ORIGINAL ARTICLE

Perspectives in PSYCHIATRIC CARE WILEY

The Compassion Fatigue-Short Scale for healthcare professionals: A Turkish study of validity and reliability

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Abstract

Purpose: The purpose of this study was conducted to adapt the Compassion Fatigue-Short Scale (CF-Short Scale) for Turkish healthcare professionals and determine its validity and reliability.

Design and Methods: This methodological study was conducted with 132 healthcare professionals. The CF-Short Scale, the Burnout Measure-Short Version, and the Secondary Traumatic Stress Scale were used in the study.

Results: The CF-Short Scale has a two-factor structure: job burnout and secondary traumatic stress. It was determined that the consistency of the structural equation model designed for the scale was good and acceptable. Cronbach's alpha internal consistency coefficient was calculated as 0.91 for the whole scale.

Practice Implications: The Turkish version of the CF-Short Scale is a valid and reliable measurement tool for determining the compassion fatigue of healthcare professionals.

KEYWORDS
burnout, compassion fatigue, reability, secondary traumatic stress, validity

1 | INTRODUCTION

Healthcare professionals are individuals who generally enter into the lives of their patients and their families at critical times and share their pain, aches, worries, desperation, anxieties, and traumatic experiences. The factors such as insufficiency in therapeutic interaction, internalization of the patients' and their families' conditions, stress due to inability to help, exposure to traumatic situation/situations, and inability to set aside time for oneself in daily life, cause healthcare professionals to experience some burdens related to provide treatment and care.[1] Figley[2] generally referred to this burden as compassion fatigue and described the concept in detail as a secondary traumatic stress response arising from helping individuals suffering from traumatic events or the desire to help.[2,3]

In the literature, Joinson[4] first mentioned the concept of compassion fatigue in healthcare professionals in a study investigating job burnout in nurses working in emergency departments,[4] and then Figley[2] made this concept become more widespread.[2]

Compassion fatigue may occur as a job hazard in healthcare professionals working with patients with serious problems and their families.[5] The studies conducted with healthcare professionals on this subject vary widely. They are generally conducted with the staff of the departments of psychiatry,[6,7] oncology,[8,9] intensive care,[10] hospice care,[11] organ transplantation,[12] pediatrics,[13] and emergency room.[14]

In the healthcare sector, compassion fatigue is very important for both staff and patients. Fatigue affects the biopsychosocial integrity of employees in time and decreases the quality of treatment and care. It also leads to problems such as job dissatisfaction, inappropriate decision-making, decreased working capacity, loss of empathy, inability to be objective, intolerance to patients, ergophobia, making medical errors, and leaving the profession.[15,16] Therefore, it is very important not to ignore compassion fatigue in healthcare professionals.

In the literature, various measurement tools are used to determine compassion fatigue. The Compassion Fatigue Scale, the Secondary Traumatic Stress Scale (STSS), and the Professional Quality of Life Scale are commonly used measurement tools.[17]

Adams et al.[18] examined the validity and reliability of the Compassion Fatigue- Short Scale (CF-Short Scale), which they revised and reduced to 13 items, and concluded that the scale is a valid and reliable tool that can be used to evaluate compassion fatigue.[18] Similarly, Sun et al.[19] investigated the validity and reliability of the Chinese version of the scale and reported that the results showed excellent construct validity and good internal consistency.[19]

In our country, there are very few measurement tools used to evaluate compassion fatigue. For this reason, it is very important to have tools that measure compassion fatigue and to adapt it to our culture for both the service provider and the service receiver. In this study, it was aimed to examine the validity and reliability of the CF-Short Scale, which is thought to be a scale with a small number of questions and easily understandable, by translating it into Turkish in a sample group consisting of nurses, physicians, psychologists, and social workers.

2 | METHODS

2.1 | Type of the study

This methodological study was conducted to adapt the CF-Short Scale for Turkish healthcare professionals and determine its validity and reliability.

