



Adaptation and Psychometric Evaluation of the Santa Clara Brief Compassion Scale in Türkiye

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Abstract

This study aimed to adapt the Santa Clara Brief Compassion Scale into Turkish and evaluate its psychometric properties, with the goal of providing a concise and culturally appropriate tool to assess compassion in healthcare and research contexts. This methodological study was conducted on 325 individuals aged 18 and over in Turkey between April and May 2025. Data were collected online using a demographic form and the Santa Clara Brief Compassion Scale. Content validity was evaluated by expert review. Construct validity was tested with confirmatory factor analysis, and reliability was assessed through Cronbach's alpha, McDonald's Omega, and test–retest analysis. Content validity indices indicated excellent agreement (I-CVI=0.90–1.00; S-CVI=0.99). Factor analysis indicated that the item loadings varied from 0.55 to 0.89. The fit indices were as follows: $\chi^2=5.67$, $SD=3$ ($p<0.05$), $\chi^2/SD=1.89$, $RMSEA=0.052$, $CFI=0.99$, $SRMR=0.017$, $TLI=0.99$, $RMR=0.039$ and $AIC=29.67$. Overall scale *Cronbach's alpha* coefficient was 0.805, and the Omega reliability coefficient was 0.801. As a result of the item analysis, it was determined that the item-total correlation coefficients for the items in the test varied between 0.494 and 0.697. The brief version maintained adequate validity while preserving the original item composition. The Turkish version of the Santa Clara Brief Compassion Scale demonstrated strong validity and reliability. This brief and culturally adapted tool can be applied to the general adult population and offers nursing and healthcare professionals, as well as researchers in social and behavioral sciences, a practical means to evaluate compassion. Its use may support evidence-based practice, guide interventions to foster compassionate care, and contribute to future research aimed at improving well-being and patient outcomes.

Keywords Adaptation · Nursing · Santa Clara Brief Compassion · Scale · Psychometric evaluation

Introduction

Compassion is a concept that expresses the desire to help others based on a deep sense of empathy. It is also an important form of expression that is evaluated with positive psychology both individually and socially (Nas, 2021; Nas & Sak, 2020). When evaluated from a social psychology perspective, compassion, which is one of the fundamental ethical values in human history and a subject of much debate (Yanbak & Önal, 2024), is a concept that strengthens social bonds. As it encompasses empathic feelings, it enables more sensitive responses to the emotional states of others (Özdelikara & Babur, 2020).

The meaningful bonds that compassion creates between individuals promote positive social interactions by facilitating better emotional regulation. As a result, social anxiety of individuals decreases and they exhibit more pro-social behavior (Bates et al., 2021; McBride et al., 2022; Munawar et al., 2022). A positive correlation was reported between workforce compassion levels and perceived organizational trustworthiness, and this increased productivity was reported to lead to a positive impact on the workplace environment (Yildiz & Kavak, 2017).

Compassion, which has many social effects, also has significant individual effects. Individuals with high levels of compassion are often reported to have more satisfying social experiences. These individuals achieve emotional fulfillment, deepen their social bonds and improve their quality of life through acts of compassion. It is stated that compassion interacts with social norms and that increasing the emotional capacity of individuals will have a positive impact on social values (Demirel et al., 2020; Nas & Sak, 2020).

Compassion also has significant effects in the field of healthcare. Healthcare professionals with high levels of compassion are better able to manage treatment processes for patients and positively influence the course of their illness. In addition, compassionate healthcare workers can better understand the emotional and physical distress of their patients and guide them more effectively (Cingi & Eroğlu, 2019). Compassion serves as a fundamental component of nursing care, as it does in other helping professions, because nursing is a profession that aims to be sensitive to people's suffering and to alleviate this suffering (Özdelikara & Babur, 2020).

Literature Review

The concept of compassion stands out as a decisive factor in promoting mutual assistance between individuals, developing empathy, and strengthening social solidarity. Compassion is considered to have an important role particularly in the context of education, healthcare, and social relations, which constitutes an important area of research that needs to be addressed comprehensively (Nas & Sak, 2020; Özdelikara & Babur, 2020; Plante & Halman, 2016). Compassion is an emotional and ethical concept that strengthens relationships between individuals

and communities and increases social cohesion. Research indicates compassion serves as a significant predictor of improved mood states and functioning of both individuals and societies (Nas, 2021; Plante & Halman, 2016).

