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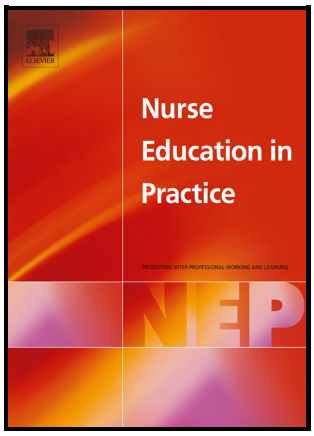

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Validation of the Spanish version of the EPICC Spiritual Care Competency Self-Assessment Tool for student nurses

1. Brief informative title:

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3. Conflict of interest

No conflict of interest has been declared by the author(s).

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ABSTRACT

Aim: To cross-culturally adapt and psychometrically test the Spanish version of the EPICC Spiritual Care Competency Tool for student nurses and midwives (EPICC_ spa)

Background: Spiritual care is an essential component of holistic nursing and specific training on its competencies and their evaluation should be mandatory in nursing degree studies. However, assessment instruments of spiritual care competencies among student nurses in Spanish contexts are presently insufficient.

Design: This was a multicentre, descriptive, cross-sectional study in two phases.

Method: Phase 1 involved the translation and linguistic adaptation of the scale through a panel of experts and a pilot test. Phase 2 involved the evaluation of structural content, internal reliability and construct validity. Data were collected between January and June 2024.

Results: Twelve of thirteen nursing schools in Madrid, Spain participated, with 642 first- or fourth-year nursing students as the final sample population. In the content validity analysis based on an expert panel, 28 items showed good or excellent validity indices. Exploratory and confirmatory factor analyses revealed a bifactor model of the EPICC_ spa, with two dimensions and 16 items: attitudes towards spiritual care (10

items) and knowledge and skills to provide spiritual care (six items). Very good reliability and evidence of construct validity (convergent and differentiation in known groups) were also shown.

Conclusions: The EPICC_spa can be a reliable and valid self-assessment tool for spiritual-care competence among nursing students in Spain and Spanish-speaking countries.

Keywords:

Instrument development

Nursing competencies

Nursing students

Psychometric testing

Spiritual care

Spiritual care competence

Spirituality

Introduction

The nursing profession exerts a unique and crucial influence in maintaining the integrity of patient care, given the privileged position of nurses regarding their time spent on direct interactions with patients. Therefore, nursing care must consider the 'whole' person in a multi-dimensional perspective, including biological, psychological, social and spiritual (International Council of Nurses, 2021). Accordingly, spiritual care is now considered an unequivocal part of the nursing profession as stated in the American Association for Nursing Diagnosis Manual (Herdman & Kamitsuru, 2024). In recent decades, there has been considerable debate regarding the meaning of spirituality and spiritual care.

Spirituality is considered 'a dynamic and intrinsic aspect of humanity through which people search for ultimate meaning, purpose and transcendence and experience relationships with the self, family, others, community, society, nature and the meaningful or sacred. Spirituality is expressed through beliefs, values, traditions and practices' (Puchalski et al., 2014, p. 646). On the other hand, spiritual care can be defined as 'a type of care that addresses and seeks to meet existential and spiritual needs and challenges in connection to illness and crisis' (Hvidt et al., 2020, p. 2). Similarly, Ramezani et al. (2014) defined it as a subjective and constantly changing concept, as well as a unique dimension of nursing care that can enhance a patient's spiritual well-being. The essence of spiritual care is *being* rather than just *doing* (Baldacchino, 2015), which can be transformative for both patients and practitioners.

In this regard, the Report of the Consensus Conference on Improving the Quality of Spiritual Care as a Dimension of Palliative Care argued that spiritual care should be an integral part of any patient-centred healthcare model and that spiritual care models should be interdisciplinary (Puchalski et al., 2009). Moreover, receiving competent

spiritual care is a right of patients and their families and a duty of professionals. Although no single discipline can or should appropriate the spiritual dimension of care, health professionals recognise and situate it in different contexts and perspectives of nursing practice (Mcsherry & Wright, 2024).

Spiritual care competency is understood as ‘the nurse's ability to assess and provide interventions to care for the spiritual needs of the patient, as well as the set of knowledge, attitudes and skills required to provide it’ (Green et al., 2020, p. 42). General standards for nurses concerning Spiritual Care Competencies should include, at a minimum, the assessment of patients’ spiritual needs, planning, intervention and subsequent evaluations (van Leeuwen et al., 2021).

2. Background

The relationship between nursing and spiritual care has been studied over the last three decades (Baldacchino, 2008; Ross et al., 2021) and its impact on the quality of patient care as well as on their health and well-being is well-known (Koenig et al., 2023).

However, while most nurses believe that addressing patients' spiritual needs is necessary for the provision of ‘core’ nursing care, spiritual care appears to be underestimated and under-recorded by nurses (Taylor et al., 2023). The factors that are most often related to these circumstances are, on the one hand, the misperception of the meaning of spirituality and the benefits that spiritual care can provide to patients and, on the other hand, insufficient training in this aspect (Costa et al., 2023). As a result, the literature suggests that spiritual care is a part of the phenomenon called *lost care*, understood as "postponed, partially completed, or outright incomplete care", or also as "care that has not been provided" (Chaboyer et al., 2021, p. 82).

