

A valid and reliable scale to assess cultural sensibility in nursing

Maidier Belintxon^{a,b}, Ana Carvajal^{b,c,*}, María Jesús Pumar-Méndez^{b,d},
Esperanza Rayon-Valpuesta^e, Tamara Raquel Velasco^e, Unai Belintxon^{f,g}, Nisha Dogra^h,
Marta Vidaurreta^{a,b}, Elena Bermejo-Martins^{a,b}, Olga Lopez-Dicastillo^{b,d}

^a University of Navarra, School of Nursing, Department of Community, Maternity and Pediatric Nursing, Campus Universitario, 31008 Pamplona, Spain

^b IdiSNA, Navarra Institute for Health Research, Spain

^c University of Navarra, School of Nursing, Department of Nursing Care for Adult Patients, Campus Universitario, 31008 Pamplona, Spain

^d Faculty of Health Sciences, Department of Health Sciences, Public University of Navarra, Spain

^e Faculty of Nursing, Physiotherapy and Podiatry of the Complutense University of Madrid, Plaza de Ramón y Cajal, 3, 28040 Madrid, Spain

^f Faculty of Law, Department of Law, Public University of Navarra, Spain

^g I-COMMUNITAS, Institute for Advanced Social Research, Spain

^h University of Leicester, Westcotes House, Leicester, UK

ARTICLE INFO

Keywords:

Nursing student
Cultural competence
Cultural diversity
Cultural sensibility
Psychometric properties
Validation study

ABSTRACT

Background: Cultural sensibility is an important concept linked to the achievement of cultural competence. Health professionals must first improve their cultural sensibility to become culturally competent and to be able to offer competent care to culturally diverse populations.

Aim

To develop and psychometrically test the Cultural Sensibility Scale for Nursing (CUSNUR), a cultural sensibility scale that can be used in nursing for the achievement of competencies needed to care for culturally diverse populations.

Design and methods: The cross-sectional survey was conducted over two stages. The first stage involved the cross-cultural and discipline-specific adaptation of an existing scale addressing this concept in the field of law using the reverse translation method. Second, validation of the scale was carried out from October 2016–June 2017 by studying the psychometric properties of the questionnaire through an analysis of content acceptability and reliability and through exploratory factor analysis (EFA).

Results: The questionnaire was designed to be clear, easy to understand, and of adequate length, and experts involved in content validation agreed that the scale meets these criteria. A total of 253 nursing students participated in the validation stage. Four factors were identified from the EFA: (1) patient and health professional behaviours, (2) self-assessments, (3) self-awareness, and (4) cultural influence. Two items were excluded. Factorial saturation is adequate for all factors (>0.30). The Cronbach alpha was measured as 0.75.

Conclusions: This study presents the first version of the CUSNUR and demonstrates that the scale is valid and reliable.

1. Introduction

The International Council of Nurses stipulated that nurses must inherently respect human rights, including cultural rights. Caring for people by addressing their diversity is a moral and professional

responsibility as well as an obligation for current and future nurses (Hemberg and Vilander, 2017; Repo et al., 2017; Yilmaz et al., 2017).

The provision of culturally competent care can help reduce inequalities and improve the quality of care as well as the satisfaction of both patients and families (Blanchet Garneau and Pepin, 2015; Long,

* Corresponding author at: University of Navarra, School of Nursing, Department of Nursing Care for Adult Patients, Campus Universitario, 31008 Pamplona, Spain.

E-mail addresses: mbelintxon@unav.es (M. Belintxon), acarvajal@unav.es (A. Carvajal), mj.pumarmendez@unavarra.es (M.J. Pumar-Méndez), erayon@ucm.es (E. Rayon-Valpuesta), tavela01@ucm.es (T.R. Velasco), unai.belintxon@unavarra.es (U. Belintxon), nd13@leicester.ac.uk (N. Dogra), mvidaurreta@unav.es (M. Vidaurreta), ebermejo@unav.es (E. Bermejo-Martins), olga.lopezdicastillo@unavarra.es (O. Lopez-Dicastillo).

URL: <http://t.co/carvajal3> (A. Carvajal).

<https://doi.org/10.1016/j.nedt.2021.105001>

Received 10 November 2020; Received in revised form 24 April 2021; Accepted 31 May 2021

Available online 8 June 2021

0260-6917/© 2021 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

2012; Yilmaz et al., 2017). To provide culturally competent care, it is essential that health professionals are adequately prepared, and this training must begin at the undergraduate level (Farber, 2019; Perng and Watson, 2012).

Addressing the concept of cultural sensibility as a first step in nursing curricula would help students to understand culture and of its relationship to disease and health processes and to develop the competency to work effectively across cultures. This will lead to providing better care for their patients and not harming them with their interventions. By contrast, a lack of cultural sensibility in health professionals can make difficult the acquisition of cultural competency and lead to a marginalisation of patients due to their skin colour, gender, age, language, origin, religion or other characteristics sometimes as the result of an unconscious bias (Fletcher, 2015; Fletcher, 2016; Karnik and Dogra, 2010). To facilitate nursing students' training in cultural sensibility, it is first essential to assess their level of understanding. However, no tools measuring this concept have been identified in the nursing literature.

2. Background

Cultural competence has been defined as involving a continuous process through which health professionals strive to acquire an ability to work with those from different cultural backgrounds and to provide culturally competent care (Campinha-Bacote, 2002; Sharifi et al., 2019). The attributes that comprise cultural competence are cultural awareness, cultural knowledge, cultural sensitivity, cultural skills, cultural proficiency, and dynamicity (Campinha-Bacote, 2002; Sharifi et al., 2019). The terms of cultural awareness and sensitivity can be studied together using the broader concept of 'cultural sensibility'. Karnik and Dogra (2010, p. 723) define cultural sensibility as 'an openness to emotional impressions, susceptibility, and sensitiveness that permits personal reflection and changes of behaviours when interacting with people from other cultures'.

It is important to highlight that the term culture is not limited to a person's ethnicity. In contrast, the term is presented as a multidimensional construct where ethnicity is one component among many that make up an individual's sense of self (Powell Sears, 2012; Verdonk and Abma, 2013). Other components include race, skin colour, gender, sexuality, disability, age or sexual or economic status (Dogra et al., 2016). Culture understood in this way also acknowledges that a person may identify his or her cultural identity differently from how others might define it (Karnik and Dogra, 2010). Based on this approach to the term culture, working with the concept of cultural sensibility is essential to help students understand that culture is a complex construct with numerous influences that affects one's interactions with others. This approach also makes it necessary to recognize the power of individuals' own cultural contexts, as they influence how individuals interpret and interact with others and remain 'open to a re-examination of [themselves] and a potential change in their own perspectives, behaviours, and attitudes towards others' (Dogra, 2003, p. 224).