The multifaceted impact of compassion emphasizes its important roles in both individual and social terms. This situation indicates that more research needs to be conducted in both academic and practical fields. There are various measurement tools in the literature that measure the level of compassion (Akdeniz & Deniz, 2016; Çiftçi, & Aras, 2022; Martins et al., 2013; Plante & Mejia, 2016; Pommier et al., 2020). Most of the existing measurement tools have certain limitations in terms of application due to their comprehensive and multi-item structures. Especially in studies conducted with large samples, there is a need for shorter and more concise tools in terms of time management and the efficiency of the measurement process. Santa Clara Brief Compassion Scale (SCBCS), which was developed in response to this need and which consists of only five items, attracts attention with its structure that simplifies the measurement process and facilitates application (Hwang et al., 2008; Plante & Halman, 2016; Plante & Mejia, 2016). The SCBCS comprises five items measuring compassion using a Likert-type scale, with established validity in predicting pro-social behavioral outcomes across diverse populations. The items in SCBCS were derived from Sprecher and Fehr's (2005) "Compassionate Love Scale" (Sprecher & Fehr, 2005), which aims to measure altruistic love toward others. A large-scale validation study ($N=6763$) further established the SCBCS's psychometric properties, confirming its reliability and construct validity across diverse populations (Plante & Mejia, 2016). However, adapting this scale to Turkish and examining its psychometric properties is important in terms of ensuring cultural validity and providing the literature with a reliable measurement tool. The development of a psychometrically sound Turkish version of the SCBCS by conducting comprehensive reliability and validity analyses was the aim of the present study. It is believed that the linguistic and cultural adaptation will contribute to conducting more accurate research on compassion in the Turkish population. The main aim of this study is to systematically adapt the Santa Clara Brief Compassion Scale into Turkish, ensure its linguistic and cultural validity, and conduct validity and reliability analyses within a Turkish sample to evaluate its psychometric properties.

Research Questions

- Is "the Santa Clara Brief Compassion Scale" a valid scale for Turkish society?
- Is "the Santa Clara Brief Compassion Scale" a reliable scale for Turkish society?

Material and Methods

Design: Methodological design was employed in the study.

Participants and Sample

Data were amassed utilizing a digital survey instrument (Google Forms) throughout the months of April and May in the year 2025, focusing on a demographic of Turkish adults aged 18 years and above (through electronic mail and social networking platforms). Participants were instructed to complete the survey and subsequently share with peers within their social networks. The study enrolled 620 adults by this method. However, 100 respondents were excluded for failing to meet inclusion criteria (age > 18 years and completion time of 1–2 min), while an additional 195 participants were excluded due to non-consent; after applying exclusion criteria, the final analysis included 325 participants. According to the literature, sample size for scale adaptation studies should meet a minimum participant-to-item ratio of 5:1, with 10:1 being the recommended threshold for robust analysis (DeVellis & Thorpe, 2021; Seçer, 2020). Given the SCBCS's five-item structure, conventional psychometric standards would require a minimum sample size between 25 (5:1 ratio) and 50 (10:1 ratio) participants. The final sample comprised 325 eligible participants who met all inclusion criteria and provided informed consent.

Data Collection Tools

Assessment tools included a demographic questionnaire and the validated Santa Clara Brief Compassion Scale (SCBCS).

Personal Information Form: The Personal Information Form collected key sociodemographic data, including age, gender, educational attainment, marital status, employment status, and presence of chronic health condition.

The Santa Clara Brief Compassion Scale: Originally developed by Hwang et al. (2008), the SCBCS comprises five items. The SCBCS items are evaluated using a Likert-type scale ranging from 1 to 7, where participants indicate the extent to which they agree with each statement. On this scale, a score of 1 means "this statement is not true for me at all," while a score of 7 means "this statement is completely true for me." The total scores obtained from the scale reflect the individual's level of self-compassion and understanding; therefore, higher scores indicate higher levels of self-compassion and sensitivity toward others (Hwang et al., 2008). A minimum of 1 and a maximum of 7 points are obtained from the scale.