2.2 | Sample of the study

The study was conducted between May and December 2019 with healthcare professionals working in two hospitals in Istanbul. The CF-Short Scale is a 13-item scale and a stratified sampling method of 10 times the number of items was used for this scale. The profession (nurses, physicians, psychologists, and social workers) and the clinics (neurology, infection, surgery, psychiatry, and emergency services) of healthcare workers who have completed a year in the job were grouped as a percentage (divided into stratification) and randomly included in the study. For this reason, it was predicted that 130 healthcare workers (excluding the pilot application) could be included in the sample for the scale consisting of 13 items. In this context, data collection forms were distributed to 151 healthcare workers who completed a year in the profession and volunteered to participate in the study, and they were not included in the study because 16 out of the 148 forms that were returned were missing data. Thus, the study was completed with 132 healthcare workers.

2.3 | Data collection tools

2.3.1 | Personal Information Form

The form was developed by the researchers and consists of seven questions on the sociodemographic, professional, and working life characteristics of healthcare professionals.

2.3.2 | CF-Short Scale

The scale was developed by Figley[2] and used and revised by different researchers at different times.[2,3,20] The scale was finally revised, shortened by Adams et al.,[18] and its validity and reliability study was also performed by them.[18] The scale consists of 13 items in total, each item can be scored from 1 to 10 points (1: rarely/never, 10: very often). It is a Likert-type scale and has two subdimensions as job burnout and secondary traumatic stress. According to Adams et al.,[18] Cronbach's alpha coefficients of the subdimensions range from 0.80 to 0.90 and have good internal reliability. The obtainable scores on the scale range between 13 and 130 and the level of compassion fatigue increases as the score increases.

2.3.3 | Burnout Measure-Short Version (BM-Short Version)

Pines[21] developed a 10-item short-form to create an easy-to-use measurement tool that requires less time during the application and analysis phase to meet the needs of researchers and practitioners as a substitute for Burnout Measure (BM) consisting of 21 items.[21] The 10 items selected for the BM-Short Version were determined in line with the contextual basis of the 21-item BM, which assesses the levels of physical, emotional, and mental fatigue of persons. In other words, the items were selected not based on a statistical analysis of the 21-item version of the BM, but on the basis of theoretical analysis. The items of the BM-Short Version are also evaluated in seven levels as in the BM. Çapri[22] conducted its Turkish validity and reliability study. The scores of 2.4 and below on the scale indicate a very low burnout, the scores range between 2.5 and 3.4 show the danger signals for burnout, the scores range between 3.5 and 4.4 indicate a burnout state, the scores between 4.5 and 5.4 show very serious burnout and the scores of 5.5 and above are interpreted as the need for receiving professional help as soon as possible. In the validity and reliability study of the Turkish form of the scale, the internal consistency coefficient was found to be 0.91 for the total scale, and it was concluded that the Turkish form of the scale has high validity and reliability values that can measure job burnout.[22]

2.3.4 | Secondary Traumatic Stress Scale (STSS)

The STSS is a 5-point Likert-type assessment tool developed by Bride et al.[23] and its Turkish validity and reliability study was conducted by Yıldırım et al.[23,24] The scale has three subdimensions as Intrusion, Avoidance, and Arousal. The obtainable scores on the scale range between 17 and 85 and high scores indicate a high level of exposure. In the validity and reliability study of the Turkish form of the scale, the internal consistency coefficient was found as 0.91 for the total scale, 0.84 for the "emotional violation," 0.78 for the "avoidance," and 0.82 for the "arousal" subdimension, and it has been concluded that the scale was a valid and reliable measurement tool.[24]