To provide adequate spiritual care, nurses must receive specific training (Costeira et al., 2024; Rykkje et al., 2022). However, recent studies have suggested that spiritual care is not sufficiently relevant to the training of future nursing professionals (Ross et al., 2018). Although the need to train nursing students in spiritual care is widely recognized in the literature, given the positive impact of such training, the lack of consensus on a model for spiritual care training in clinical practice has led to a multitude of approaches internationally. In a scoping review by Rykkje et al. (2022), 36 training experiences or strategies in spirituality and/or spiritual care were identified in 15 countries between 2010 and 2020, showing a great variety in terms of content, duration and tools to evaluate the results obtained.

Student nurses should be offered opportunities for self-assessment of their competencies, given its crucial contribution to the development of metacognitive skills and the improvement of their confidence (Adib-Hajbaghery et al. 2017). Furthermore, an enhanced self-awareness in healthcare professionals has been shown to aid them in effectively addressing the pressing needs of patients and their families (Costeira et al., 2024). Implementing strategies that contribute to developing students' spiritual awareness would improve their spiritual intelligence and critical reflection. Hence, the availability of a tool capable of assessing these competencies in nursing students is of great importance.

A recent global review of the literature on different scales to assess competencies for spiritual care concluded highlighted various methodological and/or conceptual limitations across the tools, such as the assessment of opinions, inclusion of aspects more related to psychosocial care than spiritual care, integration of concepts without a clear definition, or questions about nurses' spirituality rather than their willingness to provide spiritual care (Garssen et al., 2017). More recently, the 28-item "*EPICC*

Spiritual Care Competency Self-Assessment Tool for student nurses and midwives" was designed (Giske et al., 2022). It includes the evaluation of four competencies (subdimensions) considered essential for spiritual care: intrapersonal spirituality, interpersonal spirituality, spiritual assessment and care planning and spiritual care intervention and assessment. The instrument was validated in a sample of 323 nursing students from four countries (USA, UK, Ghana and Netherlands) simultaneously in three languages: English, Norwegian and Danish, showing evidence of construct and content validity, as well as high internal consistency with a Cronbach's alpha of 0.9. In addition, students indicated that the questionnaire was useful and easy to answer, especially during the first years of their bachelor's degrees.

The approach to the analysis of spirituality or spiritual care competencies in nursing students in Spain is limited. This may be due to the absence of adapted and validated tools to assess these competences. Of the few studies found, students and professionals report little training in spiritual care, being assessed through a qualitative approach and non-validated instruments (De Diego Cordero et al., 2019; 2023; Fernández-Pascual et al., 2020; Morillo Martín et al., 2017)

Considering the comprehensive view of spiritual care included in the EPICC tool and its updated and multicultural validation, it is pertinent to conduct a study to translate, culturally adapt and validate it in the Spanish context to provide the first instrument for the assessment of the competencies for spiritual care among bachelor's degree nursing students in Spain.

Moreover, this tool allows the evaluation of differences in spiritual competencies among students from various countries, which represents an advantage for standardizing spiritual care and a benefit for the international nursing community.

3. The study

Objective: To translate and culturally adapt the "EPICC Spiritual Care Self-Assessment Tool for student nurses and midwives" and to test its psychometric properties in Spanish nursing students.

4. Methodology

The study was conducted in two phases. In the first phase, the translation and cultural adaptation of the original EPICC tool was performed according to the procedure recommended by the EPICC steering group (Martins et al., 2015). In the second phase, an assessment of the structure and psychometric properties of the translated and adapted EPICC after Phase 1 was conducted according to the guidelines published by Boateng et al. (2018) and revised by Koenig and Al Zaben (2021). Figures 1 and 2 summarise the methodological steps of each phase.

Phase 1. Translation and cultural adaptation of the EPICC tool: After obtaining permission from the EPICC Network Steering Group (facilitated by Wilfred McSherry), two translations of the original version were carried out independently by two bilingual translators in English, whose first language was Spanish. Discrepancies were resolved and the versions were synthesised into a single version. Subsequently, back-translation into the original language was performed by two bilingual Spanish translators whose first language was British English. This back translation was sent to two members of the EPICC Steering Group to assess its concordance with the original version. After receiving inputs from the EPICC group, the research team developed a Spanish version of the scale (EPICC_spa_v1).

Subsequently, the content validity of the EPICC_spa_v1 was assessed by calculating the Content Validity Index (Polit et al., 2007), which was obtained from the consensus of a

panel of experts, considering the following selection criteria: level of knowledge (master´s degree or PhD), years of work experience (minimum 10), prestige in the field of palliative care (from national official registries in the field) and professional experience as a provider of spiritual care (hospital or outpatient, 5 years minimum). Eleven experts participated in the study: five nurses, two psychologists in the fields of oncology and palliative care, one physician and theologian, one palliative care physician and two hospital chaplains. Participants were asked to assess the relevance of the questionnaire items on a scale of 1–4 (1= not relevant and 4= very relevant). In addition, each item had a free-text response section where participants were asked to indicate their observations regarding the comprehension of the item itself and other appreciations, they considered relevant.

