

Palliative care and spiritual care competency measurement among Turkish Nurses: A scale adaptation study

Original Article


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Corresponding author: Zeliha Koç;
Email: zelihaeren@hotmail.com

Tuğba Kavalalı Erdoğan, PH.D. and Zeliha Koç, PH.D. 

Faculty of Health Sciences, Ondokuz Mayıs University, Samsun, Turkey

Abstract

Objectives. This study aimed to conduct a Turkish validity and reliability study of the Palliative Care Spiritual Care Competency Scale.

Methods. The sample of the study consisted of 354 nurses. In the first stage, the forward-backward translation method was used to develop the Turkish version of the Palliative Care Spiritual Care Competency Scale. The comprehensibility, purposefulness, cultural appropriateness, and discrimination of the scale items were evaluated with content validity. Confirmatory factor analysis (CFA) was applied to examine the construct validity of the scale. To evaluate the ability of the scale to give consistent results at different time intervals, the relationship between the scores obtained from the first and second applications was examined with the intraclass correlation coefficient (ICC). The reliability of the scale was evaluated with the Cronbach's alpha reliability coefficient and item-total score correlation coefficients.

Results. The content validity index of the Palliative Care Spiritual Care Competency Scale was found to be 0.98 after expert opinion was obtained. The goodness-of-fit values of the scale were χ^2 /sd: 3.125; GFI: 0.915; AGFI: 0.875; IFI: 0.926; TLI: 0.905; CFI: 0.925; RMSEA: 0.078; SRMR: 0.054. As a result of CFA, some items were removed from the scale, and a Turkish version of the scale consisting of 14 items and three sub-dimensions was developed. The reliability of the scale over time was evaluated with the test-retest method, and it was found that the inter-response agreement was very good (ICC: 0.981; $p < 0.001$). The Cronbach's alpha reliability coefficient of the scale was 0.89 and the Cronbach's alpha reliability coefficient of the subscales ranged between 0.78 and 0.85.

Significance of results. It was determined that the Turkish version of the Palliative Care Spiritual Care Competency Scale is a short, easy-to-understand, and psychometrically sound measurement tool that can be safely applied to Turkish nurses.

Introduction

Palliative care can be defined as active and integrative care for individuals with diseases that do not respond to treatment. Reports state that the global need for palliative care is increasing daily due to the aging population and disease and that an estimated 56.8 million people need palliative care every year (World Health Organization Palliative Care 2023).

The increasing need for palliative care in healthcare settings requires all nurses to have the necessary competence in this field. This competence is based on the knowledge, skills, values, and attitudes of nurses and is gained through education, experience, and self-awareness (Hökka, 2022; Kirkpatrick et al. 2017). Nevertheless, it has also been argued that nurses engaged in palliative care must possess specific competencies in collaborating and communicating effectively with patients, families, and teams. Among these are the abilities to navigate ethical and legal complexities while also tending to psychosocial and spiritual aspects of care (Hökka et al. 2020).

Spiritual care can be defined as identifying and meeting the spiritual needs of individuals (Baldacchino 2015). It has been reported that spiritual care includes being present with the individual, providing active listening, counseling and emotional support, demonstrating empathy, instilling hope, preparing an appropriate environment for patients with religious beliefs, referring patients to other professionals when required, and also offering spiritual support (Abel et al. 2018; Ebrahimi et al. 2017). The provision of spiritual care can positively affect an individual's health status and well-being (Abell et al. 2018; Ebrahimi et al. 2017). Such spiritual care can help individuals achieve inner peace and find meaning in life (Baldacchino 2015).

Spiritual care has also been reported to be a crucial component of healthcare delivery and holistic care (Abell et al. 2018; Ebrahimi et al. 2017). Although the holistic approach views humans as bio-psycho-social and spiritual beings, the spiritual care of patients can sometimes be overlooked in healthcare settings (Adib-Hajbaghery et al. 2017; Ebrahimi et al. 2017; Lewinson et al. 2015). Since holism recognizes that all patients have spiritual needs, it is important to

identify the spiritual care needs of individuals. For this reason, it is essential for spiritual care providers to know about spirituality and religion in order to better understand the individual and be able to use the most suitable approach (Sulmasy 2012).

It has also been emphasized in the literature that it is essential for nurses to have the necessary competencies to meet the spiritual care needs of patients (Baldacchino 2015; Chen et al. 2016; Hu et al. 2019a; Lewisson et al. 2015). Competencies can be defined as the proven abilities to use knowledge, skills, and abilities in the work environment (Baldacchino 2015). It has been reported that such competencies can be determined by assessing an individual's actions or performance and their ability to fulfill a task (McMullan et al. 2003).

In the clinical care environment, nurses often come across patients who have spiritual expectations or needs; however, it has been noted that they often lack the necessary competencies in spiritual care (Hsieh et al. 2023). One study on this topic revealed that nurses generally possess a moderate level of spiritual care competency (Guo et al. 2021). The concept of spiritual care competency encompasses the evaluation of nurses' knowledge, skills, and attitudes in addressing the religious and existential needs of patients. It involves recognizing and addressing patients' experiences and inquiries regarding the meaning and purpose of life, and providing appropriate spiritual care (van Leeuwen et al. 2009). Furthermore, it is important to acknowledge that cultural and religious differences can impact healthcare professionals' ability to deliver spiritual care effectively (Harrad et al. 2019).

