

Adaptation of the compassion competence scale to Turkish

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Abstract

Purpose: In this study, we examined the validity and reliability of the Compassion Competence Scale (CCS) by adapting it to Turkish.

Desing and Methods: The data of the methodological research were obtained from 180 nursing students in the 3rd and 4th grades of the nursing department of a public university.

Findings: CCS Cronbach alpha coefficient was determined as 0.795; 0.758 for the "Communication" subdimension and 0.639 for the "Sensitivity" subdimension and 0.658 for the "Insight" subdimension.

Practice Implications: As a result of this research, it was identified that the CCS is a valid and reliable evaluation tool in assessing compassion competence in nursing students.

KEYWORDS

Compassion competence, nursing students, reliability, scale adaptation, validity

1 | INTRODUCTION

According to Turkish Language Association, compassion is defined as the feeling of sadness and pity for the plight a human or a living creature encounters.¹ Compassion, defined as a deep awareness and strong desire to ease the suffering of others, is a primary element in quality health care.² Compassion in nursing is not only about understanding the difficulties experienced by the patient and empathizing with them but also supporting and empowering them with the nursing care they need.³ Compassion provides an understanding of the physical, mental, and emotional state of the patient and increases the quality of the care given.⁴ Compassion is accepted as a vital value in the nursing profession.⁵ Compassion, which is an important notion in nursing education, is seen as a value and emotional learning that shapes the ethos during the clinical education of nursing students.⁶

Compassion and competence in the nursing profession, are intricately connected as appreciation notions of the values and beliefs specific to basic components of nursing practice.⁷ Compassion, an important criterion in patient satisfaction enables establishing a therapeutic relationship with patients and providing quality nursing care.⁸ Also, among the characteristics of a good nurse, there are thinking based on compassion, respect, and sincerity.⁹ Compassion is understanding the pain of

individuals and showing sensitivity to their suffering. Compassionate individuals have the ability to seek solutions to other people's problems, to be kind, to help, and to support others.¹⁰ According to the Turkish Language Association competence is defined as "being competent, special knowledge that provides the power to do a job, capability, competence."¹¹ Lee and Seomun¹² used a hybrid model to define the notion of compassion competence in nurses and it determined that competence is the capacity of someone to successfully fulfill the responsibilities expected by them within the norms of society. As for professional competence, they stated that it includes the rational use of habits and theoretical knowledge, practical skills, communication, clinical reasoning, emotions, values, and reflection in daily practice.¹² Nurses not only should provide care with their cognitive or psychomotor skills but also with the knowledge, skill, attitude, and emotional competence towards reducing the suffering of patients.¹³

Nursing students who will become the health professionals of the future must present, in a quality manner, the needed nursing care of patients they are responsible for and their families during their internship/practice and career by using their compassion ability. Nursing students' offering compassionate care is an important subject for undergraduate education and content.^{14,15} In the education of nursing, it is necessary that the feeling of compassion must be

taught as a value to students and it must be adapted to the nursing curriculum.⁶

Domestic literature was scanned with “Kindliness” and “Compassion” keywords through TOAD Scales and Google Scholar and 8 Scales were found with these keywords.^{16–23} It was determined that some of these scales were not related to “Compassion Competence” or were not suitable for nurses and nursing students.^{18–20,22} It was determined that the other scales did not evaluate “Compassion Competence.” It was seen that Compassion Competence Scale (CCS), which was developed by Lee and Seomun¹² in South Korea, is an evaluating tool that can evaluate the compassion competence of nurses. Also, in the review of literature, no research that evaluates the compassion competence of nurses or nursing students in Turkey is found. In this research it was aimed to create a valid and reliable tool that is suitable for the Turkish Language and Culture to evaluate the compassion competence of nursing students. As a result of this research, it was aimed to introduce an evaluating tool that can be used in initiatives focusing on compassion in nursing education to Turkish literature, to help educational studies by ensuring the correct evaluation of compassion and to shed light on future research.

2 | METHOD

2.1 | Research type

It is methodological research that was conducted with the aim of adapting the CCS to Turkish.

2.2 | Place and date of the research

The research was carried out with 3rd and 4th-year students of the nursing department of a state university in Erzurum between November 2020 and January 2021.