Finally, a pilot study was conducted to assess the functioning of the scale using a small representative sample of the target population. Students from 2nd and 3rd year of a bachelor's degree in nursing in the Madrid Autonomous Region were selected for this study (n=57) to not duplicate the same participants as in the sample of phase two (1st and 4th year students). The objectives of this pre-test were: (a) to collect "in situ" the reactions of the test takers; (b) to ensure that the items and instructions were correctly understood; (c) to record the time required to complete the questionnaire and (d) to correct possible errors of content or format before moving on to the operational phase.

As a result, a second version of the instrument (EPICC_spa_v2) was available for administration in the participants of phase 2 to evaluate the remaining psychometric properties and obtain the final version of the scale.

Phase 2. Assessment of the structure and psychometric properties of the translated and adapted version of the EPICC

Design: This was a multicentre study with a cross-sectional design for validation in first- and fourth-year bachelor's degree nursing students across 13 nursing faculties in the Madrid Autonomous Region, Spain.

Study scope and sampling: The study included 13 nursing faculty in the Madrid Autonomous Region (Spain) with a total population of approximately 4,000 students. A formal invitation email was sent to the directors of the faculty and consecutive sampling was used to recruit participants. To analyse construct validity using factor analysis, it is recommended that the sample size be at least to 5–10 times the number of items on the scale (Devellis, 2016). Given that the analysed instrument comprised 28 items, the estimated sample size was 280–350 students. The final sample consisted of 642 first- and fourth-year students from 12 of 13 nursing faculty members, with a response rate of 16%. Specifically, 39.7% (n=255) of the students came from private non-Catholic faculties, 39.7% (n=255) from private Catholic faculties and 20.6% (n=142) from public non-Catholic faculties.

Inclusion and/or exclusion criteria: The inclusion criteria required participants to be first- or fourth-year bachelor's degree nursing students to analyse differences in entry and exit competency levels between both courses. The exclusion criterion was Erasmus students from another country.

Instruments: EPICC Spiritual Care Competency Self-Assessment Tool for student nurses and midwives (Giske et al., 2022), in its translated and adapted version after Phase 1 (EPICC_spa_v2), is composed of 28 items with responses scored on a Likert-type scale from 1 to 5 (1= strongly *disagree* and 5= strongly *agree*) and distributed across four dimensions (Supplementary Material Table S1). The total scale score is obtained by adding the scores of all items and dividing by the number of items and ranges from 1 to 5; the higher the score, the higher the competence.

Additional Variables: To assess convergent validity and based on previous studies that found positive and significant association between perceived spiritual care competency and meaning in life (Ross et al., 2018; Nassehi et al., 2025; Yang et al., 2024) and resilience (Limonero et al., 2014; Stephens & Layne, 2023), students completed two further questionnaires selected due to their availability in Spanish and their good reliability: the Meaning in Life Questionnaire (MLQ) (Steger et al., 2006) and the Brief Resilient Coping Scale (BRCS) (Sinclair & Wallston, 2004). The MLQ assesses the degree to which people feel their lives are meaningful (MLQ-Presence), as well as the strength of people's search for meaning in life (MLQ-Search); its Spanish version (Steger et al., 2008) demonstrated good reliability and structural validity (Cronbach's alpha of 0.81 and 0.90 for MLQ-Presence and MLQ-Search, respectively). Similarly, the Spanish version of the BRCS, adapted and validated in nursing student**s** by Limonero et al. (2010), showed an internal consistency (Cronbach's alpha) of 0.68 and test-retest reliability of 0.71.

Finally, to assess the validity of the scale in differentiating between known groups, other academic variables were collected, such as year of study (first or fourth) and previous training in spiritual care.

Data collection: The EPICC_spa_v2 and the other questionnaires were developed through the online survey software (REDcap®) and distributed via email to all participating universities, including a QR code and a link to the online survey. Participants were required to complete all responses to submit the questionnaire, thereby preventing missing values.

Data analysis:

For the analysis of the **content validity** of the EPICC_spa_v1, the Content Validity Index of each item (I-CVI) and of the scale (S-CVI) was calculated with the responses

obtained in the expert committee, considering an acceptable value of S-CVI ≥ 0.90 (Polit et al., 2007).

To analyse the factor structure of the EPICC_spa_v2, confirmatory factor analysis with the full sample was performed, showing that the original four-factor model did not reach adequate levels of fit. Subsequently, **s**equential exploratory factor analyses with Oblimin rotation were performed in the first half of the sample to reduce the number of items, selecting those that best represented each dimension, considering acceptable saturations above 0.40 in the factor and below 0.30 in the remaining factors. The measures of fit chosen were: the $\chi 2$ statistic, the chi-square ratio ($\chi 2$/df), the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error approximation (RMSEA) and the standardised root mean square residual (SRMR). The cut-off criterion were: $\chi 2$/df ratio ≤3; CFI and TLI ≥.95; RMSEA ≤.05; and SRMR <.8.

While Exploratory Factor Analyses were performed with the first half of the sample, the factor structure derived from this solution was tested through Confirmatory Factor Analysis using the second half (both subsamples were randomly formed from the full dataset). Three models were tested: a correlated factors structure, a second-order global factor structure and a bifactor model. The bifactor model offers an advantage over the second-order or correlated factors models, as it allows for the distinction between a general factor and the specific contributions of individual factors (Chen et al., 2012). Indices calculated were hierarchical omega and explained common variance (≥ 0.8 for unidimensionality), factor determinacy and Factor H (FD>.90 and FH ≥.70 to determine the stability and definiteness of latent variables) and the explained common variance for each item (I-ECV) (cut-off point of 0.80 or 0.85 to select items that measure the overall factor).