2.4 | Data analysis

The Statistical Package for Social Science (SPSS) 22.0 package program was used to evaluate the data. The confidence interval was accepted as 95% while $p < 0.05$ was considered as statistically significant. The suitability of the data to normal distribution was examined and Skewness/Kurtosis values showed that the data were suitable for normal distribution. Number, percentage, mean, and standard deviation were used to evaluate the personal characteristics of healthcare professionals. The Content Validity Index (CVI) of the scale was evaluated with the Davis technique, structure validity with Kaiser–Meyer–Olkin (KMO) sampling adequacy test and with Bartlett's sphericity test, explanatory factor analysis with Varimax method, and confirmatory factor analysis with Structural Equation Model (SEM). As the fit indexes of the mentioned model, root mean square error of approximation (RMSEA), incremental fit index (IFI), Tucker–Lewis index (TLI), goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), and Chi-square/degrees of freedom (X^2/DF) were used. The criterion dependent validity was evaluated with Pearson's correlation test, and scale and subscale internal consistency were evaluated with Cronbach's alpha reliability test.

2.5 | Ethical statement

The written permissions were obtained from Adams, Capri, Yıldırım for CF-Short Scale, BM-Short Version, and STSS, respectively. For conducting the study, the ethics committee approval was obtained from the Hamidiye Noninvasive Ethics Committee on March 29, 2019, permission was also obtained from Istanbul Local Health Authority for the hospitals where the study was carried out on May 8, 2019, and written consent was obtained from the participant healthcare professionals.

3 | RESULTS

The mean age of the healthcare professionals participating in the study was 30.65 ± 5.37, they were in the profession and the institution for 6.95 ± 5.56 years and 4.28 ± 3.41 years, respectively. A total of 68.5% of the healthcare professionals were women, 46.2% of them were married, 45.4% of them were nurses, 41.5% of them were medical doctors, 9.2% of them were psychologists, 3.8% of them were social workers, and 96.1% of them had an undergraduate or above degree (Table 1).

3.1 | Findings related to the language and content validity of the scale

To develop the Turkish version of the CF-Short Scale, it was first translated from English to Turkish by two independent experts who know English well. After its translation to Turkish, the Turkish version was back-translated to English by two persons with foreign nationality

TABLE 1 Personal information of healthcare staff ($n = 132$)

Personal information	n	%
Gender		
Female	91	68.9
Male	41	31.1
Marital status		
Married	62	47.0
Not married	70	53.0
Profession		
Nurse	59	44.7
Doctor	54	40.9
Psychologist	12	9.1
Social worker	7	5.3
Age (years), mean ± SD	30.65 ± 5.37	
Professional experience (years), mean ± SD	6.95 ± 5.56	
Institution experience (years), mean ± SD	4.28 ± 3.41	

who were living in Turkey who know English and Turkish well. The original version of the scale was compared with the back-translated version and examined in terms of language suitability. The Turkish version of the scale was formed after the necessary corrections were made. The scale was presented to the opinions of nine persons who are experts in their fields and who know the methods of preparing scale questions. The requested changes were made in line with expert opinions and recommendations. The CVI was evaluated using the Davis technique. In this study, the CVI was found above 0.89 for all items and this value was found to be sufficient for 13 items to be included in the scale. Finally, the scale which was rearranged according to the expert opinions was applied to 10 healthcare professionals (4 nurses, 2 doctors, 3 psychologists, and 1 social worker) as a pilot study. The healthcare professionals were asked to assess the clarity, fitness, and readability of the items. The CF-Short Scale was completed with a few minor changes after the pilot study. The data of the pilot study were excluded from the study and were not evaluated.

3.2 | Findings on the construct validity of the scale

The sample adequacy of the CF-Short Scale was tested with the KMO test, and thus the KMO value was found to be 0.897. In Bartlett's sphericity test, there was an adequate correlation between the items to make explanatory factor analysis ($X^2 = 941.306$, $p < 0.001$; Table 2).