2.3 | The population and sample of the research

The population of the research was constituted of 3rd and 4th-year students studying nursing at a state university in Erzurum. There are a total of 625 students in the 3rd and 4th year. When determining the sample size in the studies of scale adaptation, it is stated that the scale must be at least 5 times the number of scale items (10 times if possible).^{24,25} There are 17 items in the original of the CCS. Therefore, the sample size was predicted to be at least 85 or 170. The data was prepared via Google Forms and the generated link was conveyed to students through SMS. A total of 184 nursing students participated in the research voluntarily. To ensure normal distribution of data, the data of four participants were removed from the dataset. When the data of four participants were removed, a normal distribution was ensured. The research was continued with data acquired from 180 participants.

It was determined that 79.4% of the students who participated in the research were female, 51.7% were 4th year, 76.7% chose the nursing department willingly and 84.4% were between the ages of 19–22.

2.4 | Data collection tools

The research data were collected using the “Personal Information Form” and the “Compassion Competence Scale (CCS).”

2.4.1 | Personal information form

It consists of four questions that question the gender, age, class, and status of whether they choose to nurse willingly or not.

2.4.2 | Compassion Competence Scale

The scale¹² was developed in three stages by Lee and Seomun.

First stage: By using the theoretical, fieldwork, and analytical work stages of the hybrid model, product specification occurred based on concept analysis. The literature was scanned in the theoretical stage. During the fieldwork stage, eight in-depth interviews were held with six nurses. In the analytical stage, comparative analyses on the concept of compassion competence were conducted. Finally, the conceptual infrastructure of the scale was created.¹²

2.4.3 | Second stage

A pool of 49 items was created and these items' content validity was evaluated by submitting them to 10 expert opinions. As a result of the revisions, an 18-item evaluating tool was developed.¹²

2.4.4 | Third stage

The validity and reliability analysis of the CCS was done. The population of the research was constituted by 710 nurses. The sample of the research was constituted by 660 nurses. Data collection tools were applied twice at intervals for retesting. In the analyses made, it was determined that the scale is a valid and reliable evaluating tool. The scale was developed in a 5-point Likert type (1: *strongly disagree*–5: *strongly agree*). The scale consists of 3 subdimensions: communication (1,2,3,4,5,6,7,8), sensitivity/susceptibility (9,10,11,12,13), insight (14,15,16,17). In the item analysis of the scale, it was determined that the items had correlation values between 0.306 and 0.649. The structural validity of the scale was verified. The Cronbach alpha value, which shows the internal consistency of the scale, is 0.91. It was determined that the Cronbach alpha value of the communication subdimension was 0.88, 0.77 for the sensitivity subdimension, and 0.73 for the insight subdimension.¹² The first factor

communication means to express understanding and kindness towards patients and their families. The second factor *susceptibility* refers to the ability to notice through careful observation and to react to changes in patients' emotions. The third factor, *insight* is the ability to understand patients clearly and comprehensively realize their needs and conditions based on professional knowledge.¹²

2.5 | Translation process of the scale

During the studies of scale adaptation, the scale must be translated by at least two foreign language experts, its suitability to Turkish must be reviewed by at least two Turkish language experts, the suitability of the terminology to the field must be checked by field experts, and the necessary revisions must be provided.²⁶ After the Turkish form is created, the form must be translated into the original language and the forms should be compared by experts who master both the original language and Turkish.²⁶ The scale was translated into Turkish by three foreign language experts. After translation, a single form is created with the expression that takes place in scale items and this forms the suitability to scale items, Turkish language validity, suitability to culture was checked by the review of three Turkish Language experts, one Scale Development Expert and five field expert, and revisions were made. In line with expert recommendations, no items were removed from the scale, only revisions were made. As a result of the revisions, the scale items were collected in a single form and translated into the original language by a foreign language expert. The translated form was checked with the original scale and it was determined that the Turkish form was similar to the English form.

2.6 | Preimplementation

In scale adaptation studies, it is necessary to reach a sample of around 50 for the pilot application, to an internal consistency value of the scale be 0.70 and above, and to check whether the item-total correlation value is below 0.30 or not.²⁶ In this research, a pilot application was carried out with 54 nursing students. It was determined that the internal consistency value of the scale was 0.895. It was determined that the lowest item correlation value was 0.398. In light of this information, the actual implementation phase was started.