Exploratory and confirmatory factor analysis were performed with Mplus version 8.4 and R (R Core Team, 2020), with the package "BifactorIndicesCalculator" (Dueber, 2019), was used to calculate the indices of the bifactor model.

Following the analysis of the factor structure of the EPICC_spa_v2, a third version was constructed comprising 16 items organised into two dimensions, the EPICC_spa_ v. final (hereafter, EPICC_spa), for which the remaining psychometric properties were assessed. Descriptive analysis of the variables and non-parametric tests were performed using IBM SPSS Statistics (version 28.0, IBM Corp. Armonk, NY, USA).

Internal consistency was assessed by calculating Cronbach's alpha and McDonald's omega coefficient (recommended values ≥.90). Item-total correlation was analysed considering that items with a correlation value lower than 0.3 are inconsistent with the mean behaviour of the other items

To check for stability of response, a total of 642 students were asked to respond to the EPICC_spa again, approximately one month after completing it for the first time and the intraclass correlation coefficient was assessed, where values above 0.70 were considered acceptable.

For construct validity analysis (convergence and differentiation of known groups), the defined variables and scale scores were compared and differences were assessed using non-parametric methods such as the Mann-Whitney U, Kruskal-Wallis and Chi-square tests. In all the cases, a confidence level of 95% was established. Statistical significance was set at < 0.05.

Ethical Considerations: All study participants received information about the project as part of the digital questionnaire and an initial question was included with informed consent for its completion, including a retest, which had to be accepted prior to filling in

the questionnaire. This project was approved by the Research Ethics Committee of the Comillas Pontifical University in Madrid, Spain, with internal code 48/22-23. All information related to the study was strictly confidential and treated according to the European Regulation and Organic Law 3/2018 on Personal Data Protection and the guarantee of digital rights.

4. Results

Phase 1: In the process of translation and back-translation of the original scale there were no major discrepancies in the resulting versions, hence minor changes were made to the wording of some items (i.e. "*spiritual care*" term in items 13, 15, 17 and 21, translated in Spanish as "*spiritual attention*") through majority consensus of the four members of the research team. The results of the Content Validity Index (CVI) obtained from the expert committee were good. The overall CVI was 0.92. The mean modified kappa coefficient for the entire scale was 0.92. Three of the items were rated as good (K* =.61–.8) and the rest were rated as excellent (25 items with K*>.81). Finally, for the pilot test, a total of n=57 second and third-year bachelor's degree nursing students participated and it confirmed the absence of difficulties in understanding the instructions and items as well as of errors in content or format in the online questionnaire. The response time for completing the questionnaire was approximately 10 minutes.

Phase 2:

Sample characteristics: Of the n=642 nursing students who completed the questionnaire, 67.7% (n=434) were in their first year of study, 85.8% (n=551) were female and 90.3%(n=622) were under 30 years of age, with a mean age of 22.16 years ±5.89. In addition, 66% of them attended high school (baccalaureate) and 24.9% (n=160) reported some training in spiritual care (Table 1).

Factor structure: Confirmatory factor analysis with the full sample showed that the original four-factor model did not reach adequate levels of fit (χ^2 (344)=2527.3, p<.001, χ2/gl= 7.3, CFI= 0.681; TLI=.649; RSMEA=.100 95% CI= (0.096-.103), SRMR=.103), hence an exploratory factor analysis was performed with the first half of the sample and a confirmatory factor analysis with the second half.

Exploratory factor analysis (n=321, sample 1): A parallel analysis initially indicated that extracting three factors was more appropriate than the four factors proposed in the original scale. Several items did not load strongly on a single factor. Therefore, items were gradually removed and parallel analyses and EFAs were repeatedly conducted, examining the factor loading matrix, applying the established saturation criteria and Cronbach's alpha rating. After several iterations (supplementary material tables S2-S8), a parsimonious 16-item solution was achieved in this first phase, converging around two factors, six and 10 items each (Table 2), with adequate internal consistency indices (0.89 and 0.89, for Factor 1 and Factor 2, respectively).

By analysing the content of the items of both factors, it was concluded that Factor 1 included items related to attitudes or willingness to provide spiritual care (items 1-10), such as openness or preparedness to work with other professionals, while Factor 2 included items related to skills or knowledge to provide professional spiritual care (items 11-16).

Confirmatory factor analysis (n=321, sample 2): The 1- and 2-factor model did not achieve adequate indicators, although the 2-factor model fitted better than the 1-factor ($\Delta\chi$2(1)=524.1, p<.001), but without reaching entirely adequate levels. The bifactor model achieved sufficient fit, albeit with insufficient RMSEA values (Supplementary Material Table S9).

In the analysis of this bifactor model, the overall scale omega was 0.93 (table 3) and the hierarchical omega was.74. Thus, 80% (0.74/.93) of the reliable variance can be attributed to an overall factor, which we termed *Spiritual Care Competence* (the remaining 20% can be attributed to sub-factors). The ECV was 0.60, far from the usual cut-off of 0.80 to be considered unidimensional.