Working within a cultural sensibility approach prevents those from the dominant culture from assuming that their culture is somehow superior to others (Dogra, 2003). This assumption would lead to the provision of ethnocentric care with negative consequences for patients, as needs related to patients' cultural backgrounds go unnoticed. Some of these consequences involve the establishment of a superficial relationship between patients and health professionals; the use of general messages instead of tailored care; and the generation of conflicts due to existing cultural shocks at the level of values and beliefs (Author Blinded, 2020; Leininger, 1995).

Addressing cultural sensibility promotes the examination of one's own beliefs, attitudes, and prejudices and recognises the mastery of one's own cultural context when interpreting and interacting with others (Fletcher, 2015; Fletcher, 2016). In addition, cultural sensibility requires that individuals be open to making changes to their own beliefs, behaviours, and attitudes (Dogra, 2003; Dogra et al., 2010). This

openness is fundamental to understanding one's own identity, considering other cultures, avoiding judgement, and recognising diversity (Dhadda, 2014).

Cultural sensibility encompasses the two attributes of cultural competence described above, cultural awareness and cultural sensitivity, in addition to promoting the adoption of an attitude of openness to the modification of one's own behaviour (Dhadda, 2014; Dogra, 2003; Dogra et al., 2010). Therefore, to become culturally competent, individuals must first cultivate cultural sensibility.

Addressing cultural sensibility can help achieve cultural safety as well, as some authors have noted that the antecedents of cultural safety are the two concepts involved in comprehending cultural sensibility, i. e., cultural sensitivity and cultural awareness (Bozorgzad et al., 2016). When health professionals view patients as whole persons, recognising the multiple underlying factors leading to health and disease, a culturally safe nursing practice can take place. Cultural safety leads to the delivery of services that recognize, respect, and nurture the unique cultural identities of different groups and that safely address their needs, expectations, and rights (Polaschek, 1998). Cultural safety and cultural sensibility concepts understand culture in the same way. However, the concept of cultural safety recognises that while those within an ethnic group may be diverse, their attitudes are likely to be similar, assuming that it is mostly persons of the dominant culture who need to learn about other cultures (Polaschek, 1998).

As stated above, there are numerous concepts related to culturally competent practice. Many scales related to these terms are presented in the literature, and most focus on measuring cultural competence and its attributes, such as the Scale of Ethnocultural Empathy (Albar et al., 2015), the Cultural Sensitivity Scale: Hispanic Version (Lee et al., 2006), and the Cultural Competence Assessment Spanish Version, CCA-S (Rai-gal-Aran et al., 2019). Although some of these scales include items that share commonalities with the concept of cultural sensibility, they do not address the concept as such.

Only one scale provided in the literature measures the construct of cultural sensibility, i.e., the Cultural Sensibility Survey (CSS) scale developed by Curcio et al. (2013) designed and tested in English for university law students in the United States. This scale was developed based on Karnik and Dogra's (2010) conceptual framework for cultural sensibility. The framework was created in the medical field and is therefore suitable for health professional contexts. The CSS was designed with the purpose of measuring learning outcomes related to knowledge, attitudes and skills needed to achieve cultural sensibility in law students (see Curcio et al., 2013 for details).

The CSS collects information on personal perceptions regarding the need for training on cultural diversity, knowledge about how cultural diversity affects communication and interactions with others, and knowledge about how culture affects the legal process. The disciplines in which lawyers and nurses work share many similarities, as both are person centred, and professionals in both fields interact with people from different cultures under conditions of great vulnerability. As this scale has robust psychometric properties, it was used as a model to develop a new scale for the study of cultural sensibility in health professionals.

Therefore, this study set out to create and validate a new scale for the assessment of cultural sensibility that could be used in nursing for the achievement of competencies needed to care for culturally diverse populations.

3. Methods

3.1. Aim

We sought to develop and validate a cultural sensibility scale that can help undergraduate nursing students develop into culturally competent graduates who can work with diverse populations.

3.2. Methodology

The new scale was developed over a two-staged process, which is described in the following sections.

3.2.1. Stage 1: cross-cultural adaptation of the scale and pilot study

The first stage involved the cross-cultural and discipline-specific adaptation of an existing scale addressing this concept in the field of law using the reverse translation method (Argimon and Jimenez, 2004). This method is widely recommended by experts of cross-cultural studies

and includes the translation of the scale by individuals who are proficient in both languages, corrections by experts, back-translation, evaluation by a committee, comparisons with the original version, and a pilot study (Author Blinded, 2011; Maneesriwongul and Dixon, 2004; Wild et al., 2005).

The process was carried out as follows (see Fig. 1):

- Two bilingual researchers who knew the purpose and content of the questionnaire independently translated the original version into Spanish.