2.7 | Actual implementation

The evaluation tool was conveyed to nursing students by sending the data collection link via SMS using the Google Forms application and it was applied after obtaining their consent. A total of 184 nursing students filled out the data form. The test-retest method was used to evaluate the stability of the scale. It is recommended to perform the retest between 15 and 30 days in the literature.²⁶ In the research, the retest was conducted between 15 and 30 days.

2.8 | Data collection

The scale form was prepared in Google Forms application and a link was created for this scale form. This link was sent to 3rd and 4th year students via the institution's SMS system. A total of 184 people participated in the study. The data obtained were arranged and transferred to the SPSS Package Program and made suitable for data analysis.

2.9 | Statistical analysis

The data were analyzed with the SPSS 22 package program and AMOS application. Data were evaluated with arithmetic mean, SD, percentage, min-max values, Kaiser-Meyer-Olkin (KMO), Bartlett's test of sphericity, factor analysis, confirmatory factor analysis, χ^2/SD value, GFI, adjusted goodness of fit index, comparative fit index, RMSEA, root mean square residual, normed fit index, Tucker-Lewis index, incremental fit index, parsimony normed fit index, parsimonious goodness of fit index, standardized root mean square residual fit indices and PATH diagram, Spearman's correlation coefficient and Cronbach alpha coefficient.

2.10 | Ethical considerations and permissions

First of all, the necessary permissions were obtained from the scale owners, Lee and Seomun through email. Ethics committee approval was obtained with the decision numbered B.30.2ATA.0.01.00/09/04 from the Ethics Committee Administration of the relevant institution, on 05.11.2020. The institution permission required for the research to be applied was obtained from the faculty dean's office of the relevant institution (document no.: 80131151/2000302016). Information about the purpose and method of the research was given with the Google Forms application. The nursing students who participated in the research were informed that the research was based on the principle of voluntarism and their consent was obtained with the Google Forms application. It was informed that the names and data of the individuals participating in the research will not be shared.

3 | FINDINGS

3.1 | Findings regarding validity

3.1.1 | Explanatory factor analysis

Reliability analysis was conducted to determine whether the items had appropriate values or not. AFA was conducted to ensure the construct validity. To determine the items in the scale, it was taken into account that there was no overlapping item, the item eigenvalue was 1, and the item load value was at least 0.30.^{26,27} The total

TABLE 1 Demographic attributes of the students who participated in the research

	N	%
Sex		
Female	143	79.4
Male	37	20.6
Class		
3	87	48.3
4	93	51.7
Status of voluntarily choosing the nursing department		
Yes	138	76.7
No	42	23.3
Age		
19–22	152	84.4
23 and above	28	15.6

correlations of the CCS item and Cronbach alpha were given in Table 1. To ensure construct validity, 25° of Promax axis rotation preferred in scale adaptation studies was performed.

When the total correlations of the items were examined, it was determined that it varied between 288 and 593, and the total Cronbach alpha value was 0.857 (Table 2). During this period, the item was not removed due to the outcome of Cronbach alpha value is good. Analysis was continued with 17 items.

Before conducting explanatory and confirmatory factor analysis to the scale, KMO and Bartlett's sphericity test was performed to check the suitability of the sample size and the suitability of the dataset for analysis. The KMO value was determined to be 0.844. Bartlett's Globality test was found to significant ($\chi^2 = 891.725$; $p = 0.001$) (Table 3). When the literature was scanned, these results showed that the size of the sample and the dataset were suitable for analysis.^{25,26}

If an item has a load value of 0.32 and above in more than one dimension and the difference between the factor load values in these dimensions is less than 0.10, these items are considered overlapping and it is recommended to be removed from the scale.^{25,26} Therefore, some items (1, 4, 5, 12, 13, 14) were removed from the scale because they were overlapping items. It was determined that the KMO value was 0.802 in AFA that was conducted with 11 items and Bartlett's test of sphericity was significant ($\chi^2 = 493.900$; $p = 0.0001$) (Table 4). These findings showed that the data were suitable for explanatory factor analysis.^{25,26} As a result of the Promax analysis, it was determined that the scale items were collected under 3 factors. The presence of 3 components with an eigenvalue above 1 indicated that the scale had a 3-factor structure. In addition, the scree plots diagram pointed out that the scale is in a 3-factor structure (Figure 1) (Table 4).

