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Validation of Spanish Version of the *Spirituality and Spiritual Care Rating Scale (SSCRS-Sp)* in Nursing Professionals

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ABSTRACT

Aim: To examine the reliability and construct validity of the Spanish adaptation of the *Spirituality and Spiritual Care Rating Scale* (SSCRS) within the nursing professionals' context.

Design: Observational and descriptive cross-sectional study.

Methods: The sample consisted of $N = 325$ nursing professionals from various healthcare settings, including hospitals, clinics and community healthcare centres. Following translation and cultural adaption of the SSCRS, the scale underwent psychometric assessment of its construct validity through exploratory and confirmatory factor analysis. Internal consistency analysis was also performed using a McDonald's omega. The reporting in this investigation adhered to the STROBE checklist.

Results: The exploratory factor analysis (EFA) revealed a two-factor structure, with one factor closely aligning with one religiosity dimension and the other factor combining the spirituality, spiritual care and personalised care dimensions. The results of the confirmatory factor analysis did not provide an adequate fit to the data for both the two-factor solution found in the EFA and the four-factor solution proposed by McSherry, Draper, and Kendrick (2002). Even though the four-factor solution showed a slightly better fit than the two-factor solution, neither model achieved a satisfactory fit. The lack of formal education and confusion between religion and spirituality among healthcare professionals could have influenced the responses and interpretation of the results.

Conclusion: The findings showed that the SSCRS-Sp demonstrated good internal consistency, indicating that the items in the scale are reliably measuring the targeted constructs. Further refinement and validation of the scale are needed to establish a robust factor structure in the target population.

Relevance to Clinical Practice: The SSCRS-Sp can be used to assess the nurses' perceptions of spirituality and spiritual care. The availability of this tool represents a significant step towards greater integration of the spiritual dimension of care within a holistic nursing care framework in Spanish-speaking countries.

Patient or Public Contribution: Nursing professionals responded to the research scale.

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1 | Introduction

The recognition and integration of spirituality and spiritual care in nursing practice have gained increasing importance in patient-centred care. Spirituality is recognised as a vital component in promoting holistic health and overall patient satisfaction (Kleiven et al. 2021; Puchalski et al. 2014). Nurses play a crucial role in spiritual care as they are uniquely positioned to establish a trusting relationship with patients and understand their beliefs, values and spiritual needs (Ghorbani et al. 2021). Despite the increasing body of scientific knowledge, supporting the relevance of incorporating spiritual care into nursing practice, nurses face significant challenges in addressing spiritual care effectively (Green, Kim-Godwin, and Jones 2020). Delivering proficient spiritual nursing care necessitates the cultivation of professional competence which, when consistently assessed, permits one to supervise nursing education at both the undergraduate and postgraduate levels. This facilitates the enhancement of nurses' understanding, competences and attitudes regarding spiritual care. (Machul et al. 2022).

In the specific healthcare context where this research was conducted, there is a growing recognition of the importance of spirituality, yet the integration of spiritual care into nursing practice remains underdeveloped (De Diego-Cordero et al. 2022). Time constraints, insufficient training and uncertainty about how to address spirituality in clinical settings are common barriers that prevent nurses from adequately meeting patients' spiritual needs (Wang et al. 2023). This is particularly concerning, as unmet spiritual needs can lead to increased patient distress, negatively impacting emotional well-being and satisfaction with care (Balboni et al. 2022; Batstone, Bailey, and Hallett 2020; Dos Santos et al. 2022).

2 | Background

A growing body of quantitative research indicates that nurses' understanding of their own spirituality can significantly influence how they interpret and address the spiritual needs of their patients. A critical synthesis by Cooper et al. (2020) emphasises that nurses' personal perceptions of spirituality shape their approach to spiritual care, often determining how they engage with patients' spiritual concerns. Likewise, the systematic review and meta-analysis by Sharifnia et al. (2022) found that higher levels of spiritual intelligence among nurses are associated with improved professional practice, including more accurate identification and management of patients' spiritual needs. These findings underscore the importance of self-awareness in spirituality, as it influences how nurses perceive and respond to patients' spiritual requirements and directly impacts on the overall quality of care provided.

In order to foster a common comprehension of the knowledge, abilities and attitudes that nursing and midwifery (N/M) students should acquire in the realm of spiritual care upon their graduation, a collaborative effort was undertaken by a team of European scientists and educators originating from 21 different countries. This endeavour spanned from 2016 to 2019 and culminated in the establishment of the 'EPICC Spiritual

Care Education Standard' (McSherry et al. 2020; Van Leeuwen et al. 2020; EPICC 2020; www.epicc-network.org). The EPICC Spiritual Care Education Standard served as background for the creation of the EPICC Spiritual Care Competency Self-Assessment Tool (Giske et al. 2022).