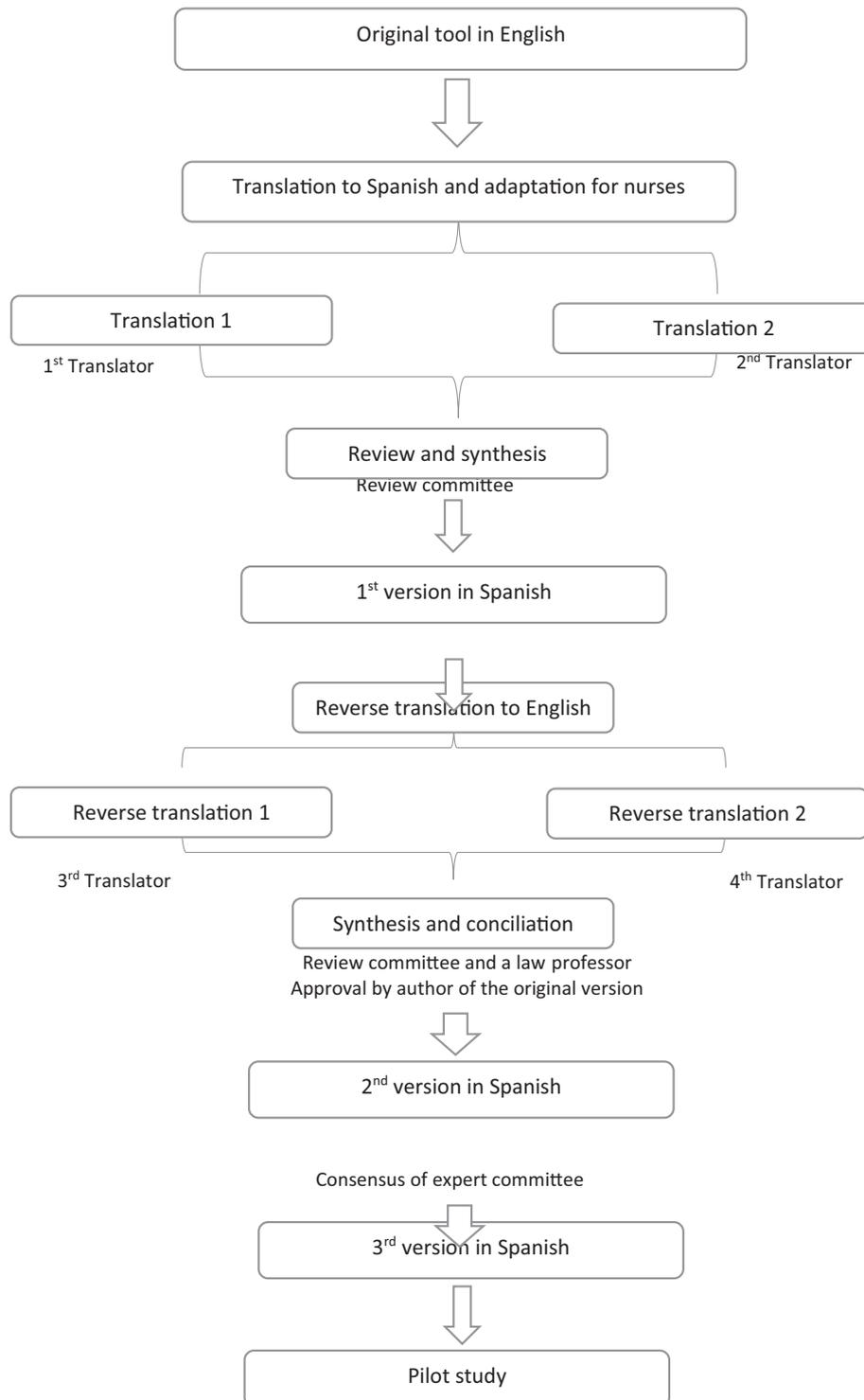


Fig. 1. Stage 1: transcultural adaptation of the scale and pilot study.

- A review committee (two members of the research team and a student in the final year of the nursing programme) reviewed the translation and generated a first version of the questionnaire.
- Two bilingual experts in idiomatic aspects reverse-translated the first version into the original language.
- The review committee compared the original version to the last reverse-translated version for semantic equivalence (meaning of the items), producing a new version of the questionnaire. The authors of the original version approved of the updated version of the questionnaire.
- The review committee, together with a professor of international law, helped translate the items from a focus on law to a focus on health, verifying the use of certain concepts in this field.
- To evaluate content acceptability and validity, the version was reviewed in a structured and independent way by seven experts (intentional sampling): two nursing professors with considerable knowledge of these aspects, four undergraduate students, and one health professional practising in primary care. Qualitative information was collected on questionnaire content, wording, structure, instructions, and typographical errors.
- A pilot study including a descriptive and reliability analysis was performed to explore internal consistency using the Cronbach alpha coefficient.

3.2.2. Stage 2: psychometric validation of the scale

A cross-sectional observational study was conducted to evaluate the psychometric properties of the new Cultural Sensibility Scale for Nursing (CUSNUR) and study its psychometric properties through content acceptability, reliability, and exploratory factor analysis (EFA).

3.3. Sample/participants

The final version of the questionnaire was distributed to third- and fourth-year nursing students at three different Spanish universities (between October 2016 and June 2017). As inclusion criteria, students had to be proficient in Spanish, voluntarily want to participate in the study, and sign the consent form. Sociodemographic data were also collected.

To calculate the sample size, it was estimated that 10 subjects per item were necessary (Nunnally and Bernstein, 1994). As the CUSNUR includes 24 items, the sample size was estimated at a minimum of 240 people. With a percentage of possible losses of 25%, a total of 300 questionnaires were estimated to be necessary (100 from each university).

3.4. Instruments

3.4.1. The CSS

The CSS (Curcio et al., 2013) consists of 24 items grouped into five factors in the original study (Factor 1, cultural influences; Factor 2, self-awareness; Factor 3, desire to learn; Factor 4, client behaviours; Factor 5, self-assessment). The response to each item was collected on a Likert scale ranging from 1 to 6 (1 = It does not influence me at all to 6 = It influences me a lot). Visually, the instrument includes an initial section with six items and a second section with 18 items. Responses to all items of this second section employ a Likert scale of 1 (strongly disagree) to 6 (strongly agree). In addition, the scale includes 5 items regarding training received on cultural diversity and on four sociodemographic items. The reliability of the survey scale was measured as $\alpha = 0.842$, indicating a high degree of internal consistency in the scale. For this study, the new version of the CSS, the CUSNUR, was used to measure students' and health professionals' cultural sensibility.

3.4.2. Social Desirability Scale

The Social Desirability Scale (Ferrando and Chico, 2000) determines the degree of social desirability in respondents' answers. This instrument

can be applied when other questionnaires are used, such as the CUSNUR. In contrast with Curcio et al. (2013), a long version of the Social Desirability Scale was used, as the short version was not validated in Spanish at the time of the study. The long version has 33 true/false items and was validated for students (20 years of age on average). For the calculation of total scores for social desirability, the items are considered direct or inverse. For the direct items, 1 = true and 0 = false, while for the inverse items, 1 = false and 0 = true. Once calculated, the higher the score is for the subject, the greater the degree of social desirability in their answers is. The version used here was developed by Ferrando and Chico (2000), which is translated and adapted for the Spanish context. The reliability for the survey scale was measured as $\alpha = 0.78$. The social desirability average reference score for the general population mean age of 20 years old is 15.83 (SD 5.15).

3.5. Data analysis

All analyses were performed using FACTOR version 9.2 (Lorenzo-Seva and Ferrando, 2006) and SPSS version 17.0.