When the analysis results are examined, it was determined that the first factor consisted of 5 items including 2, 3, 6, 7, 8 items, the

factor loads of the items varied between 0.521 and 0.604 and explained 34.294% of the total variance. This factor was named "Communication" as it included items related to "Communication" (Table 5).

It was determined that the second factor consisted of 3 items: 9, 10, 11 items, the factor loads of the substances vary between 0.556 and 0.686 and explain 13.270% of the total variant. This factor was named "Susceptibility" as it included items related to "Susceptibility" (Table 4).

It was determined that the third factor consisted of 3 substances: 15, 16, 17 substances, the factor loads of the substances vary between 0.555 and 0.648 and the total variance explains 10.704. This factor was named "Insight" because it included items related to "Insight" (Table 5).

When the 11-item scale was examined as a whole, it was found that it had a 3-factor structure, and the factor loads of 11 items varied between 0.521 and 0.686. It was determined that 3 factors explained 58.269% of the total variance. Tabachnick and Fidell (2007)²⁸ stated in their scale studies that the lower limit of item factor load value was 0.32. According to the data obtained, it can be said that the item factor load value of the 3-factor structure is sufficient.²⁹ Henson and Roberts³⁰ stated that the variance explained in an evaluating tool should be at least 52%. In many studies, it is stated that a value of 40% or above is acceptable.²⁵ It can be said that the scale explains the sufficient variance. The values obtained showed that the scale was sufficient to account for the compassion qualifications of nursing students (Table 5).

3.1.2 | Confirmatory factor analysis (CFA)

CFA was tested with the structure obtained by exploratory factor analysis (EFA). CFA was implemented using the AMOS Package Program. The AMOS package program did not have modifications as there were no appropriate modification recommendations. Information on compliance indices obtained as a result of CFA are given in the Table 6. The fit values were evaluated by considering more than one reference value.^{25,26,31,31,32}

In the analysis made as a result of CFA, five items in the factor named "Communication" were between 0.55 and 0.70; 3 items in the factor named "Susceptibility" between 0.51 and 0.80; it was determined that 3 items in the factor named "Insight" had standard solutions varying between 0.60 and 0.65 (Figure 2). The items were considered to be important for their factors. The Path Diagram was examined and it was determined that the obtained values were appropriate in terms of item-factor fit (Figure 2).

3.1.3 | Findings regarding reliability

Internal consistency (Cronbach alpha) coefficients

The Cronbach alpha coefficient was calculated to determine the reliability analysis of the 11 items of the final form of the scale.

TABLE 2 CCS item total correlations and Cronbach alpha coefficients

Scale items	Med. \pm SS	Total item correlation	Cronbach alpha if the item is deleted
CCS 1. I can express my kindness for patients by communicating with them.	4.31 \pm 0.741	0.397	0.853
CCS 2. I know how to communicate with patients to encourage them.	3.99 \pm 0.755	0.504	0.848
CCS 3. During conversation, I have a sense of humor that can evoke a good mood in patients.	3.94 \pm 0.847	0.528	0.847
CCS 4. Patients tell me about their concerns about illness and the difficulties of their illness.	4.14 \pm 0.741	0.411	0.852
CCS 5. I try to support patients through care to help them overcome their problems.	4.33 \pm 0.559	0.568	0.847
CCS 6. When communicating with patients, I respond to them with appropriate gestures and facial expressions.	4.48 \pm 0.593	0.490	0.849
CCS 7. I participate in training to improve my communication skills with patients, my colleagues, etc., other people.	3.66 \pm 0.952	0.462	0.851
CCS 8. I can properly provide the necessary emotional support to patients.	3.89 \pm 0.739	0.593	0.844
CCS 9. I am careful with my speech and behavior in order not to hurt the feelings of the patients.	4.67 \pm 0.527	0.472	0.850
CCS 10. I always take what patients say into consideration.	4.27 \pm 0.759	0.431	0.851
CCS 11. When patients ask for attention, I immediately pay attention to them.	3.64 \pm 0.843	0.288	0.859
CCS 12. I am tolerant of patients' opinions.	4.44 \pm 0.581	0.470	0.850
CCS 13. I am well aware of the changes in the emotional state of patients.	4.08 \pm 0.659	0.491	0.849
CCS 14. Thanks to my different clinical experiences, my intuition towards patients is strong.	3.66 \pm 0.841	0.530	0.847
CCS 15. I offer special care to patients by taking into account their personal characteristics.	3.91 \pm 0.793	0.513	0.847
CCS 16. I care for patients without being affected by personal difficult situations.	3.74 \pm 0.756	0.529	0.847
CCS 17. I can empathize enough with the difficulties experienced by the patients.	4.24 \pm 0.629	0.479	0.849

