Turkish Validity and Reliability Study of the Compassion Scale-Short Form

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ABSTRACT

Objective: The aim of this study is to fulfil the Turkish validity and reliability of the Compassion Scale-Short Form. **Materials and Methods:** The sample of the study was comprised of 509 students from a university located in the west of Turkey. Data were analyzed by using descriptive statistics, explanatory and confirmatory factor analysis, Cronbach alpha, test-retest and parallel-form reliability. **Results:** As a result of the exploratory factor analysis applied with varimax rotation, it was determined that the factor loads of the items were distributed between 0.334 and 0.793. It was calculated that the ratio of explaining the total variance of four components with an eigenvalue greater than 1 was 55.33%. It was found that the total Cronbach's alpha value of the scale was 0.77, the test-retest reliability coefficient was 0.76, and the parallel form reliability coefficient was 0.18. **Conclusion:** The findings obtained from the analysis conducted to adapt the Compassion Scale-Short Form to Turkish society showed that the scale was a valid and reliable tool in determining the state of compassion. The findings obtained from the analysis conducted to adapt the Compassion Scale-Short Form to Turkish society showed that the scale was a valid and reliable tool in determining the state of compassion.

Keywords: Compassion, Scale Adaptation, Validity, Reliability.

Merhamet Ölçeği'nin Kısa Formunun Türkçe Geçerlik Güvenirlik Çalışması

ÖZ

Amaç: Bu çalışmanın amacı, Merhamet Ölçeğinin Kısa Formunun Türkçe geçerlik güvenirlik çalışmasını yapmaktır. **Gereç ve Yöntem:** Çalışmanın örneklemini Türkiye'nin batısında yer alan bir üniversitenin 509 öğrencisi oluşturdu. Veriler, tanımlayıcı istatistikler, açıklayıcı ve doğrulayıcı faktör analizleri, Cronbach alfa, test-tekrar test ve paralel form güvenilirliği ile analiz edildi. **Bulgular:** Varimaks rotasyonu ile uygulanan Açımlayıcı Faktör Analizi sonucunda maddelerin faktör yüklerinin 0,334 ile 0.793 arasında dağıldığı belirlendi. Özdeğeri 1'den büyük dört faktörün toplam varyansı açıklama oranının %55.33 olduğu hesaplandı. Ölçek toplam Cronbach's alpha değeri 0.77, test-tekrar test güvenirlik katsayısı 0.76, paralel form güvenirlik katsayısı ise 0,18 olarak bulundu. **Sonuç:** Merhamet Ölçeğinin Kısa Formunun Türk toplumuna uyarlanması için yapılan analizlerden elde edilen bulgular, ölçeğin merhamet durumunu belirlemede geçerli ve güvenilir bir araç olduğunu gösterdi.

Anahtar Kelimeler: Merhamet, Ölçek Uyarlama, Geçerlik, Güvenirlik.

INTRODUCTION

Many concepts are used to describe the emotions that arise in response to the suffering of others, including compassion, empathy, anxiety, distress, pity, and sympathy (Bivins et al., 2017). Studies on this subject argue that these concepts refer to various psychological processes such as recognizing people's expressions correctly, adopting their perspectives, understanding how they feel, helping them, and managing their own emotions (Bivins et al., 2017; Seppälä et al., 2017). Compassion, one of these concepts, can be called emotion, virtue and also a character trait. Most of the current debates on compassion focus on describing it as an emotional response. One of the reasons for theorists to define compassion is to try to understand how it differs from seemingly similar concepts such as empathy, pity, and sympathy (Bivins et al., 2017; Nas & Sak, 2020). Although compassion and empathy, especially, are intertwined concepts, (Jeffrey, 2016; Neff & Pommier, 2013) there is a wide consensus that they are different concepts (Bivins et al., 2017). In empathy, a person can empathize with someone else's sadness or distress, as well as their joys, gratitude, or admiration. Compassion usually occurs as a response to someone else's pain and is often assumed to be a sad feeling. Moreover, unlike empathy, it contains anxiety towards someone who is suffering and a desire to help them (Price & Caouette, 2018). This shows that compassion is also intertwined with the feeling of pity. However, the feeling of pity includes characteristics such as condescending to the other person, favoring the other person, looking down on someone morally and psychologically. Pity may not involve a positive contribution on behalf of the sufferer; whereas compassion contains an intense interest and respect for the other (Akdeniz & Deniz, 2016). Similar to pity, sympathy is also defined as a pity-based response to an upsetting situation characterized by a lack of relational understanding and self-preservation of the observer. Whereas, compassion is a virtuous response that seeks to relieve a person's pain and needs through relational understanding and action (Sinclair et al., 2017).

