

Factorial Structure and Construct Validity of an Iranian Version of the Fear of Compassion Scale: A Study in Nurses

Abstract

Backgrounds: Fear of compassion is one of the psychological variables in the nursing profession that can be a barrier to providing appropriate services to patients. This research was done in order to assess psychometric properties, construct validity, reliability of fear of compassion scales and to introduce suitable measures for experts and researchers in the healthcare-related fields. **Materials and Methods:** In this study, 216 nurses (117 males and 99 females) were chosen with a multistage cluster sampling method between June 2016 and Feb 2017. Lisrel-8 and SPSS-18 were used for data analysis. The construct validity of the fear of compassion scales was assessed using confirmatory factor analysis. To assess the divergent and convergent validity of the fear of compassion scales, the compassion for others, depression, anxiety, stress, burnout, and cognitive emotion regulation questionnaires were used. **Results:** The results of confirmatory factor analysis showed that the single-factor model of fear of compassion scales (for others, from others, and for self) is a better fit to the data. Furthermore, these three scales had a positive and significant correlation with anxiety, depression, stress, burnout, and unhealthy cognitive-emotion regulation strategies, and negative and significant correlation with compassion for others and healthy cognitive-emotion regulation strategies. In addition, the Cronbach's alpha coefficient for fear of expressing compassion to others was 0.85, and 0.95 and 0.96 for fear of responding to compassion from others and fear of self-compassion, respectively. **Conclusions:** This study provides additional evidence for the psychometric properties of fear of compassion scales in Iranian nurses.

Keywords: Factor analysis, statistical, Iran, nurses

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Introduction

In recent years, compassion has converted to an important variable in health and especially mental health-related fields.^[1] In psychology, Gilbert (2009) defines compassion as “basic kindness, with a deep awareness of the suffering of oneself and of other living things, coupled with the wish and effort to relieve it.”^[2] According to Gilbert, compassion sense can be expressed in three ways: 1) expressing compassion for others, 2) receiving compassion from others, and 3) self-compassion.^[3] Gilbert *et al.*'s studies showed that some people have resistance to these three types of compassion.^[3] Motivation to take care of others can be considered as one of the important elements of compassion.^[3,4] Fear of compassion might be a barrier to providing appropriate services to patients. People with a fear of compassion may feel fear or anxiety when faced with

any compassion, empathy, and treatment procedure which has been applied for them by nurses or clinicians. On the other hand, compassion affects the quality of health providers' responses when dealing with patients' pain and suffering. Therefore, due to its importance, a concept with the title of “compassionate care” has been created in health-related fields.^[5,6]

According to Roach (2007) “compassionate care has been required to understand pain, labor, fear, and worry of another person, even if that person is a strange one.”^[7] In the nursing field compassion concept may have several aspects. On the one hand, self-compassion causes balanced reactions to environmental stress and burnout of nursing profession. On the other hand, self-compassion leads to improve compassion for others.^[5,8] According to the moral codes of the International Council

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of Nurses and the American Association of Nurses, professional standards remind nurses to be compassionate. Furthermore, hospitals should include compassion rules as their objective and guideline.^[6]

Gilbert *et al.* have designed fears of compassion scales in 2011.^[3] These scales measure three factors: fear of compassion for others, fear of receiving compassion from others, and fear of self-compassion. Besides, these scales are self-report scales that measure people's view of compassion and kindness. The first factor is fear of compassion for others which includes 10 items (e.g., "there are some people in life who don't deserve compassion"); these people mostly evaluate compassionate behaviors as threats, because they are worried about being abused or dependent. The second factor is fear of receiving compassion from others which includes 13 items (e.g., "I try to keep distance from others even when I know those are kind"); whenever these people see kindness and empathetic signs or actions from others, they feel fear and anxiety. The third factor is fear of self-compassion which includes 15 items (e.g., "I fear that if I am too compassionate toward myself, bad things will happen"); these people tend to be self-critical. They believe that do not deserve to be compassionate to themselves or/and consider it as a weakness.^[1,3]

Studies have shown that fear of compassion is positively associated with anxiety, stress, depression, burnout, and negative emotion regulation strategies. Also, fear of compassion has negative and significant relationship with compassion for others.^[3,9-14] Therefore, the Depression, Anxiety, And Stress Scale (DASS), Cognitive Emotion Regulation Questionnaire (CERQ), and burnout inventory and compassion for others scale were used for convergent and divergent validity in this study.