Adaptation Process

The scale development process followed a three-phase approach. Two qualified linguists independently translated the original English items into Turkish during the initial adaptation phase; Turkish translations were subsequently evaluated for content validity by a panel of nine experts, including one Turkish language expert, two psychologists, two public health nursing experts, two experts in fundamentals of nursing, and two experts in internal medicine nursing. All scale items were retained following content validity assessment, with I-CVI scores exceeding the 0.80

benchmark. However, some items were revised in terms of language and expression in line with expert opinions. After these revisions, Turkish form was back-translated by two English language experts, and no semantic difference was found between the first and final versions. Therefore, following successful completion of translation and validation procedures, the adapted scale was deemed psychometrically appropriate for pilot application. In the second stage, 35 participants were reached within the scope of the preliminary application, and the analysis applied established reliability criteria of item-total correlations ≥ 0.30 , and Cronbach's $\alpha \geq 0.70$ as the threshold for acceptable internal consistency (Seçer, 2020; Shrestha, 2021). None of the items were excluded from the scale since all correlation values and the reliability coefficient of the scale were above the specified threshold values. In the final stage, the main application process, the adapted scale was administered digitally using Google Forms, with recruitment conducted through targeted email distributions and social media platforms. Confirmatory factor analysis (CFA) was conducted using data collected from 325 participants recruited through this approach. The model's validity was assessed by comparing the resulting fit indices with established benchmarks recommended in the relevant literature (Bae, 2017; Woo, 2017). The results confirmed the structural validity of the scale. In accordance with the methodological standards outlined by Koenig and Al Zaben (2021), a test–retest reliability procedure was implemented. The scale was re-administered to a subsample of 30 participants after a 20-day interval, which falls within the recommended 15–30-day window, and the results demonstrated excellent temporal stability (Koenig & Al Zaben, 2021; Seçer, 2020).

Statistical Analysis

Survey data collected via Google Forms were systematically organized in Microsoft Excel before being imported into IBM SPSS Statistics (Version 27) for comprehensive statistical analysis. Scale reliability was assessed through both item-total correlations and Cronbach's alpha coefficients. The adequacy of the dataset and sample size for factor analysis was assessed using the *Kaiser–Meyer–Olkin (KMO)* measure of sampling adequacy and Bartlett's test of sphericity. A KMO value exceeding 0.60, along with a statistically significant result from Bartlett's test, indicated that the data were suitable for factor analysis (Seçer, 2020). A confirmatory factor analysis (CFA) was conducted utilizing LISREL software to evaluate the construct validity of the measurement scale. During the evaluation process of model fit, various statistical fit indices were carefully examined. The Relative Chi-Square Index (CMIN/DF) is a fit measure adjusted according to the model's degrees of freedom. The Root Mean Square Error of Approximation (RMSEA) assesses the model's fit to the data while accounting for error margin. The Comparative Fit Index (CFI) compares the model fit against an independent model, whereas the Tucker-Lewis Index (TLI) measures fit while also considering model complexity. The Standardized Root Mean Square Residual (SRMR) indicates the difference between observed and predicted correlations, while the Root Mean Square Residual (RMR) represents the average difference among variances. These indices are used to evaluate model fit from different

perspectives in structural equation modeling (Bae, 2017; Byrne, 2013; Seğer, 2020; Woo, 2017). Reliability was evaluated using Cronbach's Alpha and McDonald's Omega coefficients. Both values exceeded the threshold of 0.70, indicating a high level of internal consistency (Pallant, 2020; Seğer, 2020). Consistency over time was assessed by using the test–retest method (Seğer, 2020).

Scale Contamination Assessment

In line with Bambling (2024), scale contamination was evaluated to determine whether any items were measuring unintended constructs, exhibited conceptual drift, or demonstrated cross-loadings that could compromise construct validity. Contamination indicators were examined using confirmatory factor analysis outputs, including modification indices, cross-loading diagnostics, and factor correlations. All items loaded cleanly onto a single factor, with no cross-loadings or elevated modification indices suggesting contamination. Item–total correlations (0.494–0.697) further supported internal consistency without evidence of construct overlap. These results indicate that the Turkish version did not display scale contamination.

Ethical Considerations

Ethics Committee of the relevant university granted permission to conduct the study (2025/06—33 numbered). Permission to adapt SCBCS was obtained from the scale owner through official correspondence. This research adhered to the ethical standards set forth in the Declaration of Helsinki regarding human subjects research. In addition, the purpose was explained in detail to and verbal consent of the participants was received for participation.

Results

The participants were between 19 and 62 years of age, with a mean age of 29.17 ± 9.09 . Among the participants, 55.4% were female, 58.2% were married, 87.7% held an undergraduate degree or higher, 53.8% were employed, and 90.8% reported not having a chronic illness.

Results Related to Validity

Content Validity

Expert evaluations demonstrated excellent content validity, with item-based indices (I-CVI) of 0.90–1.00 and a scale-level index (S-CVI) of 0.99.