Compassion is an indispensable virtue for all professions in the field of health, especially nursing. As a solution to neglect and unsafe treatment, compassionate care is stated to be an easy and cost-effective solution to the problems that exist in modern healthcare (Bivins et al., 2017). The provision of compassionate care in nursing is not a new concept and dates back to Florence Nightingale era. Nightingale's practices involving grace, sincerity and courtesy in care practices form the basis of compassionate care. Studies conducted in recent years also show that the interest in compassionate care has increased (Hofmeyer et al., 2018; Younas & Maddigan, 2019). In his study, Henderson (2017) emphasized that concepts such as determining personal values, understanding the possibility of incompatibility between personal values and professional values, compassion fatigue, compassion satisfaction, compassion literacy and self-compassion should be understood in providing compassionate care (Henderson & Jones, 2017).

Although it is stated in the nursing literature that giving compassionate care constitutes the essence of the nursing profession, it is seen that there are not enough valid measurement tools that directly measure compassionate care. Therefore, reliable measurement tools are needed in our country to recognize and evaluate behaviors that measure compassion and compassionate care (Nas & Sak, 2020). Although the concept of compassion is frequently included in the subject area of psychiatry, psychology and all health professions, it frequently arouses interest in different fields and groups, especially in education. In studies conducted in different fields, it is seen that the Compassion Scale, which was developed by Pommier et al. in 2020, and whose Turkish validity was carried out by Akdeniz and Deniz, was frequently used as a tool to measure compassionate behaviors (Akdeniz & Deniz, 2016; Pommier, 2010). Therefore, it is seen that the updated version of the scale (2020), which was reduced to 16 items and 4 components, needs to be adapted to Turkish society. The aim of this study is to conduct a Turkish validity and reliability study in order to determine the compatibility of the current form of the Compassion Scale, which was developed by Pommier et al. in 2020, for Turkish society.

MATERIALS AND METHODS

Population and sample

The universe of the research, which was planned methodically, consisted of university students studying in a city located in the west of Turkey. It has been tried to reach the sufficient number of samples in methodological studies. For methodological studies, it is recommended that the sample size be at least 10 times the number of items in the scale. (Çapık, 2014). However, sufficient sample size should be reached in order to perform Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). For both analyses, it is stated that the data set is sufficient for a sample size of 300 and above, but it may differ according to the number of items. A sample size of over 500 is perfect (Koyuncu & Kılıç, 2019). Therefore, the sample of the research consisted of 509 students who agreed to participate in the research, who were over the age of 18, did not have a mental illness, and were not foreign nationals. Within the scope of sampling, the data of the research were collected between January 2020 and April 2020.

Data collection tools

As a data collection tool, the Self-Compassion Scale-Short Form was used to evaluate the reliability of the parallel form, as well as the introductory information form containing the sociodemographic characteristics of the students (age, gender, the region they live in Turkey, income status, educational status of mother and father) and the Compassion Scale.

Compassion Scale (CS): The 16-item Compassion Scale developed by Pommier et al. (2020) is the current version of the 24-item, 5-point Likert-type Compassion Scale developed by Pommier (2010) for his thesis. The Turkish validity and reliability of this 24-item Compassion Scale was made by Akdeniz and Deniz (2016), and the scale