Studies have highlighted a close association between nurses' ability to provide spiritual care and the fulfillment of patients' spiritual needs (Hu et al. 2019b; Li et al. 2022). Despite the growing interest in spiritual care, it has been observed that this remains the most overlooked dimension of palliative care, with limited evidence regarding spiritual care competency in palliative care settings (Larenjeria et al. 2023). The competency of nurses in delivering spiritual care is crucial and warrants attention (Hu et al. 2019b; Li et al. 2022). Nurse managers and educators play a vital role in enhancing nurses' awareness of spiritual care, enabling them to promptly and accurately identify patients' spiritual care needs when they have a high awareness of these (Zeng et al. 2023). Fulfilling patients' spiritual care requirements has the potential to enhance their quality of life and health outcomes (Hu et al. 2019b).

In Turkey, the field of palliative care has seen recent developments both with regard to specific research and in terms of legal regulations. The implementation of the "Directive on Palliative Care" in 2014 marked a significant step forward (Uyar and Köken 2020). Prior to this, the recognition of palliative care as a medical discipline came with the establishment of the "Palliative Care Program Action Plan" in 2008 and the "Palya-Türk" project by the Ministry of Health in 2010 (Çölgeçen and Güney Aslan 2022; Uyar and Köken 2020). According to the April 2020 data from the Ministry of Health of the Republic of Turkey, palliative care services are available in all 81 provinces, encompassing 415 health facilities with a combined bed capacity of 5566 (Çölgeçen and Güney Aslan 2022). Palliative care services in Turkey primarily concentrate on cancer patients and the management of pain (Kavşur and Sevimli 2020).

In comparison to international standards and regulations in the field of palliative care, Turkey's services are in need of more national regulations to further enhance their quality (Ekinici and Bölüktaş 2023). To address this, the Turkish Council of Higher Education has recommended the provision of "palliative care training" for

nurses, encouraging in-service trainings and the introduction of courses dedicated to this subject (Koç 2021). While some universities in Turkey offer palliative care courses as electives in undergraduate nursing programs and as mandatory courses in graduate nursing education, it is important to note that not all universities include it in their nursing education curricula (Kudubeş et al. 2022).

Several studies conducted in Turkey have highlighted the inadequate attention paid to spiritual care in both nursing education curricula and in practice after graduation (Çetinkaya et al. 2013; Kavak et al. 2014; Kostak et al. 2010; Yılmaz and Okyay 2009). It has been reported that nurses lack knowledge and skills in providing spiritual care (Demirbağ & Özkan, 2018; Ercan et al. 2018), and they do not perceive spiritual care as a part of their nursing role (Demirbağ and Ozkan 2018). Furthermore, the spiritual needs of patients are often overlooked (Aslan et al. 2020; Kavak et al. 2014; Khorshid and Arslan Gürol 2006; Kostak et al. 2010; Yılmaz and Okyay 2009). The lack of education and knowledge has been identified as a significant barrier to providing spiritual care (Çetinkaya et al. 2013; Eglence & Şimşek, 2014; Ercan et al. 2018; Kostak et al. 2010; Özbaşaran et al. 2011; Yılmaz and Okyay 2009), further preventing it from being effectively delivered.

In our country, there is thus a clear need for a trustworthy measurement tool that can effectively assess the competencies of nurses in palliative and spiritual care. The Palliative Care Spiritual Care Competency Scale, created by Chen et al. (2016), was specifically designed to evaluate the capabilities of palliative caregivers in delivering spiritual support to patients in their final stages. This scale is made up of items meant to gauge the palliative care and spiritual care proficiencies of healthcare practitioners and it emphasizes the significance of having a strong grasp of these competencies. Employing this scale, allows one to quantitatively measure the expertise of palliative care professionals in providing spiritual assistance to patients. While the Palliative Care Spiritual Care Competency Scale has been validated, it is noteworthy that it has not yet undergone cross-cultural testing. Nonetheless, it was used in the present study due to its concise, practical, and user-friendly nature. As a self-report scale offering a convenient means of assessing both palliative care and spiritual care competencies, it was a good fit for our specific research objectives.

A comprehensive review of the literature revealed that a Turkish version of the Palliative Care Spiritual Care Competency Scale has not yet been tested for validity and reliability. Conducting such a study will contribute to both the international and national literature by examining the validity and reliability of the scale across different countries. Adapting the scale to Turkish will enable the assessment of palliative care and spiritual care competency among nurses in Turkey. Additionally, it will allow for the evaluation of nurses' knowledge, self-awareness, and practices in spiritual care (Chen et al. 2016; Hu et al. 2019a). On the basis of the research findings, appropriate recommendations and strategies can be developed to enhance these competencies in nursing practice. This study thus aimed to address the question of whether the Turkish version of the Palliative Care Spiritual Care Competency Scale can serve as a valid and reliable measurement tool for evaluating the palliative care and spiritual care competencies of nurses in Turkey.