In the research literature, fear of compassion has been discussed as a powerful barrier for relationship with patient. Since nurses in comparison with other staff have the most contact with patients, the fear of compassion is especially important in this profession.^[8] The fear of compassion scales have also been normalized in East Asian countries and studies have suggested that these scales have good psychometric properties and could be useful for evaluating the fear of compassion and its components.^[1] However, the psychometric properties of these scales have not been studied in Iran. The current research was done in order to assess psychometric properties, construct validity, reliability of fear of compassion scales and to introduce the appropriate measure for experts and researchers in the field of health care in Iran.

Materials and Methods

This study was a quantitative study performed on 216 nurses (117 males, 54.20% and 99 females, 45.80%) in Tehran hospitals between June 2016 and Feb 2017. In the confirmatory factor analysis (CFA), a sample size

of greater than 200 is acceptable.^[15] Thus, 216 nurses were selected by the multistage cluster sampling method. Accordingly, five hospitals were randomly selected from public and private hospitals in Tehran; then, based on the list of wards of each hospital, four wards of each hospital were randomly selected, and participants in the ward were asked to complete questionnaires. Cronbach's alpha and test-retest reliability were used to evaluate the reliability of the fear of compassion scales. The validity of these scales was examined, using CFA and divergent and convergent validity. The fear of compassion scales were prepared based on the guidelines for cross-cultural adaptation of measures.^[16,17] Accordingly, after obtaining permission from the author of these scales, first the original version of the fear of compassion scales was translated from English into Persian by a group of clinical psychology professors. Then, the questions were translated from Persian to English by two other mental health professionals who were fluent in English and Persian. In the next step, the final translation was reviewed by the authors to check that the scales are acceptable and understandable. Furthermore, in a pilot study, these scales were performed on a sample of 30 nurses in Tehran hospitals and the unintelligible phrases were corrected. Participants, in the present study, completed the fear of compassion scales, compassion for others, Burnout, DASS, and CERQ.

The fear of compassion scales were developed by Gilbert *et al.* in 2011. It consists of 38 items for measuring three scales of fear of compassion: 1) fear of expressing compassion to others (10 items), 2) fear of receiving compassion from others (13 items), and 3) fear of self-compassion (15 items). The items were rated on a five-point Likert scale (0 = don't agree at all, 4 = completely agree). The Cronbach's alphas for three scales in students were 0.85, 0.84, and 0.92, respectively. The Cronbach's alphas for three scales in therapists were 0.87, 0.78, and 0.85, respectively. Also, fear of compassion had a significant relationship with self-criticism, compassionate love for others, anxiety, depression, stress, and self-compassion ($p < 0.05$).^[3]

The scale of compassion for others was made by Pommier in 2010.^[18] It consists of three contradictory components (each component has two sides) as kindness-indifference, common humanity-separation, and mindfulness-isolation. The participants scored the items based on a five-point Likert scale [from almost never (0) to almost always (5)]. Overall Cronbach's alpha for compassion for others was 0.90 and Cronbach's alphas for subscales of kindness, indifference, common humanity, separation, mindfulness, and isolation were reported as 0.77, 0.68, 0.70, 0.64, 0.67, and 0.67, respectively.^[18] In research on an Iranian sample, construct validity and reliability of the scale have been confirmed.^[19]