In Spain, the historical evolution of healthcare has been significantly influenced by religious perspectives, leading to a predominantly religious interpretation and understanding of spirituality (León-Sanz 2022). However, contemporary approaches to spiritual care require a broader understanding that encompasses diverse spiritual needs beyond traditional religious frameworks. Currently, Spanish nursing education and training programmes do not specifically address this secular dimension of spiritual care, and there is a notable absence of validated assessment tools that evaluate these aspects comprehensively.

Despite the existence of numerous questionnaires available to assess nurses' views on spirituality and spiritual care few of these instruments have been validated in Spanish (Pastrana et al. 2021; Reig-Ferrer et al. 2019). Furthermore, many of these tools present methodological deficiencies or conflate spirituality with religiosity (Del Rio and White 2012). This conflation can obscure a comprehensive understanding of spiritual care, which is not necessarily tied to religious beliefs. Given this context, it is essential to validate an instrument that reflects a more inclusive understanding of spirituality.

Among the measurement instruments reviewed in this study, the *Spirituality and Spiritual Care Rating Scale* (SSCRS) (McSherry, Draper, and Kendrick 2002) emerges as a prominent tool for assessing the perceptions of spirituality and spiritual care among nursing professionals.

The SSCRS is a tool designed to assess the perceptions of nursing professionals regarding their delivery of spiritual care. It encompasses various aspects of spirituality, including the search for meaning and purpose, transcendence and the impact of spiritual beliefs on health and well-being (McSherry 2016). The SSCRS has been extensively utilised and validated in diverse cultural and linguistic settings, demonstrating robust reliability and validity (Herlianita et al. 2018; Martins et al. 2015; Panczyk et al. 2023; Parozzi et al. 2023; Pais, Suresh, and DCunha 2023). A study validating the SSCRS in Spanish was conducted in Colombia (Escobar 2015). However, the findings of the validation study revealed certain psychometric deficiencies. It should also be pointed out that no confirmatory analysis was carried out in relation to the structure of the scale, highlighting the need for further refinement and adaptation of the scale. Our study addresses these shortcomings, proposing a comprehensive re-evaluation of the scale's factor structure through confirmatory factor analysis (CFA) to ensure its applicability and accuracy in the Spanish-speaking nursing context.

Building upon previous validation studies, the primary objective of this study is to examine the reliability and construct validity of the Spanish version of the SSCRS among nursing professionals. By validating the scale in this specific population, we aim to provide healthcare practitioners with a reliable tool to assess their perceptions of spirituality and spiritual care. This will contribute to enhancing the quality

of spiritual care delivery within the nursing profession in Spanish-speaking countries.

3 | Method

3.1 | Study Design

The present study is a methodological research, designed as an observational and descriptive cross-sectional study to analyse the psychometric properties of the SSCRS in a Spanish sample of nursing professionals.

3.2 | Participants

Eligible participants were registered nursing professionals, all of whom were currently employed in healthcare centres across Spain. An official invitation email was sent via the Official College of Nursing of Alicante to its registered members. The sample comprised a total of 325 licensed nursing professionals, selected through nonprobability sampling. However, to ensure a sufficient number of participants for psychometric validation, snowball sampling was subsequently employed, allowing participants to refer colleagues from their professional networks. This method allowed the inclusion of participants from various regions of Spain, beyond the initial geographic focus. The approach was deemed appropriate to expand the participant pool and maintain an adequate sample size. The minimum sample size was estimated as 10 participants per item, following the standard recommendations for psychometric studies (Kline 2015).

Inclusion criteria required participants to be registered nurses and currently working in a healthcare setting. Exclusion criteria included nurses who were not actively employed or those who were still students.

3.3 | Procedure

Data were collected via an online survey. Participants were invited via an official email sent by the Official College of Nursing of Alicante, which included a link to the online survey platform. The email explained the study's objectives, assured confidentiality and highlighted the importance of their participation in validating the scale. To increase response rates, a reminder email was sent 2 weeks after the initial invitation.

The online survey was hosted on the survey platform of the University of Alicante, which participants accessed via the provided link. Participants were informed about the objectives of the study and signed the informed consent form approved by the Ethical Committee of the University of Alicante (Spain) [UA-21-10-11]. Before completing the main questionnaire, participants filled out a demographic characteristics section, which included age, gender, years of professional experience, educational background, religious belief and any formal training in spiritual care. These data were collected to ensure a comprehensive profile of the sample and to explore any potential associations with the study variables.