Construct Validity

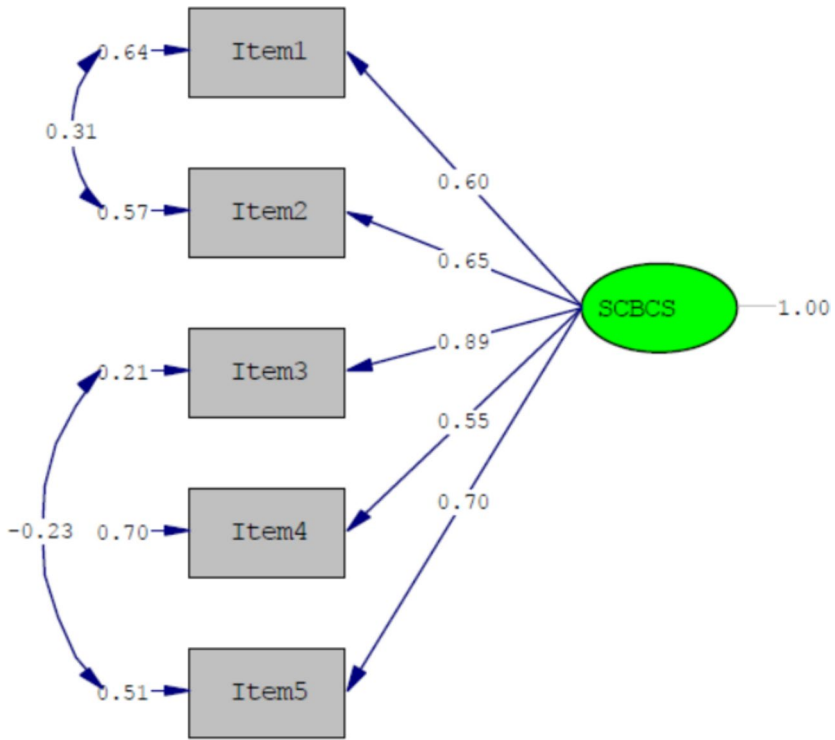
Prior to conducting construct validity analysis, the KMO measure and Bartlett's test of sphericity were utilized to assess the adequacy of the sample size and the suitability of the data for factor analysis. Kaiser–Meyer–Olkin measure yielded a sampling adequacy value of 0.785, confirming the dataset's suitability for factor analysis. Bartlett's test of sphericity yielded a statistically significant result ($\chi^2 = 566.737$; $p < 0.001$). Confirmatory factor analysis (CFA) was directly employed to evaluate the hypothesized unidimensional structure of the 5-item scale. The CFA results indicated that factor loadings ranged from 0.550 to 0.890, supporting the adequacy of the single-factor model (Table 1).

Confirmatory Factor Analysis

The fit indices obtained as a result of confirmatory factor analysis are as follows: $\chi^2 = 5.67$, $SD = 3$ ($p < 0.05$), $\chi^2/SD = 1.89$, $RMSEA = 0.052$, $CFI = 0.99$, $SRMR = 0.017$, $TLI = 0.99$, $RMR = 0.039$ and $AIC = 29.67$ (Table 3). The path diagram of the analysis process is presented in Fig. 1.

Table 1 Descriptive characteristics

Characteristics	Number ($n = 325$)	%
<i>Gender</i>		
Female	180	55.4
Male	145	44.6
<i>Marital status</i>		
Married	189	58.2
Single	136	41.8
<i>Educational status</i>		
Literate	5	1.5
Primary education	3	0.9
High school	32	9.8
Undergraduate and higher	285	87.7
<i>Employment status</i>		
Employed	175	53.8
Unemployed	150	46.2
<i>Presence of chronic disease</i>		
Yes	30	9.2
No	295	90.8
	Mean \pm SD	Min–Max
Age (year)	29.17 \pm 9.09	19–62



Chi-Square=5.67, df=3, P-value=0.12859, RMSEA=0.052

Fig. 1 PATH diagram regarding the factor structure of the scale

Reliability Results

Cronbach's Alpha coefficient was found as 0.805. In addition, the Omega coefficient, which supports the reliability of the scale, was 0.801 (Table 2). With regard to the assessment of items, the coefficients of item-total correlation ranged from 0.494 to 0.697 (Table 3).

Test–Retest Reliability

In order to establish temporal stability, a test–retest analysis was conducted on 30 participants at 20-day intervals, which resulted in a correlation coefficient of $r=0.989$, which was found to be statistically significant ($p<0.01$). Furthermore, no significant difference was observed between the two applications. The intraclass correlation coefficient (ICC) assessing test–retest reliability was 0.948 ($p>0.05$) (Table 4).