Concerning Factor 1 (attitudes), it was observed that the hierarchical omega was almost completely reduced (0.05), which was the result of discounting the influence of the global factor. Ninety-five percent of the variance in the first factor was due to a global factor (competence in spiritual care). The residual covariances (after controlling for the global factor) of this attitudinal factor were considerably reduced (by 95%). Congruently, the saturation of the items in Factor 1 (Attitudes) was higher in the global factor than in Factor 2 (Knowledge and Skill).

On the other hand, Factor 2 (Knowledge and Skills) had a high hierarchical omega (0.73), 82% of the reliable variance could be attributed to this factor.

Factor determinacy values were higher than 0.90 for the overall factor (Spiritual Care Competence) and Factor 2 (Knowledge and Skills) (0.95 and 0.94, respectively). However, Factor 2 was not sufficiently represented by item scores (0.76). Factor H showed that the global factor and the knowledge and skill sub-dimensions (Factor 2) were well defined (0.91 and 0.87, respectively), while the attitudinal sub-dimension (Factor 1) was not (H=.49 in this case).

The I-ECV results showed that Items 1, 5, 6, 7, 8, 9 and 10 explained the highest percentage of variance for the global measure (competence in spiritual care). This means that seven items (all comprising attitude factor 1) out of 16 items on the scale (43.8% of the items) were most closely linked to the global factor.

Descriptive analyses of items: The overall mean EPICC_spa score in the study group was 4.00 (±.526). The results were skewed to the left (skewness = -.645) and lacked a normal distribution ($p<.05$, Kolmogorov–Smirnov test). None of the items had a standard deviation equal to zero, nor an item-total correlation of less than 0.45 (supplementary material Table S10).

Reliability: Cronbach's alpha values for the EPICC_spa_ were 0.89 for the Attitudes factor and 0.88 for the Knowledge and Skills factor, while for the overall scale it was 0.89. McDonald's omega matched Cronbach's alpha for both factors, whereas for the overall scale, it was 0.86. Test-retest reliability was examined (n=100 students), who completed the EPICC_spa questionnaire twice, separated by one month, with a resulting total ICC of 0.77 (95% CI: 0.66-.85), being 0.75 (95% CI: 0.63-.83) for the Attitudes factor and 0.75 (95% CI: 0.63-.83), for the Knowledge and Skill factor, indicating good response stability.

Construct validity

(1) Convergent: positive correlation was observed between the presence of meaning in life, meaning in life-seeking and the total scale score, as well as with its two sub-dimensions. A positive correlation was also found between resilience and the total scale score, especially with the Attitudes factor (Table 4).

(2) Differentiation between known groups: Significant differences ($p= 0.002$) were observed between 1st and 4th year and the total score on the scale. This difference was mainly due to the score obtained in the Knowledge and Skill dimension, being higher in 4th grade (mean of 3.48 +/- 0.84) than in 1st grade (mean of 3.24 +/- 0.78), with a $p< 0.001$ in the latter case (Table 5).

Significant differences (p<.001) were also observed in the total scale score for students with Training in Spiritual Care (mean 4.14+/-.57) compared with those without (mean 3.95 +/-.50). As in the previous case, this difference is observed mainly in the knowledge dimension, being higher in students with previous training in spiritual care (mean 3.66 +/- 0.78) than in those without (mean 3.20 +/- 0.78), as well as an effect size of 0.59. (Table 5)

5. Discussion

This study aimed to validate the Spanish version of the "EPICC Spiritual Care Competency Tool for student nurses and midwives" scale in nursing students following its translation and adaption from the original EPICC assessment tool. After a process of translation and backtranslation, the resulting scale was subjected to expert consensus and a pilot test on a small sample of nursing students and subsequently subjected to a full psychometric analysis through exploratory and confirmatory factor analyses, as well as an evaluation of its reliability and construct validity.

The results of the exploratory and confirmatory factor analyses revealed a deviation from the original factor structure of the EPICC scale, which proposed a multidimensional structure with four factors, whereas the analysis conducted in this study yielded a bifactorial solution, with a global factor (competence for spiritual care, closely linked to attitudinal aspects) and a specific factor, independent of this general one, that captures knowledge or skills for spiritual care. This bifactor model revealed that the two components of competence were complementary. As Benito et al. (2016) state, spiritual care not only requires the accumulation of knowledge but also demands from practitioners increased self-awareness and empathy from the patient's perspective (attitudes) and the ability to carry out personalised interventions (skills). If spiritual care

is conceived as *being* rather than *doing* (Baldacchino, 2015), it makes sense that its attitudinal component is much more present than its knowledge or skill components. According to the model developed in this study, attitudes towards spiritual care seem to be the basis for acquiring the knowledge and professional skills required to provide such care. Similarly, studies conducted in different cultural contexts such as China (Guo et al., 2022), Taiwan (Hsieh et al., 2020), or Europe (Ross et al., 2018) also showed a positive correlation between attitudes towards spiritual care and spiritual care competence, finding that the more positive the students' spiritual care attitude, the higher their perception of spiritual care competence. Students with positive spiritual care attitudes were willing to acquire more knowledge and skills to address the needs of patients and provide more effective care. Our results show that this attitude, although central, does not guarantee the acquisition of knowledge and skills that must be promoted in a targeted manner.