3.4 | Sample Size

The scale consists of 17 items and the final study sample includes 325 participants, with 177 in the training sample and 148 in the testing sample. This represents a training sample ratio (number of participants: number of items) of 10:1, or 10 patients per item, to assess the psychometric properties of the questionnaire. This sample size ensured a proportion of correct factor structures greater than 60%, as recommended by Costello and Osborne (2005). The 10:1 ratio is also recommended for sample size calculations in questionnaire validation (Kline 2015).

3.5 | Measures

The tool comprises of two sections. The first page of the survey provided participants with information about the total number of questions, the estimated time needed for survey completion and the purpose of the study. The first component is the SSCRS-Sp, consisting of 17 items originally categorised into four subscales: 'spirituality', 'spiritual care', 'religiosity' and 'personalised care'. Responses are organised using a 5-point Likert scale ranging from 'totally disagree' to 'totally agree'. To calculate the total score, items C, D, M and P were reverse-coded (Menekli and Şentürk 2022) and the scores of the items were summed, calculating their mean value and standard deviation (SD). The mean and SD were also calculated for each item and for each category of the explanatory variables. The second segment examines sociodemographic data (gender, age, religious beliefs) and professional details (nursing specialisation/ work unit).

The Spanish version of the scale was translated from English into Spanish employing the back-translation method and following international guidelines for test adaptation (e.g., Hambleton 2005; Hernández et al. 2020). Permission was initially sought and obtained from the developer of the original questionnaire to proceed with the adaptation process. Following this approval, the items from the English version were translated into Spanish. First, a panel of experts from the University of Alicante in the fields of nursing, psychology and linguistics, fluent in both English and Spanish, was convened. This panel consisted of five professionals who possess a deep understanding of the concepts related to spirituality and spiritual care, as well as expertise in cross-cultural translation processes. Their role was to review the original scale and propose an initial Spanish translation that maintained the conceptual equivalence of the items. Following the panel's initial translation and adhering to the process of translation-back translation, we involved a different group of bilingual experts to translate the preliminary Spanish version back into English. The purpose of this step was to verify the accuracy of the initial translation and to identify any discrepancies or issues that might have arisen during the translation process. Before obtaining the final version of the scale, a pilot phase was conducted involving a sample of 30 nursing professionals from various healthcare settings in Spain. Their feedback and responses were invaluable in refining the preliminary Spanish version of the scale. Based on their input, adjustments were made to the survey instrument, including rephrasing some questions for clarity and ensuring that the online data collection process worked smoothly. These changes were implemented to improve the overall quality and

TABLE 1 | Description of the full sample.

	<i>n</i>	%	Total SSCRS	
			Mean	SD
Age (years)				
20–29	124	38.1	69.2	5.8
30–39	79	24.3	67.9	6.3
40–49	72	22.2	66.6	7.7
≥ 50	50	15.4	66.4	7.3
Gender				
Woman	281	86.5	68.0	6.8
Men	44	13.5	67.0	5.8
Marital status				
Single	124	38.2	68.9	6.7
Married/cohabiting	186	57.2	67.3	6.6
Separated/divorced/widowed	15	4.6	66.5	7.0
Children				
No	133	40.9	65.8	7.4
Yes	192	59.1	69.2	5.8
Level of education				
Bachelor's degree	102	31.4	69.0	6.1
Diploma	109	33.5	66.0	6.6
Master's/Doctorate	62	19.1	68.5	7.0
Undergraduate degree	13	4.0	66.6	10.0
University Expert	10	3.1	70.3	6.4
RIS (Resident internal specialist in nursing)	29	8.9	69.0	5.8
University attended for studies				
Madrid	156	48.0	67.9	6.4
Barcelona	67	20.6	69.3	6.1
Alicante	40	12.3	67.0	7.0
Balears	14	4.3	64.5	6.3
Córdoba	15	4.6	68.2	6.9
Other	33	10.2	67.0	8.3
Spiritual care resources				
Many	14	4.4	62.7	8.3
Several	55	16.9	61.3	7.3
Enough	94	28.9	68.3	6.7
Very few	145	44.6	60.1	4.9
None	17	5.2	57.8	5.3
Do you believe in the existence of something after death?				
Nothing	82	25.2	68.1	7.1

(Continues)

TABLE 1 | (Continued)