Theoretical framework

The conceptual framework of this study is built upon Benner's "Novice to Expert Theory." According to Benner's theory, a nurse

who has reached the stage of competency in skill acquisition possesses a deep understanding and comprehension of the patient's situation. They can anticipate typical events that may arise in a given situation and draw upon past experiences to adapt their plans in response to any events encountered. This holistic perception of the situation enhances the nurse's decision-making abilities. By recognizing the significant features and aspects, they can make informed decisions about patient care (Benner 1984).

Benner's theory underscores the importance of holistic understanding in nursing education and practice, including spirituality, religion, patient listening, and communication skills (Boswell et al. 2013; Butts and Rich 2011). Since palliative care patients often rely on nurses to identify and address their spiritual needs (Kang et al. 2021), there may be specific periods where a nurse's competency in a particular area becomes more pronounced based on patient requirements. By utilizing Benner's theory, both nursing practices and roles can be further developed (Boswell et al. 2013). Nurses who embrace Benner's philosophy as a framework for their care practices can evaluate their competencies in various areas of practice (Masters 2015). Thus, it is crucial for nurses to cultivate palliative care and spiritual care competencies within the framework of Benner's theory.

The Palliative Care Spiritual Care Competency Scale, which assesses the competence of nurses in providing spiritual care, was developed based on Benner's model (1984). Benner's model emphasizes the significance of theory-based scientific research and clinical experience in the development of knowledge. By designing the Palliative Care Spiritual Care Competency Scale within this framework, the scale aligns with Benner's concept of "clinical wisdom and skill acquisition in nursing practice" (Masters 2015). Benner's theoretical framework provides a comprehensive and interpretive structure for understanding and advancing nursing knowledge (Alligood and Tomey 2018).

Methods

Aim of the study

This study aimed to test the Turkish validity and reliability of the Palliative Care Spiritual Care Competency scale and its psychometric properties.

Sampling method and data collection

The study was carried out from March 10, 2021 to January 4, 2023. The sample consisted of 838 nursing professionals actively engaged within an academic medical institution. The cohort of nurses was chosen using the "Simple Random Sampling Method," a form of Probability Sampling in which each individual in the population has an equal and unbiased chance of being selected (Erdoğan et al. 2015). The selection of nurses adhered to the parameters outlined within the sample size formula for known population sizes, as well as the number of items contained within the scale to be adapted. In accordance with the stipulations of the Basiran population-dependent sample size formula, the minimum number of nurses for inclusion in the study was computed as 264, thereby maintaining an error threshold of 4% at a 95% confidence interval. However, in the context of scale-based research, it is conventionally advised that the sample size be 5 to 10 times the volume of scale items. In alignment with this suggestion, and with respect to the scale for development, which had a total of 18 items, the aim was that the sample size should be no less than tenfold the number of scale items (Kline 1994; O'Rourke and Hatcher 2013). Subsequently,

the process of data collection began with the enrollment of 354 participating nurses within the relevant hospital. The recruitment strategy employed stratified sampling in selecting nurses from various departments including internal medicine, surgery, and intensive care. Eight nurses declined to participate in the study during the period of data collection, leading to a questionnaire form response rate of 97.8%.

The data of the study were collected using a General Characteristics Form including questions about the sociodemographic and professional characteristics of the nurses and the Palliative Care Spiritual Care Competency Scale, the Turkish validity and reliability of which was being tested. The purpose of the study was explained to the participating nurses and their informed consent was obtained before the questionnaire and the scale were applied. During the data collection process, the principle of voluntariness was taken into consideration by acting according to the principles of scientific ethics. The nurses were informed that the decision on whether to participate in the study was entirely their own and that the data collected would only be used within the scope of the research. These data were collected by the researchers through face-to-face interviews with the nurses. The nurses were asked to fill in the data collection forms in a quiet room in the clinic where they worked during their less busy hours, and the data collection period lasted approximately 8–10 min.

Data collection tools

General characteristics form

The general characteristics form consisted of questions about the sociodemographics (age, gender, educational status) and professional characteristics (years of employment, nature of role, etc.) of the nurses.

Palliative care spiritual care competency scale

The Palliative Care Spiritual Care Competency Scale was developed in Taiwan by Chen et al. (2016) with the purpose of assessing the competency levels of nurses in both palliative care and spiritual care. The validity and reliability study of the scale in traditional Chinese was conducted by Hu et al. (2019a). The original scale consists of 18 items with three sub-dimensions: Spiritual Care Knowledge, Spiritual Care Self-Awareness, and Spiritual Care Practices. In this study, after the Turkish validity and reliability study of the scale, a structure consisting of 14 items and three sub-dimensions was obtained. The Spiritual Care Knowledge sub-dimension of the Turkish version of the scale consists of three items (the 1st, 2nd, and 3rd items), the Spiritual Care Self-Awareness sub-dimension consists of five items (the 4th, 5th, 6th, 7th, and 8th items), and the Spiritual Care Practices sub-dimension consists of six items (the 9th, 10th, 11th, 12th, 13th, and 14th items).