According to the factor analysis of the CF-Short Scale, the factor loads of all the items in the scale were found to be above 0.61. When using the Varimax rotation method, the items were collected under two factors. 1, 2, 4, 6, 7, 9, 11, and 13 items are in the subdimension of "job burnout," and thus a total of eight items are included in this subdimension, there is no reverse-scored item. 3, 5, 8, 10, and 12 items are in the subdimension of "secondary traumatic

TABLE 2 Findings construct validity of CF-Short Scale

CF-Short Scale		Job burnout	Secondary traumatic stress
Item 1	I have felt trapped by my work	0.79	
Item 2	I have thoughts that I am not succeeding in achieving my life goals	0.85	
Item 3	I have had flashbacks connected to my clients		0.76
Item 4	I feel that I am a "failure" in my work	0.78	
Item 5	I experience troubling dreams similar to those of a client of mine		0.63
Item 6	I have felt a sense of hopelessness associated with working with clients/patients	0.67	0.44
Item 7	I have frequently felt weak, tired, or rundown as a result of my work as a caregiver	0.74	0.30
Item 8	I have experienced intrusive thoughts after working with an especially difficult client/patient		0.73
Item 9	I have felt depressed as a result of my work	0.75	0.37
Item 10	I have suddenly and involuntarily recalled a frightening experience while working with a client/patient	0.47	0.61
Item 11	I feel I am unsuccessful at separating work from my personal life	0.72	
Item 12	I am losing sleep over a client's traumatic experiences	0.42	0.65
Item 13	I have a sense of worthlessness, disillusionment, or resentment associated with my work	0.65	0.30
Variance explained		50.58%	10.58%
Total variance		61.16%	
Rotation method: Varimax with Kaiser normalization			
KMO: 0.897; X^2: 941.306; **Bartlett's sphericity test:** $p < 0.001$			
Job burnout: $\alpha = 0.91$; **Secondary traumatic stress:** $\alpha = 0.78$; **Scale total:** $\alpha = 0.91$			

stress" and there is no inverse scored item as in the subdimension of "job burnout." Thirteen items are included in these two dimensions in the original scale with a structure as in Table 2.

After the exploratory factor analysis, it was found that the factorization consisted of two subdimensions and the SEM of experimental data was created. Confirmatory factor analysis was used to determine whether SEM is a good and sufficient model or not. The diagram of the model emerging in the confirmatory factor analysis given with the standardized values of the scale is given in Figure 1.

In Table 3, the goodness of fit indices of the SEM regarding multifactor confirmatory factor analysis. Accordingly, it was accepted that the fit of the model was at a good and acceptable level.

3.3 | Findings related to the criterion dependent validity of the scale

To test the criterion dependent validity of the CF-Short Scale, BM- Short Version and STSS, which can be shown as equivalent to the subdimensions of the scale, were used. The direction and magnitude of the linear relationship between the total scores were examined by taking into consideration Pearson's correlation coefficients. In this direction, a positive correlation at a good level was found between the subdimension of job burnout of the CF-Short Scale and the BM-Short Version ($r = 0.77$, $p < 0.001$), and between the subdimension of

secondary traumatic stress of the CF-Short Scale and the STSS ($r = 0.67$, $p < 0.001$).

3.4 | Findings on the reliability of the scale

The reliability coefficient was 0.91 for the subdimension of job burnout and 0.78 for the subdimension of secondary traumatic stress of the CF-Short Scale. The reliability coefficient for the total scale was calculated as 0.91, and thus it was determined to have very good reliability (Table 2).