	<i>n</i>	%	Total SSCRS	
			Mean	SD
There must be something	78	24.0	68.9	5.5
I think there is	104	32.0	67.5	6.1
I'm sure there is	61	18.8	66.8	8.3
Do you consider yourself a religious person?				
Very religious	16	4.9	65.8	10.5
Quite religious	52	16.0	65.8	7.0
Slightly religious	161	49.5	67.9	6.2
Not religious	96	29.6	69.1	6.4
What role or influence does religion have in your life?				
I don't know	47	14.5	68.5	6.1
None	134	41.2	68.2	6.6
Negative	10	3.1	67.2	5.6
Positive	134	41.2	67.4	7.1

effectiveness of the survey instrument for the main study. The panel of experts and the translation-back translation phases involved a total of three individuals. Their collective input and feedback were crucial in ensuring that the Spanish version of the scale accurately captured the intended meanings of the original items while being culturally and linguistically appropriate for Spanish-speaking nursing professionals. This rigorous approach aimed to achieve a high level of confidence in the accuracy and cultural relevance of the translated scale. The final Spanish version was crafted subsequent to the committee's verification of the semantic, idiomatic, experiential and conceptual equivalence between the source and translated versions.

3.6 | Statistical Analysis

3.6.1 | Validity

To assess the construct validity, an exploratory factor analysis (EFA) was conducted on a randomly selected training subset, constituting approximately 50% of the original sample size. The FACTOR program (V.10.5.01) by Lorenzo-Seva and Ferrando (2013) was employed for this analysis. To evaluate the EFA, several statistical tests were applied. The Bartlett sphericity test was utilised, alongside the calculation of the Kaiser–Meyer–Olkin (KMO) adequacy index with its 95% confidence interval (95% CI). Additionally, asymmetry and kurtosis were assessed using the Mardia Test as an indicator of multivariate normality. Due to the ordinal nature of responses in the questionnaire, an underlying continuous trait was assumed, allowing the use of polychoric correlation matrices. The factors were extracted by the Robust Unweighted Least Squares method, with the number of factors determined through parallel analysis. The extracted factors underwent a factor analysis using Weighted Oblimin rotation. Goodness of fit was measured using Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI) and Goodness of Fit Index (GFI),

where values <0.08 , >0.9 and >0.9 were considered adequate, (Browne and Cudeck 1992). Furthermore, a one-dimensional structure was evaluated using Unidimensional Congruence (UniCo), Explained Common Variance (ECV) and Mean of Item Residual Absolute Loadings (MIREAL) indices. Acceptable values for a one-dimensional structure were set at >0.95 , >0.85 and <0.30 respectively (Ferrando and Lorenzo-Seva 2018).

In the remaining 50% of the randomly selected testing sample, a CFA was performed on both the EFA-derived model and the four-dimensional model proposed by McSherry et al. in 2002. Structural equations were utilised, and the analysis was conducted using the R program (v.4.2.2) with the lavaan package (Rosseel 2012). Goodness of fit was assessed using the chi-squared test, comparative fit index (CFI) with a criterion of at least 0.90 (Mulaik et al. 1989), and the root mean square error of approximation (RMSEA) with its 90% CI (MacCallum, Browne, and Sugawara 1996). The sample size does not substantially affect the RMSEA indicator (Lorenzo-Seva and Ferrando 2013). Acceptable values were taken as those greater than 0.90 and less than 0.08 for CFI and RMSEA respectively. The path diagram, error and test of each item and their variances were applied in conjunction with their estimations.

3.6.2 | Reliability

McDonald's Omega was calculated to measure internal consistency in the EFA.

3.7 | Ethical Considerations

Information was gathered anonymously and handled by the authors in compliance with prevailing Spanish regulations and the principles outlined in the Declaration of Helsinki. Participants

explicitly consented to their involvement, a prerequisite for accessing the online survey. The study was authorised by the ethics committee of the University of Alicante under the authorisation number [UA-21-10-11]. All participants received treatment aligning with the ethical principles outlined by the American Psychological Association concerning participant consent, anonymity and confidentiality.

4 | Results

A total of 325 nurses completed the survey by correctly completing the scale. The average age was 36 years and age ranged from 21 to 64 years. About two out of three participants ($n = 203$, 62.5%) were under the age of 40 years. Of those who participated, 86.5% were females ($n = 281$). On the other hand, nearly 50% of respondents ($n = 162$) declared no spiritual care training. Most of the respondents were not religious ($n = 257$, 79%). Detailed sample and demographic characteristics are presented in Table 1.