consists of six components: kindness, indifference, common humanity, separation, mindfulness, and disengagement. In its current form of 16 items, there are a total of 4 components which are kindness (2, 6, 10, 14), common humanity (4, 8, 12, 16), mindfulness (1, 5, 9, 13) and indifference (3, 7, 11, 15), and the scale is 5-point Likert type (1=Never, 2=Rarely, 3=Occasionally, 4=Frequently, 5=Always). "When examining the parameter estimates of the six-factor models (see Table S1 of the supplemental material available online), the six-factor CFA solution had factors that were well-defined by their target loadings (λ=0.445 to 0.863, M=0.658), but correlations between these factors were so high (r=0.419 to 1.021, M=0.750) that their discriminant validity became questionable" (Pommier et al., 2020). It has been demonstrated that the 3 components (indifference, separation, and disengagement) representing compassion are not well defined. It was stated that these factors are mostly interchangeable, so they are not differentiated well. For this reason, 3 components and 12 items representing uncompassionate responding were narrowed down to a single component and 4 items containing the strongest target load. It was stated that Cronbach's alpha coefficient was 0.86 in the original form of the scale.

Self-Compassion Scale–Short Form (SCS–SF): The scale developed by Neff (2003) to measure the self-compassion variable and consists of 24 items and 6 factors in its original form was updated as "Self-Compassion Scale-Short Form" consisting of 12 items and 2 components by Raes et al. (2011), considering that it would be more useful than the long form. This short form was adapted for Turkish society by Yıldırım and Sarı (2018) and it was stated that the scale was a 2-component scale consisting of 11 items. The scale is 5-point Likert type. They expressed that the Cronbach's Alpha coefficient of the scale was 0.84 (Neff, 2010; Raes et al., 2011; Yıldırım & Sarı, 2018).

Data collection
Data were collected through an online questionnaire due to the COVID-19 pandemic. Students were reached via e-mail. They were informed in the questionnaire prepared using the Google questionnaire, and in the first question, they were asked whether they wanted to participate in the study in accordance with the principle of voluntarism, and the study continued with those who wanted to participate. It took between 10-15 minutes to complete the form. Before starting to collect data, a pilot study was conducted with 20 students to evaluate whether the items of the scale were understandable. The questionnaire form was updated in line with the answers given. The data obtained from the pilot study were not included in the data of the main sample group.

Language validity and content validity
The World Health Organization recommends that 4 steps are required during the translation and adaptation of English measurement tools to different languages: forward translation, expert panel back-translation, pre-testing and cognitive interviewing, and final version (Incirkuş & Nahcivan, 2020). The Turkish translation of the scale was done separately by the researchers. The Turkish translation was checked for suitability by five academicians who are experts in English. In line with the recommendations given, minor changes were made to the Turkish form, and five different English language experts were asked to translate the Turkish scale items into English, and a back translation was made. The Content Validity Index (CVI) was used to determine the content validity of the scale which was translated into Turkish. The opinions of 12 experts (2 academicians in the field of Turkish Language and Literature, 10 in the field of Nursing) were consulted for the content validity. Experts were asked to evaluate the items by giving a score of 1 point: inappropriate, 2 points: slightly appropriate (the item and the statement should be adapted), 3 points: appropriate (minor changes required), 4 points: absolutely appropriate. In the percentage evaluation made, 85% of the scale items were found to be "appropriate" or "absolutely appropriate" by the experts. The scale items, which were deemed appropriate for content validity, were finalized by making minor changes in line with the opinions of the experts.

Statistical analysis
Statistical analyzes were performed using SPSS 26.0 and LISREL 8.70 software. Descriptive data were expressed as mean ±, standard deviation (X ± SD), minimums, maximums and percentages (%). Validity data were evaluated by Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) (Erkorkmaz et al., 2013; Koyuncu & Kılıç, 2019). Kaiser-Meyer-Olkin (KMO) value and Bartlett's test were used for the factor analysis. The reliability of the scale was evaluated using Cronbach's alpha, test-retest, and parallel form (Ercan & Kan, 2004). Comparisons between scale mean and similar feature data were evaluated by regression analysis. Parallel form and test-retest reliability were evaluated by Spearman rho correlation analysis. Significance level was acknowledged as p<0.05.