4 | DISCUSSION

4.1 | Discussion on the language and content validity of the scale

This study was carried out to determine the validity and reliability of the Turkish form of the CF-Short Scale, which was revised and developed by Adams et al.[18] for healthcare workers. To evaluate the suitability of the adapted items of the scale, the Davis technique (1992) was used. In the Davis technique, grading is done according to the choices of (a) very suitable, (b) suitable but minor changes are required, (c) the item needs to be changed appropriately, and (d)
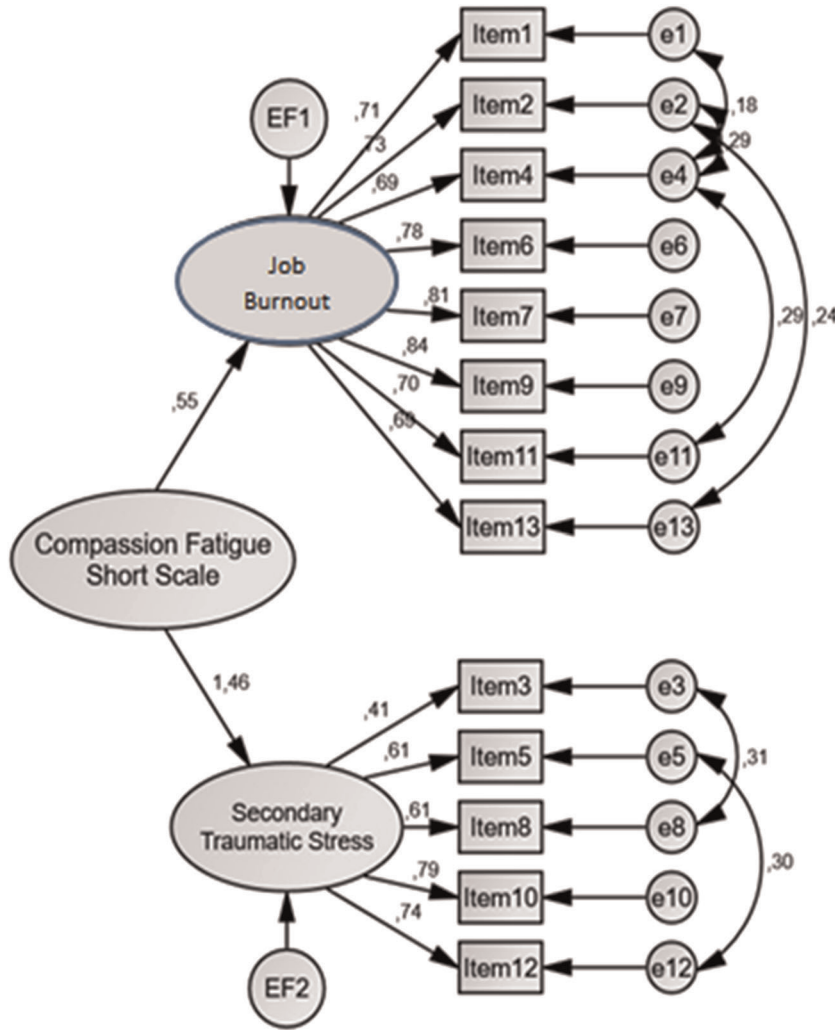
FIGURE 1 Structural equation model about second-level multi-factor confirmatory factor analysis of CF-Short Scale. CF-Short Scale, Compassion Fatigue-Short Scale

unsuitable. In this technique, the number of experts who check the choices of (a) and (b) is divided by the total number of experts, and thus the CVI for the item is obtained. This value is not compared with a statistical criterion and the value of 0.80 is accepted as a

TABLE 3 Structural equation fit indexes for the second-level multifactor confirmatory factor analysis of CF-Short Scale

Fit indexes	Acceptable value	Scale value
RMSEA	≤0.08	0.08
IFI	>0.90	0.95
TLI	>0.90	0.93
GFI	>0.85	0.89
CFI	>0.95	0.95
NFI	>0.90	0.89
X^2/DF (p)	<5	1.81 (<0.001)

Abbreviations: X^2/DF, chi-square/degrees of freedom; CFI, comparative fit index; GFI, goodness of fit index; IFI, incremental fit index; NFI, normed fit index; RMSEA, root mean square error of approximation; TLI, Tucker–Lewis index.

benchmark.[25] In the study, the CVI of the CF-Short Scale was found to be sufficient for 13 items on the scale.

Before data collection, it was necessary to conduct a pilot study using the adapted scale with a small group with characteristics close to the sample of the study. The comprehensibility and suitability of the items of the scale and the duration of the application were evaluated by conducting a pilot study. In the literature, it is stated that a pilot study with 10–15 persons is adequate.[26] The Turkish form was created after obtaining expert opinions and providing content validity and conducting a pilot study with 10 healthcare professionals. A few minor changes were made to the form and the data of the pilot study were excluded.