The profile with the lowest mean score in the questionnaire was nurses who had studied in the Balearic Islands (64.5) and those who considered themselves very or quite religious (65.8). The profile with the highest mean score included nurses with a University Expert title (70.3), RIS (69.0), those with children (69.2), those who had studied in Barcelona (69.3) and those who were not religious (69.1) (Table 1).

The three items with the highest mean scores in the SSCRS questionnaire were D, G and N, with mean scores of 4.6, 4.5 and 4.5 respectively. On the other hand, the three items with the lowest mean scores were C, E and A, with mean scores of 2.8, 3.3 and 3.6 respectively. The overall mean score was 67.8 (SD = 6.7), with individual scores ranging from 17 to 85 points (Table 2).

4.1 | Factor Structure of the SSCRS

In the training sample ($n = 177$), the data exhibit a good factorial structure (KMO = 0.826) and the Barlett's test of sphericity indicates the suitability for factorial analysis ($p < 0.001$). However, the data do not meet multivariate normality, as measured by the Mardia's test (Skewness and Kurtosis). The UniCO, ECV and MIREAL indicators suggested that a unidimensional solution was not fitting for the data. EFA using the criteria of eigenvalues greater than 1 and parallel analysis yielded two dimensions. These two dimensions account for 45.6% of the total variability. Through an oblique weighted rotation, the items forming the first factor are D, E, G, L, M and P, while items of the second factor are C, F, G, H, I, J, K, L, N, O and Q. Items A and B do not load onto either dimension, although they have more weight in the second dimension. Items G and L have similar loadings on both factors (Tables 3 and 4).

Consideration of the items to be retained in the two identified factors suggested a two factors solution labelled *Religiosity* (4 items) and *Spirituality and Spiritual care* (11 items).

The two-factor solution exhibits good fit indices: RMSEA = 0.065, CFI = 0.966 and GFI = 0.994. The internal consistency, measured by McDonald's Omega, is satisfactory at 0.871 (Table 4).

TABLE 2 | Mean scores of questionnaire items.

		Mean	SD
A	I believe nurses can provide spiritual care by arranging a visit by the hospital Chaplain or the patient's own religious leader if requested.	3.6	1.1
B	I believe nurses can provide spiritual care by showing kindness, concern and cheerfulness when giving care	4.4	0.8
C	I believe spirituality is concerned with a need to forgive and need to be forgiven	2.8	1.1
D	I believe spirituality involves only going to Church/Place of worship	4.6	0.6
E	I believe spirituality is not concerned with belief and faith in a God or Supreme being	3.3	1.2
F	I believe spirituality is about finding meaning in the good and bad events of life	4.0	0.8
G	I believe nurses can provide spiritual care by spending time with a patient, giving support and reassurance especially in time of need	4.5	0.7
H	I believe nurses can provide spiritual care by enabling a patient to find meaning and purpose in their illness	4.0	0.9
I	I believe spirituality is about having a sense of hope in life	3.7	1.0
J	I believe spirituality is to do with the way one conducts one's life here and now	4.0	0.8
K	I believe nurses can provide spiritual care by listening to and allowing patients' time to discuss and explore their fears, anxieties and troubles	4.4	0.6
L	I believe spirituality is a unifying force which enables one to be at peace with oneself and the world	4.4	0.7
M	I believe spirituality does not include areas such as art, creativity and self-expression	3.9	1.0
N	I believe nurses can provide spiritual care by having respect for privacy, dignity and religious and cultural beliefs of a patient	4.5	0.6
O	I believe spirituality involves personal friendships, relationships	3.8	0.9
P	I believe spirituality does not apply to all to Atheists or Agnostics	4.4	0.8
Q	I believe spirituality includes people's morals	3.6	1.0
	Total	67.8	6.7

TABLE 3 | Factorial analysis (EFA) in training sample ($n = 177$).

ITEM	Communality	Factor	Eigenvalue	% Variance
A	0.320	1	5.338	33.7
B	0.540	2	1.550	11.8
C	0.631		0.844	
D	1.000		0.560	
E	0.603		0.356	
F	0.785		0.240	
G	0.729		0.179	
H	0.595		0.121	
I	0.575		0.117	
J	0.950		0.087	
K	0.916		-0.001	
L	0.931		-0.025	
M	0.798		-0.038	
N	0.715		-0.074	
O	0.506		-0.119	
P	0.671		-0.216	
Q	0.647		-0.272	

Note: Optimal number of dimensions according to parallel analysis = 2. Optimal number of dimensions based on eigenvalues greater than one = 2.