Nurses are asked to answer all the items of the scale on a range from "not at all appropriate" (= 1 point) to "fully appropriate" (= 5 points). The mean total and sub-dimension scores of the Palliative Care Spiritual Care Competency Scale vary between 1 and 5 points. When the total and sub-dimension mean scores of the scale approach 1 point, this is interpreted as a decrease in the palliative care spiritual care competency level of the nurses, and when they approach 5 points, this is interpreted as an increase in the palliative care spiritual care competency level of the nurses.

The Cronbach's alpha reliability coefficient of the scale was reported as 0.92 by Chen et al. (2016) and 0.86 by Hu et al. (2019a). In this study, the Cronbach's alpha reliability coefficient of the total Palliative Care Spiritual Care Competency Scale was 0.89, while the

Cronbach's alpha reliability coefficients of the scale's Spiritual Care Knowledge sub-dimension, Spiritual Care Self-Awareness sub-dimension, and Spiritual Care sub-dimension were 0.78, 0.79 and 0.85, respectively. To conduct the Turkish validity and reliability studies of the Palliative Care Spiritual Care Competency Scale, permission was obtained from the scale owner, Chen.

Scale adaptation process

Linguistic validity

The translation process followed a rigorous forward-backward model, as outlined by Beaton et al. (2000). The initial translation of the scale from Chinese to Turkish involved four independent translators who were native Turkish speakers with good knowledge of both Chinese and Turkish cultures. Among the translators, two were informed about the study's subject and purpose, while the other two were not provided with any specific information. This approach aimed to lead to the production of both informed and natural translations (Çapık et al. 2018; Erdoğan et al. 2015; World Health Organization 2017). The translators worked independently without any communication until the translations were completed. The research team then compared the four translations to develop a unified text for the scale. Concurrently, the researchers collaborated with the translators to assess each item of the scale in terms of semantic, conceptual, linguistic, and contextual differences, focusing particularly on intercultural aspects (Çapık et al. 2018; Erdoğan et al. 2015; World Health Organization 2017).

Following the initial translation, the scale was back-translated from Turkish to Chinese by three independent translators who were native Chinese speakers and had no prior knowledge of the scale. During the back-translation process, the original version of the scale was not revealed to the translators, so that their translations could be subsequently compared with the language of the original version without them being influenced by it (Çapık et al. 2018; Erdoğan et al. 2015; World Health Organization 2017). After completing the back translations, the differences between the back-translated versions and the original scale were compared by the researchers and the translation team. Similar to the initial translation, emphasis was placed on maintaining conceptual and cultural equivalence during the back-translation process. The aim was to determine whether the translated items conveyed the same meaning as the items in the original scale (World Health Organization 2017). It was observed that the scale items were consistent with each other and retained the intended meaning.

Content validity

Content validity is a crucial aspect of determining whether a measurement tool adequately captures an intended concept both quantitatively and qualitatively (Erdoğan et al. 2015; Karakoç and Dönmez 2014). In this study, the Palliative Care Spiritual Care Competency Scale underwent content validity evaluation by 14 experts, consisting of seven nursing academics and seven clinical nurses, following the guidelines provided by Polit and Beck (2010). The experts assessed the scale items in terms of their comprehensibility, ability to serve the intended purpose, cultural appropriateness, and discriminability. The evaluation of expert opinions utilized the Lawshe technique (Lawshe 1975), as recommended by Veneziano and Hooper (1997).

Content validity ratios (CVRs) were calculated for each scale item based on the responses provided by the 14 experts. In the literature, it is recommended that items with CVRs lower than the content validity criterion be excluded from the scale (Özdamar 2017). In this study, a content validity criterion of 0.51 was adopted,

corresponding to the number of experts consulted (Veneziano and Hooper 1997). Following the expert opinions, the scale validity index was determined to be 0.98, indicating high scope validity.

The Palliative Care Spiritual Care Competency Scale demonstrated item CVRs ranging from 0.86 to 1, with no items falling below the value of 0.51. This indicated that the 18-item scale exhibited statistically significant content validity, effectively representing the intended measurement area and ensuring content validity (Erdoğan et al. 2015; Karakoç and Dönmez 2014).

Pilot study

To assess the comprehensibility of the Palliative Care Spiritual Care Competency Scale and the General Characteristics Form, a pilot study was conducted with 20 nurses. The purpose of the pilot study was to identify any items in the adapted scale that were incomprehensible to the participants. The nurses who took part in the pilot study reported that they found the scale items understandable and had no difficulty comprehending them. As a result, no modifications were made to the scale items following the pilot study. It is important to note that the nurses involved in the pilot study were not included in the final sample used for data collection in order to maintain the integrity of the study.

Construct validity

In studies on scale adaptation, assessing construct validity is a commonly employed method to evaluate the measurement tool's effectiveness in accurately measuring the intended concept. Factor analysis is a widely used method to examine construct validity by identifying underlying factors or dimensions that explain the interrelationships among variables (Izquierdo et al. 2014; O'Rourke and Hatcher 2013).

In this study, confirmatory factor analysis (CFA) was conducted to verify the original structure of the Palliative Care Spiritual Care Competency Scale, which initially consisted of 18 items and three factors. However, the CFA results indicated that the model did not demonstrate adequate fit. To improve the model, several adjustments were made. Specifically, items 13 and 14 were eliminated from the structure due to their low factor loadings and items 4 and 8 were removed due to excessive modifications.