TABLE 3 Cronbach's alpha, KMO values, and Bartlett sphericity test results regarding datasets

Tests	Test results
KMO	0.844
Bartlett sphericity test	
χ^2	891.725
SD	136
<i>p</i>	0.0001

Abbreviation: KMO, Kaiser-Meyer-Olkin.

The scale was 0.757 for the “Communication” subdimension, 0.639 for the “Susceptibility” subdimension, and 0.658 for the “Insight” subdimension; Cronbach alpha value for the whole scale was determined to be 0.795. These values show that the scale is very reliable.^{33,34}

TABLE 4 KMO values and Bartlett sphericity test results regarding datasets

Tests	Test results
KMO	0.802
Bartlett sphericity test	
χ^2	493.900
SD	55
<i>p</i>	0.001

Abbreviation: KMO, Kaiser-Meyer-Olkin.

Two half reliability coefficients

As a result of the two-half reliability analysis regarding the final form of the scale consisting of 11 items, it can be said that the Spearman-Brown correlation value ($r = 0.640$) and Guttman Split Half Coefficient value ($r = 0.629$) of the scale have sufficient values and the

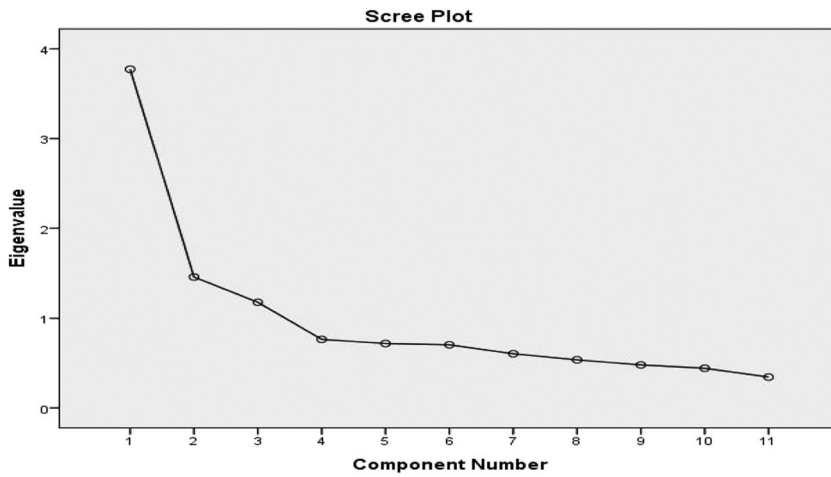


FIGURE 1 Scree plot diagram factor structure

TABLE 5 Compassion Competence Scale EFA results

Pattern matrix				
	Common factor variance	Factor load values		
		1	2	3
CCS 3	0.591	0.782		
CCS 7	0.521	0.716		
CCS 6	0.604	0.681		
CCS 2	0.529	0.667		
CCS 8	0.536	0.615		
CCS 10	0.686		0.801	
CCS 11	0.556		0.754	
CCS 9	0.612		0.623	
CCS 15	0.648			0.784
CCS 17	0.555			0.687
CCS 16	0.573			0.624
Eigenvalue (total = 6.409)		3.772	1.460	1.177
Total of variance explained % = 58.269%		34.294	13.270	10.704

Abbreviation: CCS, Compassion Competence Scale; EFA, exploratory factor analysis.

Cronbach alpha reliability coefficients for the two halves are sufficient.²⁶ Two-half reliability coefficients are given in the table (Table 6). Two-half reliability analysis results show that the scale is a reliable scale (Table 6).