Burnout inventory was made by Maslach and Jackson in 1981.^[20] It consists of 22 items for measuring emotional

exhaustion, depersonalization, and reducing the sense of personal accomplishment within the framework of professional activity. Burnout inventory is especially useful for measuring and preventing burnout in professional groups such as nurses and teachers. Maslach and Jackson (1981) reported the Cronbach's alpha of emotional exhaustion, depersonalization, and reducing the sense of personal accomplishment as 0.90, 0.79, and 0.71, respectively.^[20]

DASS was developed by Lovibond and Lovibond in 1995. It consists of 21 items for measuring depression, anxiety, and stress. The participants scored the items based on a Likert scale from 0 to 3.^[21] The reliability of this scale was reported as 0.70 for depression, 0.66 for anxiety, and 0.76 for stress in a general population in Iran.^[22]

CERQ has 36 items and 9 subscales (including putting into perspective, acceptance, self-blame, positive refocusing, rumination, blaming others, catastrophizing positive, refocus on planning, and reappraisal). This questionnaire was developed by Garnefski *et al.* (2001) to measure cognitive strategies used by every individual after experiencing stressful events. Garnefski *et al.* (2001) reported Cronbach's alphas as 0.91, 0.89, and 0.93, respectively.^[23]

The data were screened. The assumptions of normality were checked. The Cronbach's alphas for fear of compassion, Burnout, DASS, and CERQ were 0.91, 0.84, 0.82, and 0.87, respectively. Confirmatory factor analysis was applied to examine the psychometric properties of the fear of compassion scales. This method offers a variety of statistical tests and indices to assess the "goodness-of-fit" of the identified models. LISREL (version 8.72, Jöreskog and Sörbom, 2005) was applied to examine the fitness of the single-factor model of fear of compassion scales. Pearson correlation was used to examine convergent and divergent validity and test-retest reliability of these scales. The Cronbach's alpha coefficient was also used to calculate internal consistency of fear of compassion scales. Results were analyzed using SPSS software (version 18.0, Chicago: SPSS Inc.). In this study, the significance level is $p < 0.05$.

Ethical considerations

This study was approved by Shahid Beheshti University of Medical Sciences and ethical code of this study was IR.SBMU.MSP.REC.1395.66 that was registered in 2016/05/24 by ethical committee of School of Medicine. The participants were informed that their participation was voluntary and they could discontinue at any time. They were also informed of confidentiality and informed consent was obtained from all participants.

Results

The mean (SD) fear of compassion scales for the sample was 123.29 (13.76). In this study, participants age ranged from 21 to 55 years with a mean (SD) age of 31.76 (6.84)

years. The results of multivariate analysis of variance showed that there was no significant difference between males and females in the fear of compassion scales: Hotelling's Trace $F_{3, 212} = 0.96$, $p = 0.41$, partial Eta squared = 0.01. The reliability of the fear of compassion scales was assessed by using the following ways.

Internal consistency

Internal consistency of the fear of compassion scales was calculated using Cronbach's alpha. The Cronbach's alpha coefficient for fear of expressing compassion for others was 0.85, fear of responding to the expression of compassion from others was 0.95, and fear of self-compassion was 0.96, which indicates these scales have excellent internal consistency.^[24,25]

Test-retest reliability

This was tested on a another sample of nurses ($n = 50$). The test-retest period was 2 weeks. The results showed that test-retest correlation coefficients of fear of compassion for others, fear of responding to compassion from others, and fear of self-compassion were 0.79, 0.86, and 0.88, respectively.