In addition, the independent dimension associated with knowledge and skills includes items related to all phases of the nursing care process (e.g. assessment of spiritual needs, planning of care, evaluation of outcomes and recording of the process), thus providing students with a complete self-assessment of their knowledge regarding the nursing care process of spiritual care, as established in the conceptual framework of this competence (van Leeuwen et al., 2021).

These results are in line with those obtained in a systematic review carried out by Costeira et al. (2024), who concluded that competence in spiritual care includes the cognitive, affective and functional domains, which are interconnected and interact to encompass a single competence in spiritual care. The cognitive domain (knowledge) involves the assessment and planning of spiritual care; the affective domain (attitudes) includes self-assessment or self-examination, personal support and counselling of the

patient and attitude towards the patient's spirituality; and the functional or instrumental domain (skills) encompasses intervention and evaluation of spiritual care/communication strategies used to provide support to the patient. The EPICC_spa assesses aspects related to these three dimensions and provides evidence that attitudinal aspects are more comprehensive, constituting the core of competence, although other aspects (skills and knowledge) are independent and necessary.

On the other hand, the potential of the EPICC_spa to distinguish between different groups has also been demonstrated, differentiating between students who had training in spiritual care and those who did not, as well as between first- and fourth-year bachelor's degree students. Thus, it seems that training has an important role in the acquisition of competencies for spiritual care, especially in the dimension of knowledge and skills. In line with the above, the study by Ross et al. (2018) and even the original scale study (Giske et al., 2022), showed similar results, thus underscoring the importance of fostering appropriate education that promotes spiritual awareness, which in turn contributes to a better quality of spiritual care.

Finally, in terms of convergent validity, the results confirm the positive, albeit moderately low, correlation between meaning in life and spiritual care competencies, which is in line with other studies (Mesquita et al., 2014; Ross et al.,2018) that indicating the existence of a positive association between greater spiritual well-being (a broader construct, but closely related to meaning in life) and the importance given by the nursing team to the provision of spiritual care. Likewise, the positive correlation between resilience and competence in spiritual care is in line with the findings of Limonero et al. (2014), who found a positive and significant correlation ($p < 0.01$; r 0.47) between resilience and perceived personal competence in nursing students.

In summary, although the findings did not align with the factorial solution defined in the original version of the scale, it is important to highlight that the scale demonstrated good internal consistency and evidence of construct validity. These findings indicate that the EPICC_spa is a reliable tool for assessing spiritual-care competencies among nursing Students in Spain. The possibility of using this tool is the first step towards a better integration of this care dimension in the nursing degree curricula in Spain, allowing the planning of specific training activities to enhance this competency, as well as for the follow-up after the implementation of improvement strategies.

Strengths and limitations of the work

The main strengths of this study lie in the rigorous methodology used for the tool's cultural adaptation and psychometric evaluation, as well as in the large, regionwide sample and its response stability over time. However, several limitations should be acknowledged. The EPICC_spa is a self-report instrument, meaning the competencies evaluated reflect student nurses' perceptions and aspirations, which may not completely reflect their actual attitudes or knowledge. Additionally, its representativeness could be limited by the sample used, since the findings may not apply to students from other regions or educational contexts where cultural and formative perceptions differ from those of Madrid Autonomous Region. Finally, the cross-sectional design limits causal inferences about the effects of the training in spiritual care on competency. In this sense, although the two cohorts included in the study (1st and 4th year) differ only in terms of the spiritual care training received, there may be other unaccounted-for variables that distinguish the cohorts and explain the observed differences in spiritual care competence. Future longitudinal research could explore the role of training and its impact on spiritual care competencies.

Recommendations for further research

The results suggest the need to continue developing valid tools to assess nursing students' competencies regarding spiritual care. Incorporating qualitative methods such as interviews or focal group discussions could provide deeper insights into how participants perceive spirituality, thus providing further adaptation to EPICC_spa. Given the significant deviation from the original findings regarding the structure of the scale and its number of items (Figure 3), further research with more extensive and varied samples would be beneficial for exploring the underlying reasons for the deviating factorial structure. Furthermore, both translated versions of the tool were included (28 and 16 items, Supplementary Material Annexes 1 and 2, respectively). This will allow for comparison with other translations in the long term and for EPICC_spa to be more rigorously tested in other Spanish nursing and midwifery student populations and even in other Spanish-speaking countries.

On the other hand, and given the cross-sectional nature of this study, further research using longitudinal design would be desirable, to evaluate the intrasubject developmental process of this competence along the nursing studies degree, as well as to identify the impact of any intervention whose aim would be to enhance its development.

6. Conclusion

The translation and adaptation of the EPICC Spiritual Care Competency Tool scale in the Spanish context and its validation, represents a significant advance in the assessment of competencies in spiritual care. This tool provides a reliable, culturally adapted and valid instrument for the self-assessment of spiritual care competencies of nursing students in Spain, thus supporting their training in this essential aspect of holistic patient care.

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Table 1. Socio-demographic and academic variables of the total sample (N=642).