4.2 | Discussion on the construct validity of the scale

Exploratory factor analysis was performed to ensure the construct validity of the items of the CF-Short Scale. The suitability of a sample for factor analysis can be determined with many different methodologies. The KMO is one of these methodologies and measures

sample adequacy.[25,26] KMO values range between 0 and 1, a KMO value near 1 indicates the adequacy of the sample for factor analysis. In this study, the KMO value was calculated as 0.897 and therefore the sample adequacy was quite good. It is also necessary to measure the significance of the correlation matrix of the items in the factor analysis. The value of Bartlett's sphericity test, which measures whether the correlation matrix is a unit matrix or not,[27] was calculated as $p < 0.001$. In line with these findings, the factor analysis of the CF-Short Scale was feasible.

In the Turkish adaptation study, exploratory factor analysis was performed to check the compatibility with the original scale, and the Varimax method was preferred to interpret factor loads more meaningfully. As a result of the factor analysis of the CF-Short Scale, the items were grouped under two factors as in the original scale, and this two-factor structure with 13 items explains 61.16% of the total variance. Adams et al.[18] emphasized that 13 items were explained in two subdimensions in their validation study of the scale.[18] Similarly, in the study conducted by Sun et al.,[19] the two-factor structure was preserved and it was found that this structure explained 52.0% of the total variance.[19] Dinç and Ekinci[28] similarly obtained a two-factor structure in their study by using the same scale in nurses and determined that this structure explained 51.47% of the total variance. In multifactor patterns, it is sufficient to explain 50% of the variance.[25] In this context, the contribution of a defining factor to the total variance seems sufficient.

The CF-Short Scale, which consists of 13 items, was considered as job burnout (8 items) and secondary traumatic stress (5 items). In this context, whether the SEM of the experimental data is a good and sufficient model was tested by confirmatory factor analysis. One of the components of a good model is the concordance between the sample variance–covariance matrix and the estimated variance–covariance matrix. A good fit test is made with X^2 analysis. However, coherence estimation cannot always be made as clearly as measuring the X^2. In relatively large samples, small differences between the sample and estimated variance–covariance matrices are generally significant. Due to these problems, recommendations were made regarding the size of many models. In the literature, new indexes are added to fit indices.[26] It can be said that the model has a good and acceptable fit level when the findings on the most reported fit indices in the literature such as RMSEA, IFI, TLI GFI, CFI, and X^2/SD.

4.3 | Discussion on the criterion dependent validity of the scale

In the research, the parallel form method was used to provide the criterion validity of the CF-Short Scale. In the parallel form method, two equivalent forms are created by sampling different items that can represent the same behavior patterns. For the two forms to be equivalent, the content, structure, degree of difficulty, instruction, and interpretation of the forms must be similar. The correlation between the forms is calculated and interpreted as a reliability coefficient.[27] The 10-item BM-Short Version developed by Pines[21]

and adapted to Turkish by Capri[22] and the subdimensions of the CF-Short Scale prepared in this direction, and the 17-item STSS Scale developed by Bride et al.[23] and adapted to Turkish by Yıldırım et al.[24] were used as parallel scales[22,24] and a significant positive correlation was observed between the scales.

4.4 | Discussion on the reliability of the scale

Cronbach's alpha internal consistency coefficients which were calculated for both of the subdimensions and the whole CF-Short Scale are quite high. These values indicate that the scale has very good reliability. For the original scale, Adams et al.[18] determined the Cronbach's alpha coefficient was 0.90 for the subdimension of job burnout, 0.80 for the subdimension of secondary traumatic stress, and 0.90 for the whole scale.[18] Similarly, in the study conducted by Sun et al.,[19] it was determined that Cronbach's alpha coefficients for the first and second groups of healthcare workers were 0.85 and 0.87 for the job burnout subdimension, 0.79 and 0.83 for the secondary traumatic stress subdimension, and 0.87 and 0.90 for the total scale. In the study with nurses conducted by Dinç and Ekinci[28] using the same scale, it was found that Cronbach's alpha coefficient was 0.85 for the subdimension of job burnout, 0.75 for the subdimension of secondary traumatic stress, and 0.88 for the whole scale. All of these results confirmed that the CF-Short Scale is a reliable tool for determining the compassion fatigue of healthcare professionals.