Confirmatory factor analysis

The construct validity of these three scales was assessed using structural equation modelling (SEM). The fit of the single-factor model of these scales [Figures 1-3] was evaluated using comparative fit index (CFI), normed fit index (NFI), non-normed fit index (NNFI), goodness-of-fit index (GFI), adjusted goodness of fit index (AGFI), incremental fit index (IFI), root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), and χ^2/df indices. If the model is fitted, the CFI, NFI, NNFI, GFI, AGFI, and IFI indices are 0.90 or higher and the RMSEA and SRMR indices are 0.08 or

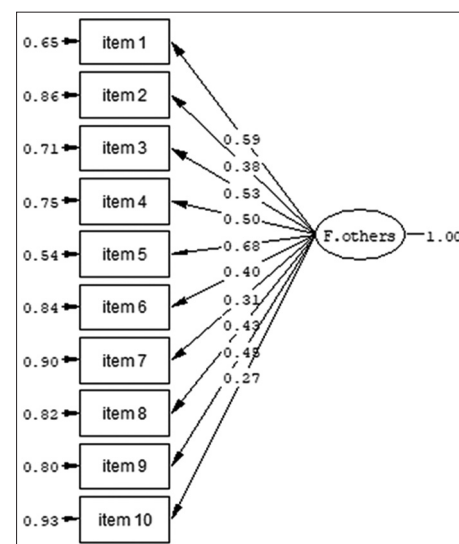


Figure 1: Fear of expressing compassion to others

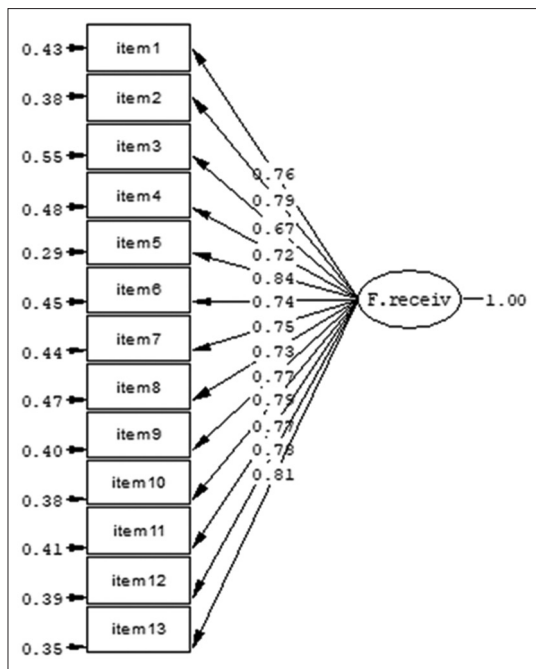


Figure 2: Fear of receiving compassion from others

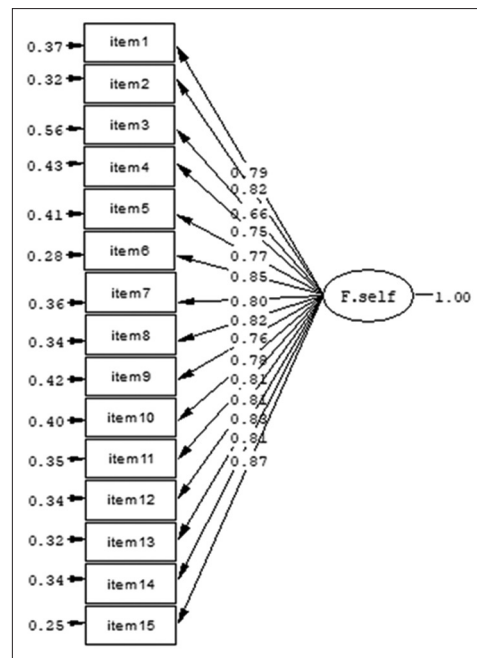


Figure 3: Fear of self-compassion

lower. In addition, the X^2/df should be less than 3.^[26-28] The results of the model's fit indexes are presented in Table 1, which confirm the suitability of the model.