After these adjustments, the revised structure of the scale consisted of 14 items and three factors. It was observed that all the items had factor loadings above 0.500, indicating satisfactory levels of association with their respective factors (Table 1). The goodness-of-fit values of the revised scale were also assessed, including χ^2 /sd: 3.125; GFI: 0.915; AGFI: 0.875; IFI: 0.926; TLI: 0.905; CFI: 0.925; RMSEA: 0.078; SRMR: 0.054 (Table 2).

Moreover, the factor loadings of the Palliative Care Spiritual Care Competency Scale items, as determined through CFA, ranged between 0.563 and 0.793 (Table 3). These factor loadings reflect the strength of the relationships between each item and its corresponding factor, further supporting the construct validity of the adapted scale.

Test-retest/invariance reliability

Test-retest reliability refers to the consistency of a measurement tool in providing consistent results across multiple applications and demonstrating stability over time. The test-retest method involves re-administering the same assessment to the same individuals under similar conditions but at different time intervals, with the aim of assessing the scale's consistency. In this context, a correlation coefficient is calculated to determine the relationship between the scores obtained from the two administrations. A high correlation coefficient indicates a high level of reliability.

Table 1. Factor loadings of the items of the palliative care spiritual care competency scale after confirmatory factor analysis

Items	First state			Final state		
	Spiritual care knowledge	Spiritual care self-awareness	Spiritual care practice	Spiritual care knowledge	Spiritual care self-awareness	Spiritual care practice
Item 3	0.735			0.737		
Item 2	0.788			0.793		
Item 1	0.697			0.689		
Item 4		0.562			-	
Item 6		0.688			0.722	
Item 5		0.671			0.611	
Item 7		0.593			0.563	
Item 8		0.605			-	
Item 9		0.696			0.700	
Item 10		0.640			0.624	
Item 12			0.756			0.710
Item 13			-0.059			-
Item 14			-0.053			-
Item 15			0.696			0.658
Item 16			0.749			0.722
Item 17			0.739			0.777
Item 11			0.700			0.660
Item 18			0.578			0.600

Table 2. Fit index values and good fit values of the measurement model of the palliative care spiritual care competency scale

	Model's fit index values	Good fit values (acceptable compliance)
χ^2/sd	3.125	≤ 3 (4-5)
GFI	0.915	≥ 0.90 (0.89-0.85)
AGFI	0.875	≥ 0.90 (0.89-0.85)
IFI	0.926	≥ 0.95 (0.94-0.90)
TLI (NNFI)	0.905	≥ 0.95 (0.94-0.90)
CFI	0.925	≥ 0.95 (0.94-0.90)
RMSEA	0.078	≤ 0.05 (0.06-0.08)
SRMR	0.054	≤ 0.05 (0.06-0.08)

χ^2/sd = Chi-square statistic; GFI = Goodness-of-Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Root Mean Square Root of Standardized Error Squares.

In the current study, the Palliative Care Spiritual Care Competency Scale was used, and 70 nurses were randomly selected from a larger sample of 354 nurses to participate. The scale was administered to these nurses at two-week intervals. To assess the scale's consistency over time, the intraclass correlation coefficient was used to examine the relationship between the scores obtained from the first and second administrations. The analysis revealed a very good agreement between the participants' responses to the repeated questions, indicating high reliability ($p < 0.001$) (Table 4).

Table 3. Factor loadings of palliative care spiritual care competency scale items after confirmatory factor analysis

Items	Spiritual care knowledge	Spiritual care self-awareness	Spiritual care practice
Item 1	0.689		
Item 2	0.793		
Item 3	0.737		
Item 5		0.611	
Item 6		0.722	
Item 7		0.563	
Item 9		0.700	
Item 10		0.624	
Item 11			0.660
Item 12			0.710
Item 15			0.658
Item 16			0.722
Item 17			0.777
Item 18			0.600

Cronbach's alpha reliability coefficient

The internal consistency of the Palliative Care Spiritual Care Competency Scale and its sub-dimensions was evaluated using the Cronbach's alpha reliability coefficient. The Cronbach's alpha reliability coefficient method is commonly employed to assess the

Table 4. Intraclass correlation coefficient (ICC) between palliative care spiritual care competency scale test–retest scores

	ICC	<i>p</i>
Palliative care spiritual care competence	0.981	0.000*
Spiritual care knowledge	0.952	0.000*
Spiritual care self-awareness	0.966	0.000*
Spiritual care practice	0.980	0.000*

**p* < 0.001, *p* = significance level.

Table 5. Reliability analysis results of palliative care spiritual care competency scale

	Item number	Cronbach's alpha (α)	Reliability level
Palliative care spiritual care competency	14	0.89	Highly reliable
Spiritual care knowledge	3	0.78	Quite reliable
Spiritual care self-awareness	5	0.79	Quite reliable
Spiritual care practice	6	0.85	Highly reliable

internal consistency of Likert-type measurement instruments. It determines whether the items in the scale represent a cohesive whole. This method calculates the sum of the variances of all questions in the scale relative to the total variance of the scale. The resulting Cronbach's alpha coefficient ranges from 0 to 1. A Cronbach's alpha coefficient approaching 1 indicates increased reliability of the scale (Karagöz 2017; Karasar 2018; Özdamar 2017).