A descriptive analysis of the sociodemographic variables was performed. Differences within groups for the different dimensions of the scale were analysed using Mann-Whitney's *U* test and effect sizes are reported by Rosenthal's value (Rosenthal, 1991; Rosenthal et al., 2000). For the 24 items, analyses of missing data, inspection of outliers, and normality assessments were performed. The psychometric properties of the scale were estimated through the following analyses:

3.5.1. Factor analysis

An EFA was performed using the minimum rank factor analysis (MRFA) approach (Ten Berge and Kiers, 1991) with promax rotation (Lorenzo-Seva, 1999). To determine the recommended number of factors to retain in the model, parallel analysis was performed using both the classical procedure developed by Horn (1965) and the procedure developed by Timmerman and Lorenzo-Seva (2011). For the extraction of factors and the retention of items, we used the following criteria: Kaiser-Meyer-Olkin (KMO) value of greater than 0.80 (Kaiser, 1974), Bartlett sphericity test result of $p < 0.001$ (Polit and Yang, 2015), percentage of total variance explained by the original data of $>50\%$ and factor loading of ≥ 0.30 (Ratnay and Jones, 2007). We also calculated the correlation inter-factors.

3.5.2. Reliability

The reliability of the questionnaire was measured by exploring internal consistency using the Cronbach alpha coefficient. Acceptable reliability was determined to range from 0.7 to 0.9 (Nunnally and Bernstein, 1994).

3.6. Ethical considerations

Authorisation to translate and create the new scale based on the CSS was obtained from the authors of the original version of the scale. We obtained approval from the relevant ethics committee (2016.030) and authorisation from each university to distribute the questionnaire among students. Participants signed an informed written consent form.

4. Results

4.1. Stage 1: cross-cultural adaptation of the scale and pilot study

After reverse translation and the necessary adaptations made to the nursing field, the 24-item CUSNUR was created.

4.1.1. Content acceptability and validity

The experts recommended some minor changes regarding the format of the scale, stressing the importance of making the questions easy to read to facilitate comprehension. The experts also agreed that the scale

was clear and simple and of adequate length and highlighted the novelty and relevance of some concepts such as 'cultural lens' and 'culturally biased assumptions'. The experts recommended defining the concepts of race and ethnicity for the first items, as they are frequently used interchangeably due to a lack of knowledge. Additionally, the wording of six of the items was modified (1.1, 1.2, 2.3, 2.7, 2.12, and 2.18).

4.1.2. Pilot study

A total of 22 participants completed the scale at this stage, of whom 100% were women. This rate reflects the high percentage of female students compared to male students enrolled in nursing programmes. All of the participants were Spanish, and the age range was 20 to 25 years. The internal consistency of the scale for the pilot study was good ($\alpha = 0.78$).

4.2. Stage 2: psychometric validation of the scale

4.2.1. Characteristics of the sample

A total 256 students returned the questionnaire. The data for three participants were excluded due to 100% ($n = 2$) or 25% ($n = 1$) of CUSNUR items being left blank. Another 24 participants left at least one item blank. As the missing data were random (Little's MCAR test: $\chi^2(314) = 330.551, p = 0.250$) and represented less than 2% for each of the items, to avoid an unnecessary reduction of the sample, missing data were substituted by the median for each item. The final sample included 253 participants (84.33%).

From the 253 participants that were included in the CUSNUR analyses, 231 were included in the analyses for the Social Desirability Scale (91.3% that of the CUSNUR), as 19 of the returned scales had excess missing data and three participants left the Social Desirability Scale blank. For the Social Desirability Scale, the mean was 14.95 ($SD = 5.16$).

A total of 90.5% of the sample had Spanish nationality, 86.6% were women, 92.1% were between 20 and 25 years of age, and 41.9% described themselves as Catholic Christians. Table 1 presents the sociodemographic data of the participants.

4.2.2. Exploratory item analyses

None of the items was normally distributed according to Kolmogorov-Smirnov analyses (all $p < 0.05$). Six items presented univariate outliers: v2.3, V2.7, v2.8, v2.10, v2.13, and v2.17. An analysis of the participants who generated the outliers confirms that only three subjects generated outliers for two items (none of these pairs of items

Table 1
Sociodemographic characteristics of the sample.

| Sociodemographic characteristics | | N = 253 n (%) |
|----------------------------------|------------------------|------------------|
| Gender | Female | 219 (86.6) |
| | Male | 34 (10.4) |
| Age | 20–25 years | 233 (92.1) |
| | 25 years | 16 (7.9) |
| | Missing data | 4 (1.6) |
| Place of residence | Navarre | 107 (42.3) |
| | Madrid | 96 (37.9) |
| | Basque country | 30 (11.9) |
| | Other regions of Spain | 20 (7.9) |
| Nationality | Spanish | 229 (90.5) |
| | Ecuadorian | 7 (2.8) |
| | Other nationality* | 17 (6.7) |
| Religious beliefs | Christian-Catholic | 106 (41.9) |
| | Atheist | 74 (29.2) |
| | Agnostic | 32 (12.6) |
| | Other religion** | 6 (2.4) |
| | Missing data | 35 (13.8) |

* Other nationalities include Chinese, Romanian, Western Saharan, Peruvian, Colombian, Bulgarian, Thai, Syrian, Argentinian, Portuguese, Guinean, Polish, and American.

** Other religions include Muslim, Evangelical, and Buddhist.

with outliers were for the same items) and the rest of the outliers were produced by subjects with no other outliers.

4.2.3. Exploratory factor analyses

Two items did not reach saturation for any factor (Items 2.4 'I do not view the health system through a culturally biased lens' and 2.5 'If it is the patient's preference based on cultural practice to delegate decision-making to other family members, the health professional should help him/her understand why he/she should make his/her own decisions regarding care'). Therefore, these items were removed from the model. The parallel analysis (Horn, 1965) for the matrix without these items involved grouping the items into four factors (see the definitions and characteristics of the factors in Table 2): (1) patient and health professional behaviours (0.776); (2) self-assessment (0.750); (3) self-awareness (0.931); and (4) cultural influence (0.784). The final model with 22 items shows a significant matrix determinant ($p = 0.002$) and a KMO value of 0.784. The Bartlett statistical test resulted in a value of 1542.1 ($gl = 231; p < 0.001$). All of the communalities except for item 2.6 (0.35) presented values of higher than 0.40. The model explains 65.69% of the common variance.

The rotated factorial matrix together with the explained variance ratio and the estimated reliability for each rotated factor, according to the procedure developed by Mislevy and Bock (1990) are presented in Tables 3 and 4. In addition, factorial saturation exceeded 0.30 for all factors with all of the items saturating only in one factor.

The correlations between factors were very weak, but the strongest correlation of 0.364 was found between F2 (self-assessment) and F4 (cultural influence). Other factors correlated with values of between -0.090 and 0.161 (Table 5).

No significant differences were found between groups for any sociodemographic variable in any of the four factors of CUSNUR. Only one significant difference was found between Christians-Catholics ($M = 19.11, Mdn = 19, IR = 4$) and Atheist-Agnostics ($M = 20.07, Mdn = 20, IR = 4$) for patient and health professional behaviours factor ($U = 4581.5, p = 0.020, r = -0.16$).