Variables		1st year (n=434)		4th year (n=208)		Total (n=642)	
		N	%	N	%	N	%
Sex	Men	59	13.6	32	15.4	91	14.2
	Women	375	86.4	176	84.6	551	85.8
Age (years)	18-30	423	93	199	84.6	622	90.3
	31-40	19	1.6	23	11.1	42	6.5
	41-50	9	2.1	9	4.3	18	2.8
	≥51	2	0.4	0	0	2	0.4
	Age (mean±SD)	20.84±5.33		24.92±6.05		22.16±5.89	
Previous academic qualification	Baccalaureate	290	66.8	134	64.4	424	66
	Higher vocational training in health sciences	100	23	42	20.2	142	22.1
	Other (Higher vocational training in other sciences or Bachelor´s degree)	33	7.6	20	9.6	53	8.2
Training	No	367	84.6	115	55.3	482	75.1
	Yes	67	15.4	93	44.7	160	24.9

Variables		1st year (n=434)		4th year (n=208)		Total (n=642)	
		N	%	N	%	N	%
in spiritual care							
Religion	Catholic	237	56.85	128	64	365	59.2
	None	148	35.5	61	30.5	209	33.9
	Other	32	7.34	11	5.34	43	4.21

SD- standard deviation

Table 2. Factor Loadings of the 16 items of the original EPICC questionnaire (n=321).

Original item	Translated item	Factor 1	Factor 2
IntraAttid2	1	**.567***	-.032
InterKnow2	2	**.593***	.044
InterSkil1	3	**.560***	.009
InterAttid1	4	**.639***	.002
AssPlAttid1	5	**.762***	-.062
AssPlAttid2	6	**.828***	-.114*
IntEvalKnow1	7	**.602***	.254*
IntEvalAttid1	8	**.735***	.044
IntEvalAttid2	9	**.666***	.099*
IntEvalAttid3	10	**.769***	.010
AssPlKnow2	11	-.068*	**.845***
AssPlKnow3	12	.193*	**.560***
AssPlSkil1	13	-.056	**.822***
IntEvalKnow2	14	.206*	**.671***
IntEvalKnow3	15	-.067*	**.843***
IntEvalSkil2	16	.098*	**.721***

* p <.05

Table 3. Completely standardized factor loadings of bifactor model

Item	General factor	Factor 1	Factor 2	I-ECV
1	.60 (0.09)*	.24 (0.19)		**.87**
2	.51 (0.11)*	0.52 (0.10)*		.48
3	.60 (0.12)*	0.53 (0.16)*		.56
4	.62 (0.09)*	.32 (0.18)		.79
5	.72 (0.06)*	.04 (0.23)		**1.00**
6	.78 (0.05)*	.08 (0.22)		**.99**
7	.69 (0.05)*	.12 (0.09)		**.97**
8	.73 (0.05)*	.01 (0.10)		**1.00**
9	.73 (,05)*	-.09 (0.13)		**.99**
10	.78 (0.07)*	-.12 (0.14)		**.98**
11	.21 (0.06)*		.75(0.03)*	.07
12	.49 (0.06)*		.41(0.05)*	.59
13	.43 (0.06)*		.62(04)*	.32
14	.27 (0.06)*		.81(0.04)*	.10
15	.18 (0.06)*		.81(0.03)*	.04
16	.29 (0.07)*		.64(0.05)*	.18
Omega	.93	.91	.89	

OmegaH	.74	.05	.73
%Reliable variance (ωH/ω)	.80	.05	.82
Determinacy Factor	.95	.76	.94
H	.91	.49	.87

Standard errors in brackets. * p <.05

Table 4. Spearman's correlations between EPICC_spa and other studied variables

	MIQ-S	MIQ-P	BRCS
Knowledge/Skill	.240**	.207**	.215**
Attitudes	.245**	.203**	.329**
Total competence	.285**	.249**	.331**

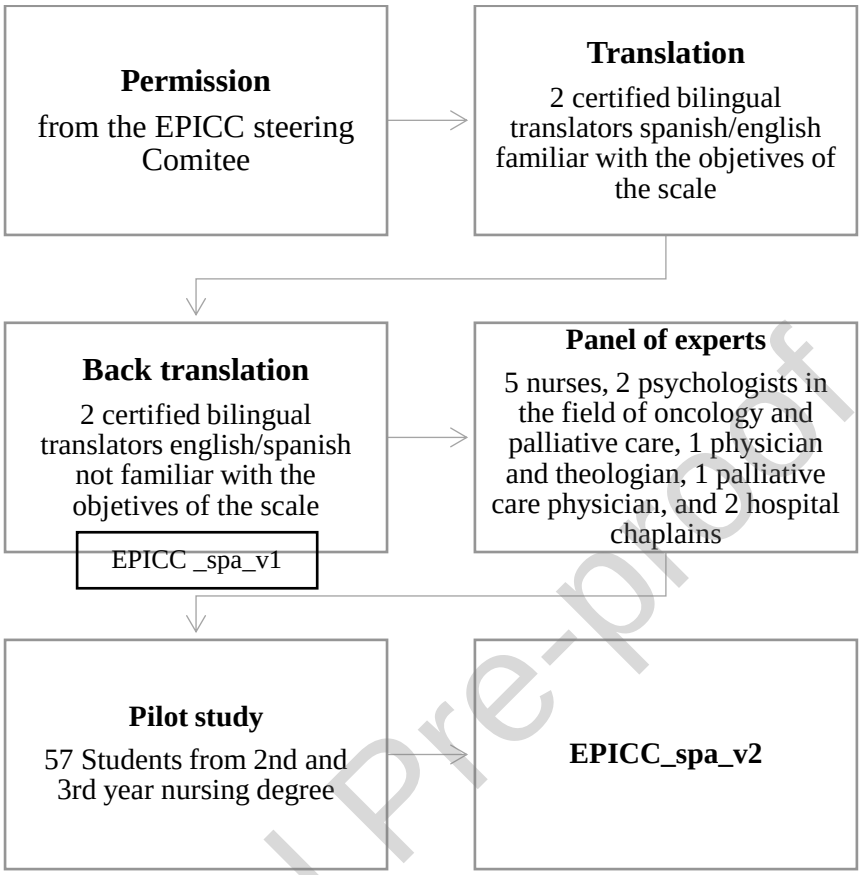
** p< 0.001. BRCS: Brief Resilient Coping Scale. MIQ-S: Meaning-in-life questionnaire search for meaning. MIQ-P: Meaning-in-Life Questionnaire on the Presence of Meaning.

