of Clinical Medicine 2015; 3(2): 69-73.

[26] Portoghese I, Galletta M, D'aloja1 E, Finco G, Campagna M. Patient verbal abuse, emotional exhaustion, and affective commitment among healthcare workers: A moderated mediation model of peer support. Le Travail Humain 2018;4(81):307-329.

[27] Difazio RL, Vessey JA, Buchko OA, Chetverikov DV, Sarkisova VA, Serebrennikova NV. The incidence and outcomes of nurse bullying in the Russian Federation. Int Nurs Rev 2019;66(1):94-103.

[28] Bamb S, Guazzini A, Piredda M, Lucchini A, De Marinis MG, Rasero L. Negative interactions among nurses: An explorative study on lateral violence and bullying in nursing work settings. J Nurs Manag 2019:27(4):749-757.

[29] Al-Ghabeesh SH, Qattom H. Workplace bullying and its preventive measures and productivity among emergency department nurses. Isr J Health Policy Res 2019;8(1):44.

[30] Aristidou L, Mpouzika M, Papathanassoglou EDE, Middleton N, Karanikola MNK. Association between workplace bullying occurrence and trauma symptoms among healthcare professionals in Cyprus. Front Psychol 2020;11:575623.

[31] Karanikola M, Giannakopoulou M, Mpouzika M, Kaite CP, Tsiaousis GZ, Papathanassoglou EDE. Dysfunctional psychological responses among Intensive care unit nurses: a systematic review of the literature. Rev Esc Enferm USP 2015;49(5):847-857.

[32] Pang Y, Dan H, Jung H, Bae N, Kim O. Depressive symptoms, professional quality of life and turnover intention in Korean nurses. Int Nurs Rev 2020; 67(3):387-394.

[33] Eltaybania S, Noguchi-Watanabea M, Igarashia A, Saitoa Y, Yamamoto-Mitania N. Factors related to intention to stay in the current workplace among longterm care nurses: A nationwide survey. Int J Nurs Stud 2018;80:118-127.

[34] Hämmig O. Explaining burnout and the intention to leave the profession among Health professionals – a cross-sectional study in a hospital setting in Switzerland. BMC Health Serv Res 2018;18(1):785.

[35] OECD. Data. Nurses. 2021. Available from: https://data.oecd.org/healthres/nurses.htm#indicator-chart. (Accessed 8 June 2021)

[36] Caringi JC, Hardiman ER, Weldon P, Fletcher S, Devlin M, Stanick C. Secondary traumatic stress and licensed clinical social workers. Traumatology 2017;23(2):186–195.

[37] Pergol – Metko P, Czyżewski L. Compassion fatigue and perceived of social support among polish nurses. BMC Nurs 2020.

[38] Best NI, Durham CF, Woods-Giscombe C, Waldrop J. Combating compassion fatigue with mindfulness practice in military nurse practitioners. JNP 2020;16(5):57-60.

How to cite this article: Kocoglu F, Asci O, Demirgoz Bal M. Compassion Fatigue and Satisfaction in Nurses and Midwives During the COVID-19 Pandemic in Turkey. Clin Exp Health Sci 2022; 12: 521-527. DOI: 10.33808/clinexphealthsci.998790