In this present study, the Turkish version of the Palliative Care Spiritual Care Competency Scale was found to have high reliability, with a total of 14 items yielding a Cronbach's alpha coefficient of 0.89. The Spiritual Care Knowledge sub-dimension, consisting of three items, demonstrated high reliability ($\alpha = 0.78$), the Spiritual Care Self-Awareness sub-dimension, consisting of five items, exhibited high reliability ($\alpha = 0.79$), and the Spiritual Care Practices sub-dimension, comprising six items, also showed high reliability ($\alpha = 0.85$) (Table 5).

Item-total score correlation coefficients

Examining the item-total correlation coefficients of the Palliative Care Spiritual Care Competency Scale, it was noted that none of the items had a negative impact on the Cronbach's alpha coefficient. The total correlation coefficients for items were found to range from 0.460 to 0.675. When each item was individually removed from the scale, the Cronbach's alpha reliability coefficient of the total scale ranged from 0.883 to 0.891. It was observed that removing any specific item did not cause a significant change in the overall reliability of the scale (Table 6).

Data analysis

The study data were analyzed using IBM SPSS Statistics 28.0 program. Frequency distributions were given for categorical variables, and descriptive statistics (mean \pm standard deviation [SD]) were given for numerical variables. The validity analysis of the Palliative Care Spiritual Care Competency Scale was performed first. The Lawshe method was applied in content validity analysis, and CFA

Table 6. Item-total correlations of the palliative care spiritual care competency scale and Cronbach's alpha values when the item was deleted

	Item-total correlations	Cronbach's alpha when item deleted
Item 1	0.519	0.889
Item 2	0.583	0.886
Item 3	0.540	0.888
Item 5	0.530	0.888
Item 6	0.647	0.883
Item 7	0.460	0.891
Item 9	0.622	0.884
Item 10	0.559	0.887
Item 11	0.654	0.883
Item 12	0.656	0.883
Item 15	0.567	0.887
Item 16	0.604	0.885
Item 17	0.675	0.883
Item 18	0.501	0.890

was applied in construct validity. In the reliability studies, the reliability of the scale and its sub-dimensions were examined with the Cronbach's alpha internal consistency coefficient and item-total score correlation coefficient. The time invariance of the scale was evaluated by the test–retest method. The significance level was accepted as 0.05 in all statistical analyses applied within the scope of the research.

Ethical considerations

The study was implemented after the approval of the Clinical Research Ethics Committee of Ondokuz Mayıs University (B.30.2. ODM.0.20.08/11-58). Written permission (E-15374210-804.01-33874) was obtained from the university hospital where the study would be conducted to collect the data.

Results

The total number of nurses who participated in the study was 354. It was determined that 84.5% of the nurses were female, 15.5% were male, 78.5% had bachelor's degrees, 38.4% had been working for between 1 and 5 years, and 37.6% worked in internal clinics. The mean age of the nurses was 32.6 ± 6.57 years (Table 7). The process of establishing the Turkish validity and reliability of the Palliative Care Spiritual Care Competency Scale is shown in Figure 1. The process of culturally adapting the scale was smooth, and no difficulties were encountered. The Turkish version is considered a valid and reliable measurement tool for assessing the palliative care and spiritual care competencies of nurses within the Turkish population (Table 8).

Discussion

The significance of spiritual care as a fundamental principle of holistic nursing has been acknowledged (Hu et al. 2019c; Merati-Fashi et al. 2021). However, there is limited understanding regarding the competencies of nurses in palliative care and spiritual care

Table 7. Distribution of sociodemographic and employment characteristics of nurses ($n = 354$)

Characteristics		<i>n</i>	%
Age (mean \pm SS; 32.6 \pm 6.57)	19–30	175	49.4
	31–40	120	33.9
	41–54	59	16.7
Gender	Female	299	84.5
	Male	55	15.5
Education status	Vocational health high school	18	5.1
	Associate degree	11	3.1
	Bachelor's degree	278	78.5
	Master's degree	40	11.3
	Doctorate	7	2.0
Years of employment	1–5 years	136	38.4
	6–10 years	82	23.2
	11–15 years	60	16.9
	16 years and more	76	21.5
Clinics worked at	Internal clinics	133	37.6
	Surgical clinics	101	28.5
	Intensive care units	82	23.2
	Other	38	10.7