Stability against time

A retest method was used to determine the invariance of the scale against time. A total of 33 students were reached. Test-retest results are in Table 7. It was given as according to the results of correlation analysis performed to determine the relationship between test and retest, it was found that there was

TABLE 6 CFA goodness of fit indices and normal values

Fit indices	Excellent	Acceptable	Result
χ^2/p	$p > 0.05$	–	0.001
χ^2/SD (CMIN/DF)	<2	<5	1.865
GFI	>0.95	>0.90	0.930
AGFI	>0.95	>0.85	0.888
CFI	>0.95	>0.90	0.921
RMSEA	<0.05	<0.08	0.070
RMR	<0.05	<0.08	0.034
SRMR	<0.05	<0.08	0.0657
NFI	>0.95	>0.80	0.849
TLI	$0.95 < TLI < 1$	$0.90 < TLI < 0.94$	0.895
IFI	>0.90	–	0.924
PGFI	>0.89	>0.50	0.578
PNFI	>0.89	>0.50	0.633

Abbreviation: AGFI, adjusted goodness of fit index; CFI, comparative fit index; IFI, incremental fit index; NFI, normed fit index; PGFI, parsimonious goodness of fit index; PNFI, parsimony normed fit index; RMR, root mean square residual; SRMR, standardized root mean square residual; TLI, trucker-lewis index.

a moderate and significant positive relationship between the two tests.

4 | DISCUSSION AND CONCLUSION

The translation of the scale into Turkish was provided by foreign language experts, Turkish language experts, scale development experts, and field experts evaluated the scale's suitability for the Turkish language, culture, and field, and necessary revisions were made. The scale, which was finalized in Turkish, was translated back into the original language by a foreign language expert, and the compatibility between the original form and the final form was

FIGURE 2 Compassion Competence Scale confirmatory factor analysis diagram [Color figure can be viewed at wileyonlinelibrary.com]