Ethical considerations
Institutional permission was obtained from the institution where the study would be conducted. Ethics committee approval of the study was obtained from Çanakkale Onsekiz Mart University Ethics Committee (Approval no:04/01/2021-01/37). Permission was obtained from the authors who developed the compassion scale via e-mail in order to carry out the Turkish validity and reliability study of the scale. Likewise, permission was obtained from the authors who made the Turkish validity and reliability of the Self Compassion Scale - Short Form to use the scale via e-mail. In the first part of the questionnaire, how to fill in the questionnaire and the purpose and scope of the research were explained. The participants were informed that they could withdraw at any time, and written consent was obtained from the volunteers. Confidentiality assurance was given that the data obtained from the study would be used purely for scientific purposes.

RESULTS

It was found in the study that the average age of the students participating in the study is 20.43±2.64 years, 80.9% of them are female (n=412), 60.7% (n=309) live in the Marmara Region, 71.5% (n=364) cover their expenses with their incomes, 55.9% (n=285) of them have a mother with primary level education, 42.2% (n=215) of them have a father with secondary level education (Table 1).

Table 1. Sociodemographic attributes of students (n=509).

| Variable		Mean±SD
Age		20.43±2.64
	n	**%**
Gender		
Female	412	80.9
Male	97	19.0
Region in which they live (in Turkey)		
Mediterranean Region	24	4.7
Eastern Anatolia Region	15	2.9
Aegean Region	53	10.4
South-eastern Anatolia Region	18	3.5
Central Anatolia Region	22	4.3
Marmara Region	309	60.7
Black Sea Region	45	8.8
Foreign	23	4.5
Family income status		
Income covers expenses	364	71.5
Income does not cover expenses	145	28.4
Mother's educational background		
Primary	285	55.9
Secondary	148	29.8
Higher education	76	14.9
Father's educational background		
Primary	197	38.7
Secondary	215	42.2
Higher Education	97	19.0

Structure Validity: for the construct validity evaluation of the data obtained from 509 participants, first EFA and then CFA were performed. The KMO sample correlation coefficient was found to be 0.914 and Bartlett test $\chi 2$ value was 3187.75 (p<0.001). It was determined that the Compassion Scale developed by Pommier et al. (2020) consists of 4 components in accordance with its original form. As a result of the varimax rotation, no item was excluded from the scale, as the factor loads were distributed between 0.334 and 0.793. It was concluded that the scale, which had 16 items in the original, can be used as 16 items in the Turkish form. It was calculated that there were four factors with eigenvalues greater than 1 and the ratio of explaining the total variance of these factors was 55.33% (Table.2). The fit index of CFA performed in the sample group was found to be $\chi 2$=1511.87, RMSEA=0.095 (p<0.0001) (Figure 1).

In this study, reliability analysis was performed in a sample of 509 people, and Cronbach alpha coefficient, test-retest correlations, parallel form reliability correlations were evaluated. The total Cronbach's alpha value of the scale was 0.77, and Cronbach's alpha values for the components were respectively found to be as follows; kindness 0.85, common humanity 0.66, mindfulness 0.81 and indifference 0.56 (Table 2). For test-retest reliability, a questionnaire form was administered to 55 students with 1-month (4 weeks) intervals and the relationship between the two forms was found to be high (Spearman rho r=0.76, p < 0.01). The Self-Compassion Scale-Short Form was used for parallel form reliability, and the total item averages of the Self-Compassion Scale-Short Form were found to be 4.29±0.48, and the mean of the items of the Compassion Scale was 3.99±0.39.

A statistically significant positive correlation was found between the Self-compassion Scale and the Compassion Scale (Spearman rho, r=0.184; p <0.01) (Table 3).

Table 2. Eigenvalues, % of variance, factor loadings for explanatory (EFA) and confirmatory (CFA) factor analysis, and Cronbach's alpha values for each factor.