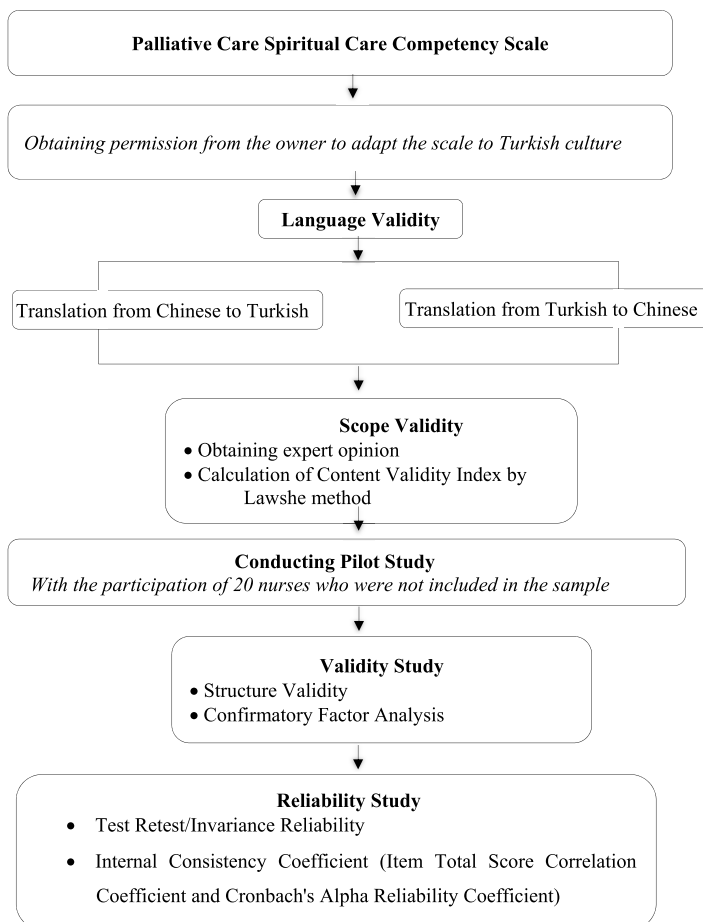
**Figure 1.** Scale adaptation process.

Table 8. Palliative care spiritual care competency scale Turkish version items

Palliative Care Spiritual Care Competency Scale								
The following statements are related to evaluating nurses' palliative care and spiritual care competency. Each sentence below is evaluated on a scale of 1–5. Please tick the number indicating the extent to which you agree or disagree with these statements.								
1	2	3	4	5				
Disagree				Agree				
Knowledge and skills regarding spiritual care								
1.	I have a very good basic knowledge of companionship and communication.			1	2	3	4	5
2.	I have knowledge of hospice care and care.			1	2	3	4	5
3.	I am familiar with professional resources for medical, social, psychological and spiritual care.			1	2	3	4	5
Self-awareness and attitude toward spiritual care								
4.	I can reflect on my motivation to help others.			1	2	3	4	5
5.	I have a sense of mission to engage in spiritual care.			1	2	3	4	5
6.	I believe that spiritual care must conform to professional and social norms.			1	2	3	4	5
7.	I can take the initiative in looking after the spiritual needs of patients/families.			1	2	3	4	5
8.	I have a good understanding of and am able to think about my life experience.			1	2	3	4	5
Spiritual care that meets patient's spiritual needs								
9.	I can help patients families in coping with sadness and loss			1	2	3	4	5
10.	I can help patients to accept others and be kind to others			1	2	3	4	5
11.	I can help patients feel a sense of love and being loved			1	2	3	4	5
12.	I can help patients/families to face core issues together			1	2		4	5
13.	I am able to gain insight into the spiritual needs of patients/families			1	2	3	4	5
14.	I am able to help patients build relationships with "higher powers" (divine beings, nature, etc.)			1	2	3	4	5

in Turkey (Aslan et al. 2020; Daghan et al. 2018; Kudubeş et al. 2022). Thus, it is crucial to assess the spiritual care competencies of nurses, increase their knowledge and awareness of spiritual care, and address deficiencies in their training using measurement tools that demonstrate validity and reliability within the Turkish context (Aslan et al. 2020; Daghan et al. 2018; Kudubeş et al. 2022).

The Palliative Care Spiritual Care Competency Scale, which has now undergone validity and reliability testing in Turkish, can be used to assess the competencies of nurses in spiritual care knowledge, self-awareness, and practices. The Turkish version of the Palliative Care Spiritual Care Competency Scale, developed through a systematic and rigorous statistical process, can be utilized by healthcare professionals and managers for the recruitment, training, and evaluation of nurses in palliative care settings. Evaluating nurses' ability to provide palliative care will contribute to providing high-quality patient care and assist nurse educators and researchers in evaluating nursing curricula, policies, and guidelines (Kirkpatrick et al. 2017). It will also enhance the quality of life for patients and their families facing life-threatening illnesses, according to the World Health Organization's Palliative Care report (2023).

The construct validity of the Palliative Care Spiritual Care Competency Scale was evaluated using factor analysis. This statistical technique aids in determining whether multiple variables can be grouped under one or more constructs. Factor loadings are used to ascertain the factor structure of the data. Loadings ranging from 0.30 to 0.40 are considered "loadings at the lowest acceptable level," while loadings of 0.50 and above are deemed "loadings with practical significance," and loadings of 0.70 and above are considered "loadings that explain the structure well" (Alpar 2016). In this study, items 13 and 14 were excluded from the scale due to their low

factor loadings, while items 4 and 8 were excluded because they had excessive modifications.