4.2.4. Reliability

For the adapted scale with 22 items, a Cronbach alpha of 0.75 was obtained for the global scale.

5. Discussion

The present study shows that the CUSNUR is a valid and reliable scale with 22 items that can be used to assess cultural sensibility in nursing. The scale is the first instrument designed for measuring cultural sensibility in the nursing context.

The psychometric properties of the CUSNUR were measured with good results. The scale shows good internal consistency (Cronbach alpha > 0.70). Although the correlations between factors are weak, the strongest correlation (0.364) was found between F2 (self-assessment) and F4 (cultural influence), which could be due to the student's self-assessment about the role of culture and the cultural context in health problems. The factor analysis shows four factors with good adjustment. In addition, all items show adequate levels of factorial saturation. Patient and health professional behaviours, self-assessment, self-awareness, and cultural influence are essential when working with cultural sensibility. The dimension identified from the analysis is conceptually sound.

The behaviours of each person in a cultural encounter will be unique, and nurses must understand and appreciate these differences (Dhadda, 2014) to avoid cultural conflict and provide effective care. Self-assessment, self-awareness, and cultural influence are important dimensions because it has been stated that culture is similar to a lens through which life can be viewed (Norton and Marks-Maran, 2014). Culture is a multidimensional, dynamic, cross-sectional, and fluid concept (Dhadda, 2014; Dogra, 2003). From a constructivist perspective, culture includes age, gender, and socioeconomic status, among

Table 2
Dimensions identified from the CUSNUR factor analysis, definitions, and aspects examined.

| Dimension | Definition | Aspects examined |
|--|---|--|
| Factor 1: patient and health professional behaviours | <i>Understanding differing cultural backgrounds and health professionals' perceptions of patients' behaviours</i> | Understanding of patient behaviours that may be based on cultural practices that differ from one's own. This factor measures understanding that health professionals should examine their own cultural assumptions when assessing patient behaviours to avoid misinterpreting particular behaviours. |
| Factor 2: self-assessment | <i>Identifying one's own unconscious biases and prejudices</i> | Examination of how respondents self-assess their ability to identify their own unconscious biases and prejudices. This factor assesses respondents' openness and willingness to admit to the difficulties of accurately identifying when their reactions are based on stereotypes and cultural biases. |
| Factor 3: self-awareness | <i>Recognising self-awareness about the role that culture plays in health professionals' perceptions of the health care system</i> | Assessment of respondents' self-awareness of the role that their cultural experiences play in their own perceptions of the health system. Respondents self-assess whether experiences arising from their own cultural backgrounds have influenced how they view the health care system. |
| Factor 4: cultural influence | <i>Understanding how culture influences health professionals and patients and that health care services are provided to people from different cultural contexts</i> | Examination of respondents' understanding of how culture influences health care professionals and patients in the context of decision-making and care provision. This factor explores respondents' understanding that health care professionals and patients view health problems through their own cultural lenses and that health professional-patient communication is influenced by the cultural backgrounds of both actors. The factor also examines students' understanding that all health professionals, regardless of their racial or ethnic background, bring culturally biased assumptions into the health professional-patient relationship and self-assessments of the culturally biased assumptions that the respondent brings into the health care process. |

other factors, and is not limited to race or ethnicity (Blanchet Garneau and Pepin, 2015). Assessment and awareness of how these aspects might affect encounters between health professionals and patients are essential to being open and considering other cultures, avoiding the tendency to judge others, and not assuming that the same beliefs are held by all (Dogra, 2003; Dogra et al., 2010).

A fifth factor, 'the desire to learn' (Curcio et al., 2013), was identified

Table 3
Rotated factorial solution for the cultural sensibility questionnaire^a.

| | Reliability ^b | Variance ^c |
|---|--------------------------|-----------------------|
| Factor 1: patient and health professional behaviours | 0.776 | 0.121 |
| 2.8 Health care professionals (HCPs) should assume that a lack of evident emotion expressed by a patient means that the patient is not particularly interested in what is being discussed | 0.462 | |
| 2.12 When a patient does not look his/her HCP in the eye, the HCP should assume that he/she is not being honest | 0.503 | |
| 2.14 HCPs who belong to ethnic minorities bring culturally biased assumptions into the HCP/patient relationship | -0.806 | |
| 2.15 When a patient shakes hands with a male HCP but refuses to shake hands with a female HCP, the HCP should assume that the patient will not respect advice given by the female HCP | 0.306 | |
| 2.16 Caucasian HCPs bring culturally biased assumptions into the HCP/patient relationship | -0.493 | |
| Factor 2: self-assessment | 0.750 | 0.117 |
| 2.10 In general, I am able to recognize when my reactions to others are based on prejudiced beliefs | 0.687 | |
| 2.13 I am able to identify the prejudices that I hold about cultures that are different from my own | 0.650 | |
| 2.17 Health care professors should discuss the cultural assumptions inherent in clinical practice with their students | 0.544 | |
| 2.18 Health care students' abilities to recognize issues of cultural diversity in their clinical practice should be assessed as part of their degree | 0.424 | |
| Factor 3: self-awareness | 0.931 | 0.273 |
| 1.1 Experiences related to your racial identity | 0.855 | |
| 1.2 Experiences related to your ethnic identity | 0.908 | |
| 1.3 Experiences related to your religious identity | 0.739 | |
| 1.4 Experiences related to your socioeconomic context | 0.820 | |
| 1.5 Experiences related to your gender | 0.690 | |
| 1.6 Experiences related to your sexual orientation | 0.844 | |
| Factor 4: cultural influence | 0.784 | 0.146 |
| 2.1 Patients analyse health problems through their own cultural lenses | 0.365 | |
| 2.2 Health care staff analyse health problems through their own cultural lenses | 0.684 | |
| 2.3 The way a patient communicates with HCPs is not influenced by the patient's cultural background | 0.506 | |
| 2.6 The HCP's socioeconomic context influences how he/she perceives the patient's behaviour | 0.420 | |
| 2.7 Health care education should not include training on cultural matters that may arise when health care services are provided to people from different cultural contexts | 0.335 | |
| 2.9 Politicians do not analyse health issues through their own cultural lenses | 0.384 | |
| 2.11 The cultural background of HCPs does not influence how they communicate with their patients | 0.660 | |

^a Content was translated into English to facilitate readers' understanding (cultural translation not validated). Factorial saturation matrix with values <0.3 suppressed. Extraction: MRFA; Rotation: promin.