	Component EFA				Component CFA				Cronbach' alfa
	1	2	3	4	1	2	3	4	
Item1	0.785				0.770				0.81
Item5	0.651				0.780				
Item9	0.753				0.260				
Item13	0.696				0.570				
Item2		0.760				0.590			0.85
Item6		0.792				0.820			
Item10		0.596				0.340			
Item14		0.742				0.580			
Item3			0.699				0.820		0.56
Item7			0.774				0.670		
Item11			0.575				0.420		
Item15			0.334				0.410		
Item4				0.521				0.690	0.66
Item8				0.609				0.800	
Item12				0.793				0.440	
Item16				0.752				0.400	
Total	**Variance**:55.337 **Eigenvalues**: 8.854								0.77
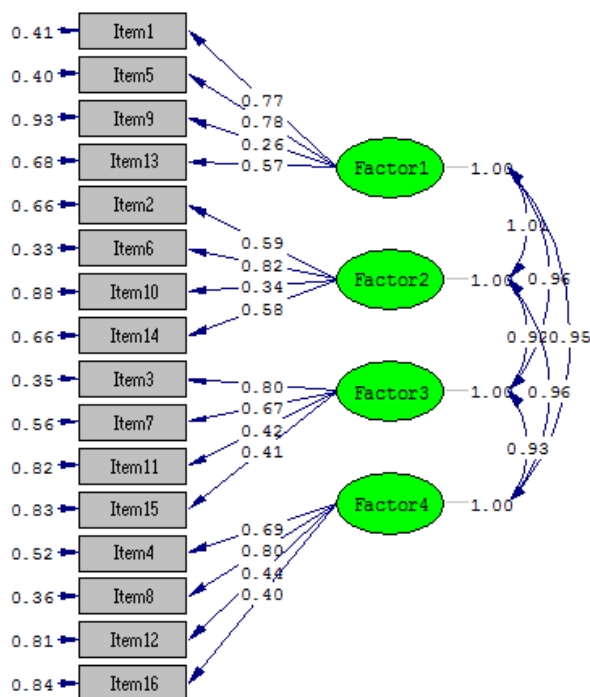
Chi-Square=1511.87, df=98, P-value=0.00000, RMSEA=0.095

Figure 1. Standardized CFA path diagram for the Turkish version of the Compassion Scale.

Table 3. The relationship between Compassion Scale and Self-compassion Scale-Short Form.

	X±SD	Rho*	p
Compassion Scale	3.99±0.39		
		0.34	0.001
Self-compassion Scale-Short Form	4.29±0.48		

*Spearman's rho p<0.01, X=Mean, SD=Standard deviation.

DISCUSSION
The study was carried out in order to introduce a measurement tool that determines the compassion levels of the participants to the literature by adapting the current short form of the Compassion Scale to Turkish society. Translation-back translation technique was used for the language validity of the scale. The Turkish translation-back translation of the scale was done by experts who know English well. It was determined that the items and components of the Compassion Scale, which was translated into Turkish, were equivalent to the expressions in the original form of the scale. CVI was used to measure whether the items in the scale and their distribution evaluated the subject of measurement. The recommended value for CVI is expected to be 0.80 or higher (Esin, 2014). As a result of this study, the CVI value was found to be 0.85. Construct validity is the determination of whether the scale reflects the characteristics of the concept and conceptual structure to be measured. In the literature, it is recommended to make both EFA and CFA for structure validity (Erkorkmaz et al., 2013; Koyuncu & Kılıç, 2019). In some studies, in the literature, it is seen that the sample group is separate for EFA and CFA, and the same in others. However, in order to carry out EFA and CFA, sufficient sample size must be reached. It is stated that the data set for both analyzes is sufficient for a sample size of 300 and above but may differ according to the number of items. A sample size of over 500 is perfect, but a sample size of 200 and below is poor and inadequate (Koyuncu & Kılıç, 2019). For this reason, both EFA and CFA were applied to the same sample group in this study. In the evaluation of the construct validity, the KMO sample correlation coefficient was found to be 0.914, the Bartlett test $\chi2=3187.75$ (p<0.001), and it showed that the data were sufficient in terms of factor analysis. If the KMO value is above 0.50, it shows that the sample size is sufficient for validity analysis. As a result of Bartlett's test, the statistical significance is an indication that the data come from multivariate normal distribution (Esin, 2014; Koyuncu & Kılıç, 2019).
As a result of the EFA applied with varimax rotation, it was determined that the factor loads of the items were distributed between 0.334 and 0.793. In the literature, suitable factor loads are expected to be above 0.30 (Karaman & Atar, 2017). There is no item removed from the scale due to the distribution of the factor loads of the scale in the expected direction. The scale has a 16-item and 4-component structure similar to the original scale. For the construct validity of the compassion scale, CFA