A testing sample ($n = 148$) was utilised to perform CFA through structural equation modelling for both the two-factor solution found in the EFA and the four-factor solution proposed by McSherry, Draper, and Kendrick (2002). Neither solution adequately fit the data, although the four-factor solution showed marginally superior fit compared to two-factor solution (Table 5; Figures 1 and 2).

Similar to the original version of the scale, the items C and E were also dropped in the four-factor model structure of the SSCRS-Sp (Figure 2).

5 | Discussion

The aim of this study was to examine the reliability and construct validity of the Spanish adaptation of the SSCRS-sp among nursing professionals. The scale was reviewed by experts and tested by EFA and CFA.

The results of the EFA revealed a deviation from the original factorial structure of the SSCRS (McSherry, Draper, and Kendrick 2002). While the original scale proposed a multidimensional structure with four factors, our exploratory analysis yielded a two-factor solution. The fit indices for both the two-factor and four-factor models indicated poor fit, suggesting that these structures may not adequately capture the underlying constructs within this cultural context. This incompatibility can be attributed to differences in cultural perceptions of the measured

constructs, as cultural values and norms significantly influence how individuals interpret survey items. Given that the primary objective of this study was to analyse the psychometric properties of the original instrument, no modifications were made to enhance or alter its structure. These findings are instead presented to underscore the importance of cultural considerations in future adaptations of the scale, particularly for developing instruments tailored to the Spanish population.

Similarly, recent adaptations of the scale in different cultural contexts have yielded different factorial structures from the original (Pais, Suresh, and DCunha 2023; Panczyk et al. 2023). Our findings indicate that the Spanish adaptation of the SSCRS captures a distinct factorial structure that may reflect cultural or contextual differences. These cultural nuances can influence how individuals respond to the scale items, affecting factor loadings and the number of factors that emerge in factor analyses. For instance, in a society where spirituality is deeply incorporated into daily life, individuals may have a more refined comprehension of spiritual care, leading to different factor loadings. In contrast, in cultures where spirituality is less emphasised, factor loadings and the number of factors might be distinct.

There were notable differences in religiosity between the original sample (McSherry, Draper, and Kendrick 2002) and our study sample. In the original sample, 76% of participants reported having religious beliefs, whereas in our study sample, only 29% identified as religious. It is important to consider these differences when interpreting the findings and

TABLE 4 | Goodness of fit and rotate loading matrix of exploratory factorial analysis for two factors.

	Index (Good level)	95% CI	
Adequacy EFA	KMO (> 0.70)	0.826	
	Bartlett (<i>p</i>)	< 0.001	
	Skewness (<i>p</i>)	< 0.001	
	Kurtosis (<i>p</i>)	< 0.001	
Unidimensionality	UniCo (> 0.95)	0.836	(0.793–0.920)
	ECV (> 0.85)	0.740	(0.692–0.803)
	MIREAL (< 0.30)	0.275	(0.210–0.297)
Robust goodness of fit	RMSEA (< 0.08)	0.065	(0.068–0.078)
	CFI (> 0.9)	0.966	(0.942–0.974)
	GFI (> 0.9)	0.994	(0.982–0.993)
Global reliability	Omega (> 0.80)	0.871	
Rotate loading matrix (Weighted Oblimin)		F1	F2
	A	0.050	0.234
	B	0.106	0.292
	C	−0.293	0.508**
	D	−0.856**	0.223
	E	0.524**	−0.176
	F	−0.002	0.719**
	G	0.435**	0.420**
	H	0.002	0.660**
	I	−0.300	0.752**
	J	0.136	0.586**
	K	0.302*	0.510**
	L	0.458**	0.437**
	M	0.590**	0.101
	N	0.338*	0.472**
	O	0.277	0.376*
	P	0.749**	−0.022
Q	−0.042	0.447**	
Cum % Variance		33.7%	45.6%

Abbreviations: CFI, comparative fit index; CI, confidence interval; ECV, explained common variance; GFI, goodness of fit index; KMO, Kaiser–Meyer–Olkin; MIREAL, mean of item residual absolute loadings; Omega, McDonald's Omega; RMSEA, root mean square error of approximation; UniCo, unidimensional congruence.

*Loading matrix components higher than 0.300.

**Loading matrix components higher than 0.400.

implications of our study, as individual spirituality and religious beliefs can significantly influence perceptions of and engagement with spiritual care (Green, Kim-Godwin, and Jones 2020).