^b FACTOR: Mislevy and Bock (1990).

^c Percentage of common variance explained based on MRFA.

Table 4
Rotated factorial solution for the cultural sensibility questionnaire.

| Items | F1 | F2 | F3 | F4 |
|-------|---------------|--------------|--------------|--------------|
| v2_8 | 0.462 | 0.231 | 0.105 | -0.001 |
| v2_12 | 0.503 | 0.148 | -0.019 | 0.143 |
| v2_14 | -0.806 | 0.166 | -0.061 | 0.193 |
| v2_15 | 0.306 | 0.096 | 0.016 | 0.028 |
| v2_16 | -0.493 | 0.047 | 0.041 | 0.233 |
| v1_1 | 0.006 | 0.085 | 0.855 | -0.103 |
| v1_2 | 0.033 | 0.126 | 0.908 | -0.169 |
| v1_3 | -0.069 | -0.003 | 0.739 | -0.072 |
| v1_4 | -0.014 | 0.018 | 0.820 | 0.126 |
| v1_5 | 0.094 | 0.105 | 0.690 | 0.159 |
| v1_6 | 0.010 | -0.053 | 0.844 | -0.032 |
| v2_1 | 0.150 | 0.157 | 0.059 | 0.365 |
| v2_2 | -0.125 | -0.256 | 0.051 | 0.684 |
| v2_3 | 0.067 | 0.117 | -0.047 | 0.506 |
| v2_6 | -0.198 | 0.083 | 0.094 | 0.420 |
| v2_7 | 0.265 | 0.254 | -0.119 | 0.335 |
| v2_9 | 0.271 | 0.038 | 0.034 | 0.384 |
| v2_11 | -0.056 | -0.037 | 0.008 | 0.660 |
| v2_10 | -0.164 | 0.687 | 0.046 | -0.200 |
| v2_13 | -0.059 | 0.650 | 0.013 | -0.280 |
| v2_17 | 0.171 | 0.544 | -0.092 | 0.284 |
| v2_18 | 0.035 | 0.424 | 0.083 | 0.180 |

Table 5
Factor correlation matrix.

| Factors | F1 | F2 | F3 | F4 |
|--|--------|--------|-------|-------|
| Factor 1: patient and health professional behaviours | 1.000 | | | |
| Factor 2: self-assessment | 0.155 | 1.000 | | |
| Factor 3: self-awareness | -0.090 | -0.034 | 1.000 | |
| Factor 4: cultural influence | 0.126 | 0.364 | 0.161 | 1.000 |

in the CSS but did not appear in this analysis. To the three items measuring 'the desire to learn' on the original scale, items for 'self-assessment' and 'cultural influence' were added. It may be argued that 'the desire to learn' is not a characteristic typical of the concept of cultural sensibility but rather reflects a general attitude that students and health professionals need to learn about any topic. 'The desire to learn' could be appear among students after they develop cultural sensibility. 'Cultural desire', a similar concept to 'the desire to learn', has also been identified in the literature. This term is defined as a nurse's motivation, desire, and passion to develop cultural competence (Campinha-Bacote, 2003; Campinha-Bacote, 2008). This desire requires passion and commitment on the individual's part to remain open and flexible with others in addition to manifesting a desire to learn from what is different (Campinha-Bacote, 2003; Campinha-Bacote, 2008). Further research is necessary, however, to validate the CUSNUR structure for other contexts.

Health professionals need to improve their cultural sensibility to become culturally competent and to be able to offer competent care to culturally diverse populations (Dhadda, 2014; Dogra, 2003, 2005; Karnik and Dogra, 2010). The proposed scale can help reveal respondents' beliefs, attitudes, and prejudices at play when interacting with others. To be culturally sensible means to be open to making changes to one's own beliefs, behaviours, and attitudes after interactions with a person from a different culture. This openness is a necessary first step to achieving cultural competence and is therefore something that must be measured before any training can be developed. Carrying out training in cultural competence without previously addressing sensibilities may be unsuccessful, as this approach can lead to a partial or biased evaluation of this competency (Dogra, 2003).

A new scale based on an existing tool analysing cultural sensibility was rigorously developed employing the most relevant methods and following guidelines for the translation and cultural adaptation of scales

(Wild et al., 2005). Such translation had the advantage of using an already researched concept with an established framework (Curcio et al., 2013). Prior work covers dimensions that are relevant to the field of law but which are limited in their adaptation to the nursing discipline due to a lack of an essential dimension for cultural sensibility, misunderstanding of certain items, or the inclusion of aspects that are not relevant to nursing. All of these aspects were addressed in our content validity assessment of the CUSNUR, which was performed with a panel of students and university professors with expertise in nursing, political affairs (to ensure an appropriate understanding of the terms of the CSS), and cultural issues. This approach helped identify relevant and understandable terms for nurses with different levels of cultural sensibility. The experts highlighted two concepts explored by the questionnaire that they considered to be novel: 'cultural lens' and 'culturally biased assumptions'.

The questionnaire response rate reached 84.3%, consistent with the criterion stating that a response rate of above 70% is sufficiently high for psychometric validation (Nunnally and Bernstein, 1994). The distribution of the questionnaire may have favoured a higher response rate. The questionnaires were delivered by lecturers who taught different courses and who had existing relationships with the students. Furthermore, the social desirability score was lower than the average for the general population of the same age in this context. These results indicate that the participants provided answers according to their beliefs and not according to what they believed to be socially acceptable.

Finally, the analysis of the religious beliefs, showed a significant difference between Christians-Catholics and Atheist-Agnostics in the dimension 'patient and health professional behaviours'. This shows that the tool can be sensitive to assess differences in cultural sensibility regarding respondents' sociodemographic characteristics. Although no other significant differences were found in these characteristics in the present study, future studies with more diverse samples can help to identify areas of interest to work the different dimensions included in CUSNUR. Some studies have pointed out that socioeconomic status, religion, sexual orientation, or disability can affect the care of patients in diverse populations and this need to be considered in health professionals' education (Kelly, 2012). Future studies could help to understand how and why the different sociodemographic characteristics of students and health professionals can influence the achievement of cultural sensibility and therefore of cultural competency afterwards.

5.1. Strengths and limitations of the study

This study is limited in its use of response categories 'strongly agree' to 'strongly disagree' in the original CSS. A growing body of research suggests that agree-disagree (AD) response categories may be subject to acquiescence bias and enhanced cognitive burden (Saris et al., 2010). However, this approach is a universal method of collecting data, which means it is easy to understand and is more responsive than other scales such as the VAS (Hasson and Arnetz, 2005). Future studies could focus on exploring which response categories are the most appropriate for preventing bias in participants' responses.