Table 2 Mean, item correlation coefficient, and DFA factor loading results

Scale items	Mean \pm SD	Corrected item-total correlations	Factor load value F1
Item 1	When I hear about someone (a stranger) going through a difficult time, I feel a great deal of compassion for him or her	5.80 \pm 1.40	0.615
Item 2	I tend to feel compassion for people, even though I do not know them	5.65 \pm 1.40	0.697
Item 3	One of the activities that provides me with the most meaning to my life is helping others in the world when they need help	5.42 \pm 1.45	0.657
Item 4	I would rather engage in actions that help others, even though they are strangers, than engage in actions that would help me	4.38 \pm 1.64	0.494
Item 5	I often have tender feelings toward people (strangers) when they seem to be in need	5.18 \pm 1.66	0.521
Cronbach's α : 0.805			

Table 3 Confirmatory factor analysis results

Fit criteria	Found	Appropriate	Acceptable	Result
χ^2/df (CMIN/DF)	1.89	< 2	< 5	Excellent fit
RMSEA	0.052	< 0.05	< 0.08	Acceptable fit
CFI	0.99	> 0.95	> 0.90	Excellent fit
SRMR	0.017	< 0.05	< 0.08	Excellent fit
RMR	0.039	< 0.05	< 0.08	Excellent fit
TLI	0.99	> 0.95	> 0.90	Excellent fit
AIC	29.67			

CFI Comparative fit index; *RMSEA* root mean square error of approximation; *RMR* root mean square residual; *SRMR* standardized root mean square residual; *TLI* Tucker–Lewis index; *AIC* Akaike information criterion

Discussion

The present study had a content validity index of 0.99. A value above 0.80 is considered sufficient in terms of content validity (Polit & Beck, 2008). The CVI value of 0.99 reflects a high level of consensus among experts' evaluations and demonstrates that the measured items are deemed adequate.

Prior to factor analysis, sample adequacy was evaluated to determine the suitability of the dataset, using the KMO measure and Bartlett's test of sphericity. Bartlett's test of sphericity yielded a statistically significant result, and KMO value was 0.785. These results indicated that the data were suitable for factor analysis. In the Portuguese validity and reliability study (Marchetti et al., 2018), KMO value was 0.78, and Bartlett's Sphericity Test was found to be statistically significant. Similarly, Czech validity and reliability study (Novak et al., 2021) found KMO as 0.81, and Bartlett's Sphericity Test as statistically significant. In Farsi and Spanish validity and reliability studies (Caycho-Rodríguez et al., 2020; Hoseininezahad et al., 2023), similar results were found. Based on similar results found in the literature, it appears that the dataset of the study is suitable for analysis.

In the present study, CFA was performed without preceding EFA to assess the validity of the five-item unidimensional structure. To demonstrate the adequacy of a measurement instrument's validity and factor structure, factor loadings for each item should meet or exceed a minimum threshold of 0.30 (Finch, 2019; Seçer, 2020). In other studies (Caycho-Rodríguez et al., 2020; Hoseininezahad et al., 2023; Marchetti et al., 2018; Novak et al., 2021), no items with factor loadings below 0.40 were found. In a Turkish validity and reliability study consistent with existing literature, factor loadings were 0.550–0.890, confirming the appropriateness of a single-factor structure.

For acceptable confirmatory factor analysis results, it is expected for the fit indices to be within certain threshold values. In this context, a CMIN/DF value below 5, RMSEA and SRMR values below 0.08, and a TLI value above 0.90 are indicative of an acceptable model fit (Aksu et al., 2017; Erkorkmaz et al., 2013). DFA fit index results of the Turkish validity and reliability study were $\chi^2 = 5.67$,

Table 4 Test–retest results and mean scores (*n*= 30)

Scale	Scale score means		Analysis results				ICC
	First implementation <i>X</i> ± <i>SD</i>	Second implementation <i>X</i> ± <i>SD</i>	<i>r</i>	<i>p</i>	<i>t</i>	<i>p</i>	
BV- SCSRFQ total	5.12 ± 1.16	5.26 ± 1.02	0.891**	0.000	− 1.381	0.178	0.948

**Correlation is significant at the 0.01 level (2-tailed); *r* Pearson Correlation Coefficient; *t*: *t*=Paired sample *t* test; *SCBCS* The Santa Clara Brief Compassion Scale; *ICC* intraclass correlation coefficient