Another element that can impact nurses' views on spirituality and spiritual care is the lack of training in this crucial aspect of healthcare. In the setting of nursing education in Spanish

universities, there is a noticeable absence of formal instruction and preparation in spiritual care within the curriculum (De Diego Cordero et al. 2019). In our study, nearly 50% of respondents declared having received no spiritual care training. In the research conducted by Panczyk et al. (2023), the findings corroborate the influence of these differences. The professionals who reported engagement in Spiritual care training or a communication competence course had higher SSCRS-P results than other

TABLE 5 | Confirmatory factorial analysis in testing sample ($n = 148$).

Numbers of factors		Two factors by EFA		Four factors proposed by McSherry, Draper, and Kendrick (2002)				
Robust goodness of fit	Fit test (p)		<0.001			<0.001		
	RMSEA (<0.08)		0.168			0.134		
	CFI (>0.9)		0.701			0.826		
	SRMR (<0.08)		0.116			0.089		
		F1	F2	F1	F2	F3	F4	
Estimates latent variables	A				1.000			
	B				2.895*			
	C		1.000					
	D	1.000				1.000		
	E	-0.212						
	F		1.771*	1.000				
	G	-1.381*				3.634*		
	H		1.592*	0.898*				
	I		1.792*	0.990*				
	J		2.164*	1.209*				
	K		2.606*			4.018*		
	L	-1.267*		1.223*				
	M	-0.832*					-0.910*	
	N		1.584*					1.000
	O		1.733*					1.006*
	P	-1.160*						-1.223*
Q		1.480*					0.878*	

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual.

*Estimate latent variables with $p < 0.05$.

participants. This lack of training underscores the necessity of incorporating comprehensive spiritual care education into nursing curricula, which could involve developing dedicated courses and workshops focused on the importance of spirituality in patient care. Research indicates that educational initiatives in this area can enhance nurses' knowledge and comfort in providing spiritual care, ultimately improving patient outcomes (Tanzi et al. 2024).

Taking this into account, the composite of the SSCRS-Sp was confirmed through goodness of fit analysis for two models, employing the CFA method. The confirmatory analysis indicated that the four-domain scale was a superior solution to the two-domain scale.

In addition to other psychometric attributes of the SSCRS-Sp scale, it is worth highlighting its internal consistency, as indicated by the value of McDonald's Omega. Reliability analysis plays a pivotal role in evaluating the psychometric properties of

measurement instruments. Nevertheless, conventional assessments of reliability, such as Cronbach's α , may present difficulties when utilised with ordinal scales. McDonald's Omega has been proposed as a suitable alternative to Cronbach's alpha for assessing internal consistency in scales with ordinal response options (Dunn, Baguley, and Brunsten 2014; McNeish 2018). During this research, we employed McDonald's omega to evaluate the reliability of the SSCRS-Sp, while also presenting Cronbach's alpha for comparative purposes. Cronbach's alpha value for the total SSCRS-Sp was 0.66, whereas McDonald's omega estimate for the total SSCRS-Sp was 0.87. These results indicate that the internal consistency of the SSCRS-Sp is satisfactory. Most prior research has documented Cronbach's alpha values ranging from 0.64 to 0.90, indicating the internal consistency of the SSCRS across different cultural adaptations and validation studies (Escobar 2015; Fallahi Khoshknab et al. 2010; Martins et al. 2015; Pais, Suresh, and DCunha 2023; Panczyk et al. 2023). These consistent findings across different populations and contexts further support the reliability and stability

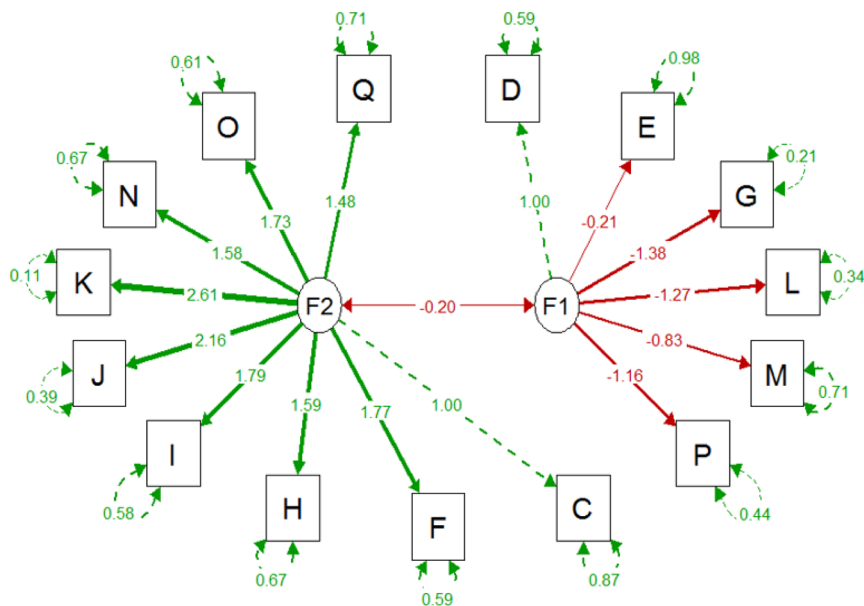


FIGURE 1 | Path diagram of confirmatory factor analysis for two dimensions, performed on the test sample.