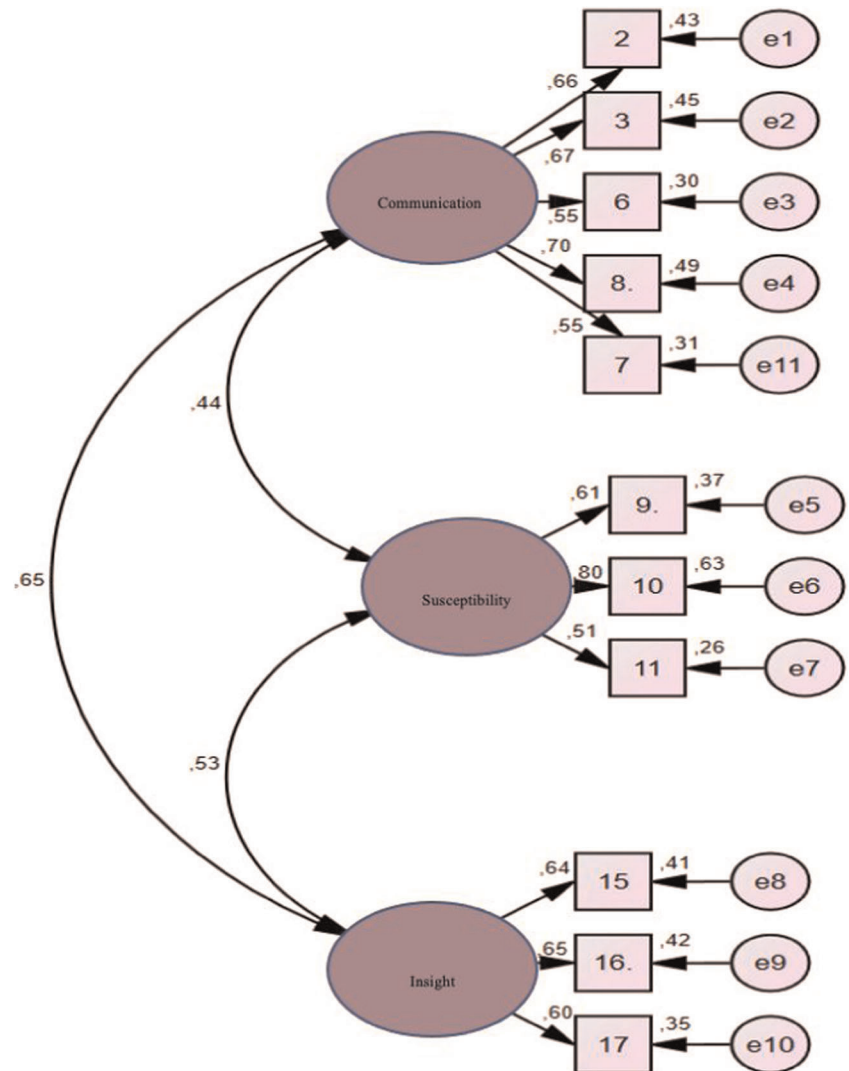


TABLE 7 Two-half reliability analysis results

Two-half reliability analysis	Cronbach alpha
Part 1	0.765
Part 2	0.667

evaluated. It was determined that the forms were similar to each other and preimplementation was made. As a result of the data obtained in the preimplementation, it was decided that the data were suitable for the actual implementation and the actual implementation was started. AFA was performed with the collected data and it was determined that the scale consisted of 3 factors and 11 items. CFA was performed in line with the data obtained from EFA, and model fit was examined and verified. After CFA, reliability analyzes were performed and the Cronbach alpha value for the whole scale was determined to be 0.795. The results of the split-half reliability analysis also showed that the scale has sufficient reliability. These results revealed that the scale is a valid and reliable scale.

The domestic literature was scanned with "Kindliness" and "Compassion" keywords through TOAD Scales and Google Scholar and 8 Scales were found with these keywords.¹⁶⁻²³ It was determined that some of these scales were not related to "Compassion Competence" or were not suitable for nurses and nursing students.^{18-20,22} It was determined that the "Scale of Compassion for the Life of Others," adapted by Coskun et al.,²³ consisted of two subdimensions: "Empathy" and "Relieving pain/suffering." The "Compassion Scale," adapted by Akdeniz and Deniz,¹⁶ was determined to consist of six dimensions: "Caring," "Indiffation," "Awareness of Shares," "Disconnection," "Conscious Awareness," and "Relationship Break." It was determined that the "Kindliness-Compassion Scale," which was examined by Sariçam and Erdemir²¹ for its psychometric characteristics, consisted of three subdimensions: "Compassion," "Me-centrism," and "Kindliness." It was determined that the "Compassion Fatigue-Short Scale" adapted by Dinç and Ekinci¹⁷ was composed of two subdimensions: "Secondary Trauma" and "Occupational Burnout." The subdimensions of the scale adapted in this research are "Communication," "Susceptibility" and "Insight." There was no similarity between the

subdimensions of the scales mentioned above and the subdimensions of the scale subject to the research. This shows the original direction of the scale.

As a result, it was determined that the scale consists of 11 items, and 3 subdimensions "Communication," "Susceptibility," and "Insight." It was determined that the subdimension of "Communication" consisted of 5 items, the subdimension of "Susceptibility" consisted of 3 items, and the subdimension of "Insight" consisted of 3 items. There is no reverse item on the scale. It was determined that the mean item score was used in the interpretation of the scale, and the lowest possible score was 1 and the highest score was 5. As the average item score obtained from the scale increases, the level of compassion competence increases. Cronbach's alpha value for the whole scale was determined to be 0.795. The invariance of the scale against time was proven. It was determined that the scale accounted for 58,269% of the total variance. It can be stated that the CCS is a valid and reliable evaluating tool for nursing students.

5 | IMPLICATIONS FOR NURSING PRACTICE

The validity and confidence study of the Turkish version of CCS shows that it fits the original scale well and is a valid and reliable tool. It is estimated that the Turkish version of CCS will contribute to use in nursing students as an important tool in determining compassion competence. On the other hand, this scale can be used by other health professionals to measure compassion competence. In addition, it is thought that the small number of items of the scale will facilitate the implementation and evaluation stages. In addition, it is thought that it will facilitate the decision to provide the necessary training in need.

6 | RESTRICTIONS

The restriction of this research is that not all students in the faculty can be included in the research. Another restriction is the removal of articles 1, 4, 5, 12, 13, 14 in the Original CSS due to low factor loads.

ACKNOWLEDGEMENTS

We would like to thank our nurse students for their role in the completion of this study.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

AUTHOR CONTRIBUTIONS

Understanding and design: Güzel Nur Aras, Bahar Çiftçi. *Data collection:* Bahar Çiftçi. *Data analysis and interpretation:* Güzel Nur Aras. *Preparation of the article:* Bahar Çiftçi, Güzel Nur Aras. *Critical review of the article:* Bahar Çiftçi.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Çiftçi B, Aras GN. Adaptation of the compassion competence scale to Turkish. *Perspect Psychiatr Care*. 2021;1-9. <https://doi.org/10.1111/ppc.12846>