5 | CONCLUSION

In this study, we found that all of the items of the CF-Short Scale contribute to the total score. Although the number of questions is low, Cronbach's alpha value determined for the scale is good, the factor analysis is similar to the original scale. Since the Turkish translation of the scale has these features, it is a valid and reliable measurement tool in determining the compassion fatigue of healthcare professionals. Accordingly, we recommended using the CF-Short Scale in studies with healthcare professionals and studies in other disciplines.

6 | IMPLICATIONS FOR NURSING PRACTICE

In the world, various measurement tools are used to determine compassion fatigue in healthcare professionals. There are a limited number of tools for determining compassion fatigue in Turkey. A Turkish CF-Short Scale is a tool adapted in the field-specific to this deficiency. The scale is thought to be easy to use, as the number of items is low and its assessment is simple. This study reveals the validity and reliability of the Turkish version of the CF-Short Scale for the assessment of compassion fatigue in healthcare professionals

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REFERENCES

1. Yılmaz G, Üstün B. Professional quality of life in nurses: compassion satisfaction and compassion fatigue. *J Psychiatr Nurs*. 2018;9(3):205-211. https://doi.org/10.14744/phd.2018.86648
2. Figley CR. *Compassion Fatigue: Coping with Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized*. Brunner/Mazel Publishers: New York; 1995.
3. Figley CR. Compassion fatigue: psychotherapists' chronic lack of self care. *J Clin Psychol*. 2002;58(11):1433-1441. https://doi.org/10.1002/jclp.10090
4. Joinson C. Coping with compassion fatigue. *Nursing*. 1992;22:116-120.
5. Pehlivan T, Güner P. Compassion fatigue: the known and unknown. *J Psychiatr Nurs*. 2018;9(2):129-134. https://doi.org/10.14744/phd.2017.25582
6. Franza F, Del Buono G, Pellegrino F. Psychiatric caregiver stress: clinical implications of compassion fatigue. *Psychiatr Danub*. 2015;27(1):321-327.
7. Jacobowitz W, Moran C, Best C, Mensah L. Post-traumatic stress, trauma-informed care, and compassion fatigue in psychiatric hospital staff: a correlational study. *Issues Ment Health Nurs*. 2015;36(11):890-899. https://doi.org/10.3109/01612840.2015.1055020
8. Duarte J, Pinto-Gouveia J. Effectiveness of a mindfulness-based intervention on oncology nurses' burnout and compassion fatigue symptoms: a non-randomized study. *Int J Nurs Stud*. 2016;64:98-107. https://doi.org/10.1016/j.ijnurstu.2016.10.002
9. Yu H, Jiang A, Shen J. Prevalence and predictors of compassion fatigue, burnout and compassion satisfaction among oncology nurses: a cross-sectional survey. *Int J Nurs Stud*. 2016;57:28-38. https://doi.org/10.1016/j.ijnurstu.2016.01.012
10. Sacco TL, Ciurzynski SM, Harvey ME, Ingersoll GL. Compassion satisfaction and compassion fatigue among critical care nurses. *Crit Care Nurse*. 2015;35(4):32-42. https://doi.org/10.4037/ccn2015392
11. Montross-Thomas LP, Scheiber C, Meier EA, Irwin SA. Personally meaningful rituals: a way to increase compassion and decrease burnout among hospice staff and volunteers. *J Palliat Med*. 2016;19(10):1043-1050. https://doi.org/10.1089/jpm.2015.0294