Divergent and convergent validity

To assess the divergent and convergent validity of the fear of compassion scales, the compassion for others, DASS, burnout, and CERQ were used. Pearson correlation coefficient was calculated between the scores of these measures and the fear of compassion scales. Table 2 shows that the fear of expressing compassion to others has a significant and positive relationship with anxiety ($r = 0.18, p = 0.008$), depression ($r = 0.25, p < 0.001$), stress ($r = 0.19, p = 0.005$), burnout ($r = 0.31, p < 0.001$), and negative cognitive emotion regulation strategy ($r = 0.28, p < 0.001$), indicating good convergent validity, while these scales have significant and negative relationship with compassion for others ($r = -0.19, p = 0.005$) and positive cognitive emotion regulation strategy ($r = -0.28, p < 0.001$), indicating good divergence validity. The fear of responding to compassion from others has a significant and positive relationship with anxiety ($r = 0.18, p = 0.008$), depression ($r = 0.28, p < 0.001$), stress ($r = 0.23, p = 0.001$), burnout ($r = 0.33, p < 0.001$), and negative cognitive emotion regulation strategy ($r = 0.26, p < 0.001$), indicating good convergent validity, while these scales have significant and negative relationship with compassion for others ($r = -0.25, p < 0.001$) and positive cognitive emotion regulation strategy ($r = -0.19, p = 0.005$), indicating good divergence validity. The fear of self-compassion has a significant and positive correlation with anxiety ($r = 0.32, p < 0.001$), depression ($r = 0.39, p < 0.001$), stress ($r = 0.29,$

$p < 0.001$), burnout ($r = 0.42, p < 0.001$), and negative cognitive emotion regulation strategy ($r = 0.41, p < 0.001$), indicating good convergent validity, while these scales have significant and negative relationship with compassion for others ($r = -0.22, p = 0.001$) and positive cognitive emotion regulation strategy ($r = -0.23, p = 0.001$), indicating good divergence validity.

Discussion

This study aimed to evaluate the psychometric properties of the fear of compassion scales. Analysis suggested the appropriate fitting indexes of factorial analysis model for fear of expressing compassion to others, fear of receiving compassion from others, and fear of self-compassion. These results are coordinated with Gilbert and *et al.*' study (2011) which was done regarding psychometric properties of the fear of compassion scales.^[3]

In addition, results are approximately in line with psychometric properties of the Italian version. In Italian version, again these three original factors were confirmed after exploratory factor analysis.^[29] However, the results of our study contradict in some aspects with Japanese version. In our study, the single-factor structure of the fear of compassion scales was confirmed, while in Japanese version, fear of receiving compassion from others was distinct from fear of self-compassion, and fear of receiving compassion from others included two subfactors: concerning about receiving compassion from others and avoidance of compassion from others.^[1] The authors attributed these unique features to cultural differences.

To clarify these results that people may fear of compassion in three aspects, Gilbert's studies can be helpful. According

Table 1: Fit indexes for fear of compassion scales

Fit indexes	χ^2	<i>p</i>	χ^2/df	SRMR	GFI	AGFI	NFI	CFI	IFI	NNFI	RMSEA
Fear of expressing compassion to others	220.21	0.001	2.45	0.04	0.88	0.84	0.98	0.99	0.99	0.98	0.08
Fear of receiving compassion from others	162.14	0.001	2.49	0.04	0.90	0.85	0.97	0.98	0.98	0.98	0.08
Fear of self-compassion	83.32	0.001	2.38	0.04	0.93	0.89	0.94	0.96	0.96	0.95	0.08

*Chi square, **Degrees of freedom, ***Standardized Root Mean Square Residual, ****Goodness-of-Fit Index, *****Adjusted Goodness of Fit Index, *****Normed Fit Index, *****Comparative Fit Index, *****Incremental Fit Index, *****Non-Normed Fit Index, *****Root Mean Square Error of Approximation

Table 2: Pearson correlation between fear of compassion scales, compassion for other, DASS, burnout, and CERQ