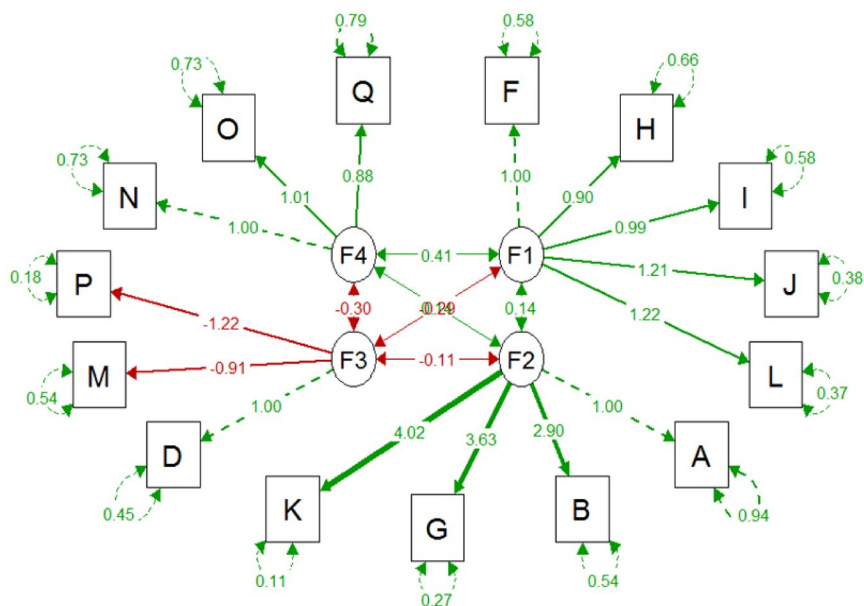


FIGURE 2 | Path diagram of confirmatory factor analysis for four dimensions proposed by McSherry, Draper, and Kendrick (2002).

of the SSCRS indicating its potential for widespread application in assessing perceptions of spirituality and spiritual care across diverse nursing cultures.

5.1 | Limitations

Finally, it is important to consider certain limitations that may impact the generalisability of the findings. The sample size and the varying degrees of religiosity and training in spiritual care competencies among participants could have influenced the responses and interpretation of the results. Specifically, the significant number of respondents who reported not receiving

formal training in spiritual care, along with those who identified as religious, raises questions about their understanding of the concept. This limitation may affect the reproducibility of the factorial structure of the scale, as participants' differing levels of knowledge and beliefs may lead to inconsistencies in their responses when assessing spirituality and spiritual care among nursing professionals.

Despite these limitations, the results support the utility of the scale in assessing nurses' perception of spirituality and spiritual care, highlighting the need for future research to include participants with diverse training backgrounds and experiences.

6 | Conclusion

This investigation provides evidence of the validity and reliability of the Spanish adaptation of the SSCRS (SSCRS-Sp) in the sample of participating nurses. While the findings did not align with an optimal factorial solution as proposed by the original author, it is significant to highlight that the scale demonstrated good internal consistency. These findings indicate that the SSCRS-Sp is a reliable tool for assessing the perception of spirituality and spiritual care among nursing professionals.

Further research with more extensive and varied samples is needed to explore the underlying reasons for the deviating factorial structure and its implications for assessing nursing professionals' perspectives on spirituality and spiritual care in Spain. Additionally, incorporating qualitative methods, such as interviews, could provide deeper insights into how participants perceive spirituality, further informing future adaptations of the scale.

Author Contributions

M. D. Fernández-Pascual: conceptualisation; methodology; writing – original draft; writing – review and editing. **A. Reig-Ferrer:** conceptualisation; supervision, review and editing. **L. Martínez-Rodríguez:** data collection. **J. A. Quesada-Rico:** formal analysis; review and editing. **W. Mcsherry:** supervision, writing – review and editing. **L. Riquelme-Ros:** data collection. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflicts of interest.

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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