The path diagram in Figure 2 illustrates the factor loadings of the validated measurement model for the Turkish version of the Palliative Care Spiritual Care Competency Scale. This diagram clearly presents the items of the model and showcases the standardized regression coefficients associated with the paths indicated by the unidirectional arrows. A detailed examination of the factor loadings for each item reveals that none of them fall below 0.500 (Izquierdo et al. 2014; O'Rourke and Hatcher 2013), with loadings ranging from 0.563 to 0.793. In Hu et al.'s (2019a) study, factor loadings greater than 0.40 were reported, and Chen et al. (2016) indicated factor loadings ranging from 0.41 to 0.85. Following the assessment of construct validity, it was determined that the Turkish version of the Palliative Care Spiritual Care Competency Scale, consisting of 14 items, exhibits a three-factor structure (Spiritual Care Knowledge, Spiritual Care Self-Awareness, and Spiritual Care Practices), in accordance with the studies conducted by Chen et al. (2016) and Hu et al. (2019a).

The Cronbach's alpha coefficients for the scale and its sub-dimensions, namely Spiritual Care Knowledge, Spiritual Care Self-Awareness, and Spiritual Care Practices, were then assessed. The results indicated a high level of internal consistency, with Cronbach's alpha coefficients of 0.89 for the overall scale and 0.78, 0.79, and 0.85 for the sub-dimensions, respectively. These findings are consistent with the research conducted by Chen et al. (2016) and Hu et al. (2019a). In the study by Chen et al., the Cronbach's alpha coefficients for the overall scale and its sub-dimensions were reported as 0.81, 0.88, 0.85, and 0.92, respectively. Similarly, in the study by Hu et al., the coefficients were found to be 0.931, 0.811, 0.889, and 0.896 for the same measures. Based on the alignment

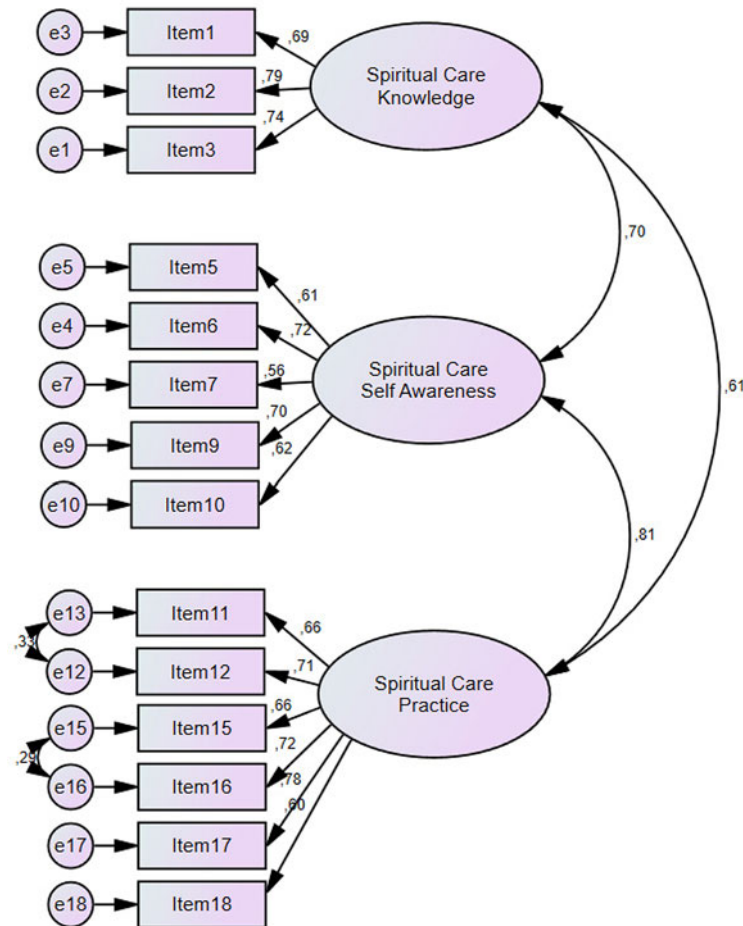


Figure 2. Palliative care spiritual care competency scale path diagram.

of these results, it can be concluded that the Turkish version of the Palliative Care Spiritual Care Competency Scale maintains consistency with the findings of the original studies by Chen et al. and Hu et al.

Assessing nurses' competencies in spiritual care and identifying their strengths and weaknesses can increase their awareness of, and improve their attitudes toward, spiritual care (Adip-Hajbaghery et al. 2017). Moreover, evaluating nurses' levels of spiritual competence helps identify their training needs in this area and assists nurse managers in developing relevant policies and procedures for palliative and spiritual care (Abell et al. 2018).

Limitations of the study

This study has some limitations. The fact that the study was conducted in a single province is a limitation of this research. The findings obtained from this study cannot be generalized to all nurses until comparable studies are conducted on nurses working in hospitals in different regions and provinces of Turkey using the Turkish form of the Palliative Care Spiritual Care Competency Scale.

Conclusion

This study showed that the Turkish version of the Palliative Care Spiritual Care Competency Scale, which was validated with 14 items and three sub-dimensions, is a valid and reliable measurement tool for the Turkish population in determining the palliative

care and spiritual care competency levels of nurses. In line with the findings obtained, it is recommended that the Palliative Care Spiritual Care Competency Scale be used in our country.

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