Variable	Mean (SD)	1	2	3	4	5	6	7	8	9	10
1. Fear of expressing compassion to others	26.14 (11.72)	-									
2. Fear of responding to compassion from others	26.08 (9.87)	0.35**	-								
3. Fear of self-compassion	23.43 (5.65)	0.30**	0.34**	-							
4. Compassion for others	66.44 (18.51)	-0.19**	-0.25**	-0.22**	-						
5. Anxiety	7.89 (2.92)	0.18**	0.18**	0.32**	-0.14*	-					
6. Depression	10.24 (3.37)	0.25**	0.28**	0.35**	-0.23**	0.67**	-				
7. Stress	7.92 (2.90)	0.21**	0.23**	0.29**	-0.17**	0.74**	0.66**	-			
8. Burnout	59.70 (13.56)	-0.31**	0.33**	0.42**	-0.24**	0.32**	0.30**	-			
8. Positive cognitive emotion regulation	31.76 (6.84)	-0.28**	-0.19**	-0.23**	0.29*	-0.33**	-0.35**	-0.19**	-		
10. Negative cognitive emotion regulation	31.76 (6.84)	0.28**	0.26**	0.41**	-0.21**	0.25**	0.27**	0.10	0.37**	-	

p*<0.05, *p*<0.01, ***Depression, Anxiety, and Stress Scale, ****Cognitive Emotion Regulation Questionnaire, *****Standard Deviation

to Gilbert, kindness and safety experiences with primary caretakers lead to shaping safety, kindness, and compassion feelings. These experiences cause the newborn to acquire a capacity of self-compassion and this capacity makes it possible for the person to have compassion to others. Accordingly, when people are neglected or grow in environments with full of conflicts, the capacity of self-compassion would be limited. Furthermore, they internalized criticisms and blames of the caretakers. They nurture fear of both self-compassion and compassion to others, because the feelings of affection and compassion in these people provoke feelings of anger, discomfort, and neglected emotions. On the whole, these three elements are related to each other and constitute the fear of compassion aspects. In this way, fear of self-compassion is a source for fear of compassion to others and receiving compassion from others.^[30-32]

In order to measure divergent and convergent validity of the fear of compassion scales, measures of CERQ, DASS, Burnout inventory and compassion for others were used. Results suggested that the fear of compassion scales had a significant and negative correlation with positive strategies of cognitive emotion regulation. Also, results showed that the fear of compassion scales correlated with the DASS, negative strategies of CERQ, and Burnout Inventory positively. These findings are in line with MacBeth and Gumley meta-analysis (2012), which suggested a big size of effect between self-compassion and psychopathology,^[9] and Gilbert and *et al.*' study, which showed that the fear of compassion is correlated with a spectrum of psychopathological indexes like self-criticism, insecure attachment, alexithymia, fear of happiness, and higher levels of depression, anxiety, and stress.^[3,11] Pauley and McPherson (2010), also, assessed experience and meaning of compassion and self-compassion in depressed and anxious people. Findings of their study showed that depressed or anxious people believed that having compassion to themselves during depression and anxiety episodes could help them. However, they find it difficult to be self-compassionate, perhaps their experiences of psychiatric disorders had negatively affected their ability to be self-compassionate.^[33] On the whole, the fear of compassion scales have suitable factorial construction and acceptable divergent and convergent validity. Clinicians and researchers in the health-related fields could use these scales for clinical studies and researches.

This study has some limitations. First, the sample size of the current study was small. Second, the number of male participants was higher, while in nursing profession, there are more female nurses. Third, nurses' inability for expressing compassion to themselves and others may not only relate to fear of self-compassion but also arise from another variable such as compassion fatigue. In future studies, it is recommended to use a bigger sample size of clinical and nonclinical populations to assess the

psychometric properties of these scales. Also, regarding nurses' difficulties to experience compassion, the role of the fear of compassion interaction with compassion fatigue could be attended.

Conclusion

The results of the present study provide additional evidence for the psychometric properties of fears of compassion scales in Iranian nurses. Furthermore, fear of compassion has correlated with psychiatric symptoms and negative emotion regulation strategies.

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Conflicts of interest

Nothing to declare.

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