was done after EFA. As a result of the analysis, it was seen that the component loadings of the items varied between 0.33 and 0.93 (Figure 1). It is stated in the literature that for a valid scale, the confirmatory factor load of each item should be at least 0.30 (Çapık, 2014). Thus, the results obtained from EFA were verified using CFA. Therefore, it was determined that the current version of the Compassion Scale with 16 items is a valid scale for Turkish society.
The reliability of the scale was evaluated with Cronbach's alpha, test-retest, and parallel form reliability (Ercan & Kan, 2004; Esin, 2014; Polit & Beck, 2017). The Cronbach Alpha technique, which is used to analyze the internal consistency of the scale, is the weighted standard deviation average change found by proportioning the sum of the variances of the items in the scale to the general variance. The value obtained is a coefficient that reveals the similarity and closeness of the questions in the scale (Polit & Beck, 2017). The original scale was developed by being applied separately in 5 different groups, and the total Cronbach Alpha value of the scale in the sample group formed by the students is 0.86. Cronbach's alpha values of the components were stated as 0.76 for kindness, 0.72 for common humanity, 0.68 for mindfulness and 0.66 for indifference, respectively (Pommier et al., 2020). The total Cronbach Alpha internal consistency reliability coefficient of the scale was found 0.85 in the 6-component scale with 24 items, which was validated in Turkish by Akdeniz and Deniz. In the same study, when the internal consistency reliability coefficient was calculated for components, it was stated that it was 0.73 for compassion, 0.64 for indifference, 0.66 for common humanity, 0.67 for disconnection, 0.70 for conscious awareness, and 0.60 for disengagement. For this study, the total Cronbach's alpha value of the scale is 0.77; Cronbach's alpha values for components were found as 0.85 for kindness, 0.66 for common humanity, 0.81 for mindfulness and 0.56 for indifference, respectively. In this study, it was observed that the scale total and components Cronbach Alpha internal consistency scores were similar, and the Cronbach Alpha coefficient in the indifference dimension was lower than the others. In the literature, 0.50-0.60 is considered low level reliable (Erkorkmaz et al., 2013). In test-retest reliability, the questionnaire should be applied to the same people at two different times. It is stated in the literature that this period should be between 2 and 4 weeks. When the score difference between the measurements is lower, the reliability is higher (Polit & Beck, 2017). Being compassionate refers to a steady state

that is not expected to change in measurements made at different times. Therefore, for the reliability of the scale, the relationship between the two measurements was expected to be high. In the study, test-retest measurements were made at 4-week intervals in accordance with the scale development study, and a statistically significant positive correlation was found between the total item correlation coefficients of the two measurements (r=0.87 p<0.001). In parallel form reliability, two equivalent forms are applied simultaneously or intermittently (Ercan & Kan, 2004). In this study, the Self-Compassion Scale-Short Form and the Compassion Scale were administered to the participants at the same time. A person who is compassionate to others is expected to be compassionate towards himself. As a result of the study, it was determined that there is a significant relationship between the Self-Compassion Scale-Short Form and the Compassion Scale (r=0.18; p<0.001).

CONCLUSION

Given that compassion might have very effective consequences in relieving the distress of others, it is of great importance to understand what factors determine the emergence of different social emotions and to have more information about how such emotional responses can be trained. The only tool to measure the state of compassion in our country is the 24-item Compassion Scale developed by Pommier (2010), whose Turkish validity was verified by Akdeniz and Deniz, for his thesis. Pommier et al. (2020) updated the scale and stated that 16 items and 4 components were more understandable. Therefore, a Turkish validity and reliability study of the current version of the scale was needed. Analyzes made as a result of this study, which is thought to contribute to the literature, show that the scale is a valid and reliable scale for Turkish society. The scale can be applied to different sample groups. However, the data obtained from the study belong to university students, and it will be useful to examine psychometric properties in studies with different groups.

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Conflict of Interest
The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Author Contributions
Plan, design: ŞÜC, NC**; Material, methods and data collection:** ŞÜC, NC**; Data analysis and comments:** ŞÜC**; Writing and corrections:** ŞÜC, NC.

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