$df=3$ ($p<0.05$), $\chi^2/df=1.89$, $RMSEA=0.052$, $CFI=0.99$, $SRMR=0.017$, $TLI=0.99$, $RMR=0.039$, and $AIC=29.67$. In Farsi, Spanish, Czech, and Portuguese validity and reliability studies, the CMIN/DF, RMSEA, SRMR, and TLI values were within the specified threshold limits (Caycho-Rodríguez et al., 2020; Hoseininezhad et al., 2023; Marchetti et al., 2018; Novak et al., 2021). In a Turkish study with similar results to those in the literature, the scale's fit levels were found to be acceptable and excellent, thus confirming its validity in Turkish.

Following recent recommendations in the literature (Bambling, 2024), we examined potential scale contamination to ensure that the translated items did not unintentionally measure additional constructs or demonstrate semantic drift. The CFA results showed no cross-loadings or modification index patterns indicative of contamination, and the item–total correlations supported the conceptual coherence of all items. These findings suggest that the Turkish adaptation preserved the conceptual purity and structural integrity of the original scale.

Internal consistency was assessed using Cronbach's alpha coefficient. As a result of the analyses, Cronbach's Alpha value for the overall internal consistency of the scale was found to be 0.805. In addition, the Omega coefficient, another indicator supporting internal consistency, was calculated as 0.801. The original scale showed high internal consistency, as indicated by a Cronbach's alpha coefficient of 0.90 (Hwang et al., 2008). In validity and reliability studies conducted in other languages, Cronbach's Alpha coefficients were found to be 0.84, 0.97, and 0.90 (Caycho-Rodríguez et al., 2020; Hoseininezhad et al., 2023; Marchetti et al., 2018; Novak et al., 2021). The item–total correlation coefficient assesses the degree of association between individual items and the overall scale score, with values of 0.30 or higher generally considered adequate (Finch, 2019; Seçer, 2020). In the item–based analysis, the item–total correlation coefficients ranged from 0.494 to 0.697.

The correlation coefficient obtained in the test–retest analysis was $r=0.989$, and this result was found to be statistically significant. The intraclass correlation coefficient (ICC) for test–retest reliability was determined to be 0.948. The results indicate a high level of reliability.

Compassion is a core virtue emphasized across major religious and spiritual traditions—including Islam, Christianity, Buddhism, and Judaism—and is frequently identified as a key mechanism through which religion influences health and well-being. Prior research demonstrates that religious involvement can shape prosocial attitudes, empathy, altruistic behavior, and caregiving motivation, all of which represent compassion-based pathways associated with improved mental and physical health outcomes (Koenig et al., 2012; Steffen & Masters, 2005). By providing a valid and reliable Turkish adaptation of the Santa Clara Brief Compassion Scale, the present study enables future research to examine how religious or spiritual beliefs may contribute to compassionate dispositions and how compassion may serve as a psychological bridge between religion and health within the Turkish cultural context.

Limitations

This study has several limitations. First, as the data were collected online through snowball sampling, issues of representativeness and potential self-selection bias may have affected the generalizability of the findings. Second, the relatively small sample size used in the test–retest reliability analysis limits the strength of conclusions regarding the stability of the scale. Finally, the reliance on self-reported data may have introduced response biases, such as social desirability, which should be considered when interpreting the results.

Conclusion

According to the results of the study, the five-item, single-factor Turkish version of the Santa Clara Brief Compassion Scale demonstrates strong psychometric properties and is consistent with the original version, thereby confirming its cultural equivalence. Beyond its reliability and validity, the scale offers practical utility in both clinical and academic contexts. In nursing education, it may be used to assess and enhance students' compassion competencies, while in clinical practice it can help evaluate the delivery of compassionate care and guide interventions to improve patient outcomes. Moreover, the instrument holds potential for community health research by providing a concise and efficient means of measuring compassion in diverse populations. Future studies should examine the applicability of the scale in different healthcare settings and across varied demographic groups to further strengthen its generalizability and contribution to nursing and health sciences.

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Author's Contribution NYB contributed to conceptualization, methodology, investigation, writing—original draft, writing—review and editing, and supervision. GB contributed to conceptualization, investigation, writing—original draft, writing—review and editing, and supervision. RÇA contributed to conceptualization investigation, writing—original draft, writing—review and editing, and supervision.

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Declarations

Conflict of interest The authors have no conflict of interest to disclose.

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