It should be noted that 86.6% of the respondents were women. Therefore, the psychometric properties of the proposed scale should be explored in males and more culturally diverse populations in future studies. However, this ratio corresponds to the percentages of women and men enrolled in nursing studies in Spain, and thus, increasing the number of male participants might be a challenge.

The lack of tools available to assess cultural sensibility prevented an assessment of criterion-related validity against a 'gold standard' (Nunnally and Bernstein, 1994). Nevertheless, the reference framework defined by the CUSNUR and the content and appearance validation of the questionnaire by experts and students serve as strengths of this initial tool.

Future studies can test the properties of the instrument in other nursing contexts, such as postgraduate education or professional levels,

and even other health disciplines in which the concept of cultural sensibility might be relevant and carry out confirmatory analysis.

6. Conclusion

The CUSNUR is the first 'cultural sensibility' scale developed and validated for the field of nursing. This study shows that the scale is valid and reliable. CUSNUR can be used in designing and evaluating training programmes aiming at improving cultural sensibility and will thus help undergraduate nursing students develop into culturally competent graduates who can work with diverse populations. The tool could be used mainly for formative processes to obtain information for the design of educational interventions adapted to students' needs to become culturally competent. It could also be used in summative assessments in the context of training aiming at the development of cultural sensibility.

The measurement of nursing students' cultural sensibility and the changes during the degree will help to determine to what extent nursing curricula includes training that facilitates the acquisition of competencies to care for culturally diverse populations. Providing culturally competent care is essential for professionals and organizations in today's diverse world. This culturally competent care reduces prejudices, racism and ethnocentric care.

CRediT authorship contribution statement

| | |
|-----|--|
| MB | Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing |
| AC | Supervision; Validation; Roles/Writing - original draft; Writing - review & editing |
| MJP | Methodology; Writing - review & editing |
| ERP | Data curation; Methodology; Validation; Writing - review & editing |
| TRV | Data curation; Methodology; Validation; Writing - review & editing |
| UBM | Methodology; Validation; Writing - review & editing |
| ND | Conceptualization; Writing - review & editing |
| MV | Methodology; Writing - review & editing |
| EB | Methodology; Writing - review & editing |
| OLD | Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing |

Declaration of competing interest

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

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.nedt.2021.105001>.

References

- Albar, M.J., García-Ramírez, M., Pérez Moreno, P., Luque-Ribelles, V., Garrido, R., Bocchino, A., 2015. Adaptation to Spanish of an ethnocultural empathy scale. *Texto Contexto Enferm.* 24 (3), 621–628. <https://doi.org/10.1590/0104-07072015001270014>.
- Argimon, J.M., Jimenez, J., 2004. Validación de cuestionarios. In: Argimon, J., Jiménez, J. (Eds.), *Métodos de investigación clínica y epidemiológica*. Elsevier, Madrid.
- Author Blinded., 2011.
- Author Blinded., 2020.
- Blanchet Garneau, A., Pepin, J., 2015. A constructivist theoretical proposition of cultural competence development in nursing. *Nurse Educ. Today* 35 (11), 1062–1068. <https://doi.org/10.1016/j.nedt.2015.05.019>.
- Bozorgzad, P., Negarandeh, R., Raiesifar, A., Poortaghi, S., 2016. Cultural safety: an evolutionary concept analysis. *Holist. Nurs. Pract.* 30 (1), 33–38. <https://doi.org/10.1097/hnp.000000000000125>.
- Campinha-Bacote, J., 2002. The process of cultural competence in the delivery of healthcare services: a model of care. *J. Transcult. Nurs.* 13 (3), 181–184. <https://doi.org/10.1177/10459602013003003>.
- Campinha-Bacote, J., 2003. Cultural desire: the key to unlocking cultural competence. *J. Nurs. Educ.* 42 (6), 239–240.
- Campinha-Bacote, J., 2008. Cultural desire: 'caught' or 'taught'? *Contemp. Nurse* 28 (1–2), 141–148. <https://doi.org/10.5172/conu.673.28.1-2.141>.
- Curcio, A.A., Ward, T.E., Dogra, N., 2013. A survey instrument to develop, tailor, and help measure law student cultural diversity education learning outcomes. *Nova Law Rev.* 38 (2), 177–246.
- Dhadda, S., 2014. An appreciation of diversity. *Nurs. Stand.* 28 (28), 66. <https://doi.org/10.7748/ns2014.03.28.28.66.s56>.
- Dogra, N., 2003. Cultural expertise or cultural sensibility? A comparison of two ideal type models to teach cultural diversity. *Int. J. Med.* 5 (4), 224–226.
- Dogra, N., 2005. Cultural diversity teaching in the medical undergraduate curriculum. *Divers. Health Soc. Care* 2, 233–245.
- Dogra, N., Reitmanova, S., Carter-Pokras, O., 2010. Teaching cultural diversity: current status in U.K., U.S., and Canadian medical schools. *J. Gen. Intern. Med.* 25 (Suppl. 2), S164–S168. <https://doi.org/10.1007/s11606-009-1202-7>.
- Dogra, N., Bhatti, F., Ertubey, C., Kelly, M., Rowlands, A., Singh, D., Turner, M., 2016. Teaching diversity to medical undergraduates: curriculum development, delivery and assessment. *AMEE GUIDE No. 103*. *Med. Teach.* 38 (4), 323–337. <https://doi.org/10.3109/0142159x.2015.1105944>.
- Farber, J.E., 2019. Cultural competence of baccalaureate nurse faculty: relationship to cultural experiences. *J. Prof. Nurs.* 35 (2), 81–88. <https://doi.org/10.1016/j.profnurs.2018.09.005>.
- Ferrando, P.J., Chico, E., 2000. Adaptación y análisis psicométrico de la escala de deseabilidad social de Marlowe y Crowne. *Psicothema* 12 (3), 383–389.
- Fletcher, S.N., 2015. *Cultural Sensibility in Healthcare: A Personal & Professional Guidebook*. Sigma Theta Tau International, Indianapolis.
- Fletcher, S.N., 2016. Cultural sensibility. *Nurs. Manag.* 22 (10), 17. <https://doi.org/10.7748/nm.22.10.17.s16>.
- Hasson, D., Arnetz, B.B., 2005. Validation and findings comparing VAS vs. Likert scales for psychosocial measurements. *Int. Electron. J. Health Educ.* 8, 178–192.
- Hemberg, J.A.V., Vilander, S., 2017. Cultural and communicative competence in the caring relationship with patients from another culture. *Scand. J. Caring Sci.* 31 (4), 822–829. <https://doi.org/10.1111/scs.12403>.
- Horn, J.L., 1965. A rationale and test for the number of factors in factor analysis. *Psychometrika* 30, 179–185.
- Kaiser, H.F., 1974. An index of factorial simplicity. *Psychometrika* 39 (1), 31–36. <https://doi.org/10.1007/BF02291575>.
- Karnik, N.S., Dogra, N., 2010. The cultural sensibility model: a process-oriented approach for children and adolescents. *Child Adolesc. Psychiatr. Clin. N. Am.* 19 (4), 719–737. <https://doi.org/10.1016/j.chc.2010.07.006>.
- Kelly, P.J., 2012. Should we rethink how we teach cultural competency in physician assistant education? *J. Phys. Assist. Educ.* 23 (3), 42–45.
- Lee, C.A., Anderson, M.A., Hill, P.D., 2006. Cultural sensitivity education for nurses: a pilot study. *J. Contin. Educ. Nurs.* 37 (3), 137–141. <https://doi.org/10.3928/00220124-20060301-05>.
- Leininger, M., 1995. Teaching transcultural nursing in undergraduate and graduate programs. *J. Transcult. Nurs.* 6 (2), 10–26. <https://doi.org/10.1177/104365969500600203>.
- Long, T.B., 2012. Overview of teaching strategies for cultural competence in nursing students. *J. Cult. Divers.* 19 (3), 102–108.
- Lorenzo-Seva, U., 1999. Promin: a method for oblique factor rotation. *Multivar. Behav. Res.* 34, 347–356. https://doi.org/10.1207/S15327906MBR3403_3.
- Lorenzo-Seva, U., Ferrando, P.J., 2006. FACTOR: a computer program to fit the exploratory factor analysis model. *Behav. Res. Methods Instrum. Comput.* 38 (1), 88–91. <https://doi.org/10.3758/bf03192753>.
- Maneesriwongul, W., Dixon, J.K., 2004. Instrument translation process: a methods review. *J. Adv. Nurs.* 48 (2), 175–186. <https://doi.org/10.1111/j.1365-2648.2004.03185.x>.
- Mislevy, R.J., Bock, R.D., 1990. *BLOG 3 Item Analysis and Test Scoring With Binary Logistic Models*. Scientific Software, Mooresville.
- Norton, D., Marks-Maran, D., 2014. Developing cultural sensitivity and awareness in nursing overseas. *Nurs. Stand.* 28 (44), 39–43. <https://doi.org/10.7748/ns.28.44.39.e8417>.
- Nunnally, J.C., Bernstein, I.H., 1994. *Psychometric Theory*, 3rd ed. McGraw-Hill, New York.
- Perng, S.J., Watson, R., 2012. Construct validation of the nurse cultural competence scale: a hierarchy of abilities. *J. Clin. Nurs.* 21 (11–12), 1678–1684. <https://doi.org/10.1111/j.1365-2702.2011.03933.x>.
- Polaschek, N.R., 1998. Cultural safety: a new concept in nursing people of different ethnicities. *J. Adv. Nurs.* 27 (3), 452–457. <https://doi.org/10.1046/j.1365-2648.1998.00547.x>.
- Polit, D.F., Yang, F., 2015. *Measurement and the Measurement of Change: A Primer for the Health Professions*. Wolters Kluwer, Hong Kong.
- Powell Sears, K., 2012. Improving cultural competence education: the utility of an intersectional framework. *Med. Educ.* 46 (6), 545–551. <https://doi.org/10.1111/j.1365-2923.2011.04199.x>.
- Raigal-Aran, L., Ferré-Grau, C., Belzunegui-Eraso, A., 2019. The Spanish version of the cultural competence assessment (CCA-S): transcultural validation study and proposed refinement. *Nurse Educ. Today* 72, 47–53. <https://doi.org/10.1016/j.nedt.2018.10.011>.