Table 5. EPICC_spa scores and selected educational factors

		Attitude			Knowledge/Skill			**Effect**	Total comp.			**Effect**
	N	Mean	*SD*	*p* *	Mean	*SD*	*p* *	**size^**	Mean	*SD*	*p* *	**size^**
Training												
No	482	4.34	0.50	.09	3.20	0.78	**<0.001**	.59	3.95	0.50	**<0.001**	.37
Yes	160	4.42	0.60		3.66	0.78			4.14	0.57		
Year												
First	434	4.39	0.48	.056	3.24	0.78	**<0.001**	.30	3.96	0.48	**.002**	.21
Fourth	208	4.42	0.61		3.48	0.84			4.07	0.60		
Total	**642**	**4.40**			**3.32**				**4.00**			

SD: Standard deviation. * Mann–Whitney U test. ^Hedges' g test

Figure 1. Translation and cultural adaptation process of the EPICC



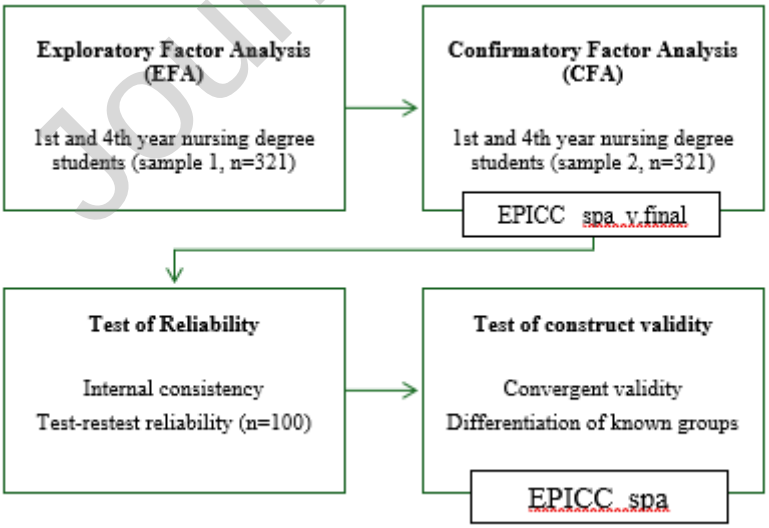
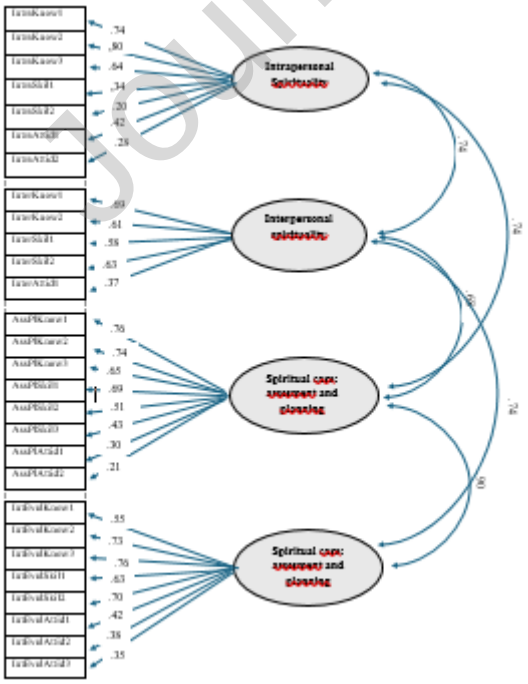


Figure 2. Psychometric Evaluation process of the EPICC_spa_v2

Figure 3a. EPICC_spa Confirmatory Factor Analysis

Figure 3b. EPICC original version Confirmatory Factor Analysis



Source: self-made from the original

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐ The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Highlights

- Assessment instruments of spiritual care competences in student nurses are absent in the Spanish context.
- The EPICC_spa is the first tool that can be used in the Spanish context, within pre- and even postgraduate nursing education, for the self-assessment of spiritual care competencies of students in any course.
- The EPICC_spa scale provides a baseline and assessment measure for planning future educational interventions in undergraduate nursing education in Spain.
- The EPICC_spa comprises the presence of two factors: an attitudinal component, with a strong influence on the global factor of spiritual competence, and another element of knowledge and skills, independent of attitudes.