12. Kim S. Compassion fatigue in liver and kidney transplant nurse coordinators: a descriptive research study. *Prog Transp*. 2013;23(4):329-335. https://doi.org/10.7182/pit2013811
13. Meyer RM, Li A, Klaristenfeld J, Gold JI. Pediatric novice nurses: examining compassion fatigue as a mediator between stress exposure and compassion satisfaction, burnout, and job satisfaction. *J Pediatr Nurs*. 2015;30(1):174-183. https://doi.org/10.1016/j.pedn.2013.12.008
14. Hunsaker S, Chen HC, Maughan D, Heaston S. Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *J Nurs Sch*. 2015;47:186-194. https://doi.org/10.1111/jnu.12122
15. Hiçdurmaz D, İnci FA. Compassion fatigue: description, causes and prevention. *Curr Approaches Psychiatr*. 2015;7(3):295-303. https://doi.org/10.5455/cap.20141128113430
16. Uslu E, Buldukoğlu K. Compassion fatigue in psychiatric nursing: a systematic review. *Curr Approaches Psychiatr*. 2017;9(4):421-430. https://doi.org/10.18863/pgy.310831
17. Stamm BH. *The Pro-QOL manual: the Professional Quality of Life Scale: Compassion Satisfaction, Burnout & Compassion Fatigue/Secondary Trauma Scales*. Sidran Press; 2005. http://www.compassionfatigue.org/pages/ProQOLManualOct05.pdf. Accessed March 15, 2020.
18. Adams RE, Boscarino JA, Figley CR. Compassion fatigue and psychological distress among social workers: a validation study. *Am J Orthopsychiatry*. 2006;76(1):103-108. https://doi.org/10.1037/0002-9432.76.1.103
19. Sun B, Hu M, Yu S, Jiang Y, Lou B. Validation of the compassion fatigue short scale among chinese medical workers and firefighters: a cross-sectional study. *BMJ Open*. 2016;6:1-7. https://doi.org/10.1136/bmjopen-2016-011279
20. Boscarino JA, Figley CR, Adams RE. Compassion fatigue following the september 11 terrorist attacks: a study of secondary trauma among new york city social workers. *Int J Emerg Ment Heal*. 2004;6(2):57-66.
21. Pines AM. The burnout measure short version (BMS). *Int J Stress Manag*. 2005;12:78-88. https://doi.org/10.1037/1072-5245.12.1.78
22. Çapri B. The Turkish adaptation of the Burnout Measure-Short Form and the Co-Burnout Inventory-Short Form and the relationship between Professional and Co-Burnout from the Psychoanalytic-Existential Perspective. *Educ Sci: Theor Pract*. 2013;13(3):1394-1418. https://doi.org/10.12738/estp.2013.3.1576
23. Bride BE, Robinson MM, Yegidis B, Figley CR. Development and validation of the secondary traumatic stress scale. *Res Soc Work Pract*. 2004;14(1):27-35. https://doi.org/10.1177/1049731503254106
24. Yıldırım G, Kidak LB, Yurdabakan İ. Secondary traumatic stress scale: an adaptation study. *Anatol J Psychiatr*. 2018;19(1):45-51. https://doi.org/10.5455/apd.247563
25. Tavşancıl E. *Measuring Attitudes and Data Analysis with SPSS*. 5th ed. Ankara: Nobel Akademik Publishing; 2014:120-230.
26. Esin N. Örnekleme. In: Erdoğan S, Nahcivan N, Esin N, eds. *Research Process, Practice and Critical in Nursing*. İstanbul: Nobel Medical Bookstore; 2014:167-192.
27. Alpar R. *Together with the Analysis Steps in Applied Statistics and Validity-Reliability-SPSS with Examples from Sports, Health and Education Sciences*. 4th ed. Ankara: Detay Publishing; 2016:502-621.
28. Dinç S, Ekinci M. Turkish adaptation, validity and reliability of Compassion Fatigue Short Scale. *Curr Approaches Psychiatr*. 2019;11(Suppl 1):S192-S202. https://doi.org/10.18863/pgy.590616