- Ratray, J., Jones, M.C., 2007. Essential elements of questionnaire design and development. *J. Clin. Nurs.* 16 (2), 234–243. <https://doi.org/10.1111/j.1365-2702.2006.01573.x>.
- Repo, H., Vahlberg, T., Salminen, L., Papadopoulos, I., Leino-Kilpi, H., 2017. The cultural competence of graduating nursing students. *J. Transcult. Nurs.* 28 (1), 98–107. <https://doi.org/10.1177/1043659616632046>.
- Rosenthal, R., 1991. *Meta-analytic Procedures for Social Research*, 2nd ed. Sage Publications Inc, Riverside.
- Rosenthal, R., Rosnow, R.L., Rubin, D.B., 2000. *Contrasts and Effect Sizes in Behavioural Research: A Correlational Approach*. Cambridge University Press, Cambridge.
- Saris, W., Revilla, M., Krosnick, J.A., Shaeffer, E.M., 2010. Comparing questions with agree/disagree response options to questions with item-specific response options. *Surv. Res. Methods* 4 (1), 61–79. <https://doi.org/10.18148/srm/2010.v4i1.2682>.
- Sharifi, N., Adib-Hajbaghery, M., Najafi, M., 2019. Cultural competence in nursing: a concept analysis. *Int. J. Nurs. Stud.* 99, 1–8. <https://doi.org/10.1016/j.ijnurstu.2019.103386>.
- Ten Berge, J.M.F., Kiers, H.A.L., 1991. A numerical approach to the exact and the approximate minimum rank of a covariance matrix. *Psychometrika* 56, 309–315.
- Timmerman, M.E., Lorenzo-Seva, U., 2011. Dimensionality assessment of ordered polytomous items with parallel analysis. *Psychol. Methods* 16, 209–220. <https://doi.org/10.1037/a0023353>.
- Verdonk, P., Abma, T., 2013. Intersectionality and reflexivity in medical education research. *Med. Educ.* 47 (8), 754–756. <https://doi.org/10.1111/medu.12258>.
- Wild, D., Grove, A., Martin, M., Eremenco, S., McElroy, S., Verjee-Lorenz, A., Erikson, P., 2005. Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation. *Value Health* 8 (2), 94–104. <https://doi.org/10.1111/j.1524-4733.2005.04054.x>.
- Yilmaz, M., Toksoy, S., Direk, Z.D., Bezirgan, S., Boylu, M., 2017. Cultural sensitivity among clinical nurses: a descriptive study. *J. Nurs. Scholarsh.* 49 (2), 153–161. <https://doi.org/10.1111/jnu.12276>.