Cultural adaptation and validation of the *Underwood's Daily Spiritual Experience Scale* — brazilian version

ADAPTAÇÃO CULTURAL E VALIDAÇÃO DA UNDERWOOD'S DAILY SPIRITUAL EXPERIENCE SCALE — VERSÃO BRASILEIRA

ADAPTACIÓN CULTURAL Y VALIDACIÓN DE LA UNDERWOOD'S DAILY SPIRITUAL EXPERIENCE SCALE-VERSIÓN BRASILEÑA

Miako Kimura[1], Acácia Lima de Oliveira[2], Lina Sayuri Mishima[3], Lynn G. Underwood[4]

ABSTRACT

This study aimed to perform the cultural adaptation and analyzing the psychometric properties of the Brazilian version of the *Underwood's Daily Spiritual Experience Scale* (DSES). The adaptation followed the internationally recommended procedures and the adapted version maintained equivalence to the original after wording adjustments in five items. In the application to 179 medical-surgical patients it was found evidences of internal consistency (Cronbach's alpha=0.91), test-retest reliability (ICC=0.94) and convergent validity, correlating with the Intrinsic Religiosity subscale of the Duke Religious Index — DUREL (r=0.56, p<0.001). Exploratory factor analysis extracted three principal components explaining 60.5% of the total variance. The DSES-Brazilian version shows evidences of reliability and validity among hospitalized patients. Further studies are needed to confirm its factor composition and to test its applicability in different populations.

DESCRIPTORS

Psychometrics
Spirituality
Religion
Questionnaires
Validation studies

RESUMO

Este estudo objetivou adaptar culturalmente e analisar as propriedades psicométricas da versão brasileira da *Underwood's Daily Spiritual Experience Scale* (DSES). A adaptação seguiu as etapas internacionalmente recomendadas e a versão adaptada manteve equivalência com a original, após ajustes na redação de cinco itens. Na aplicação a 179 pacientes médico-cirúrgicos mostrou evidências de consistência interna (alfa de Cronbach=0,91), estabilidade temporal (ICC=0,94 no teste e reteste) e validade de construto convergente, na correlação com a subescala Religiosidade Intrínseca do instrumento DUREL (r=0,56; p<0,001). A análise fatorial exploratória extraiu três componentes, explicando 60,5% da variância do total. A versão brasileira da DSES apresenta evidências de confiabilidade e validade junto a pacientes hospitalizados. São necessários mais estudos para confirmar a sua composição fatorial e testar a sua aplicabilidade em diferentes populações.

DESCRITORES

Psicometria
Espiritualidade
Religião
Questionários
Estudos de validação

RESUMEN

Este estudio objetivó adaptar culturalmente y analizar las propiedades psicométricas de la versión brasileña de la *Underwood's Daily Spiritual Experience Scale* (DSES). La adaptación cultural siguió los pasos metodológicos internacionalmente recomendados y la versión adaptada se ha mantenido equivalente con la original, después de ajustes en la redacción de cinco ítems. En la aplicación en 179 pacientes médico-quirúrgicos mostró una alta consistencia interna (alfa de Cronbach=0,91), estabilidad temporal (CCI=0,94 en el test-retest) y validez convergente, en la correlación con la subescala Religiosidad Intrínseca del instrumento DUREL (r=0,56; p<0,001). En el análisis factorial exploratorio se han obtenido tres componentes que explican el 60.4% de la varianza total. La DSES-versión brasileña muestra evidencias de fiabilidad y validez entre pacientes hospitalizados. Se necesitan más estudios para confirmar su composición factorial y testar su aplicabilidad en diferentes poblaciones.

DESCRIPTORES

Psicometría
Espiritualidad
Religión
Cuestionarios
Estudios de validación

[1]Registered Nurse. Associate Professor of the Department of Medical-Surgical Nursing of the University of São Paulo School of Nursing. São Paulo, SP, Brazil. mikimura@sp.br [2]Registered Nurse. PhD in Science from the University of São Paulo School of Nursing. Lecturer of the Faculty of Medical Sciences of Santa Casa de São Paulo. São Paulo, SP, Brazil. limoliver@usp.br [3]Undergraduate student of the University of São Paulo School of Nursing. Scientific Initiation Scholarship - PIBIC/CNPq-USP. [4]Physician. PhD in Cancer Epidemiology from Queen's University, UK. Former Professor of Hiram College, Ohio, USA, Center for Literature, Medicine and Biomedical Humanities. lynnunderwood@researchintegration

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INTRODUCTION

Spirituality and religiosity have been recognized in the literature as resources that help people face daily adversity and stressful and traumatic events, such as those related to the illness and hospitalization processes[1]. They are considered by the World Health Organization as components of the quality of life concept[2], and in various studies they have been associated with better physical and mental health[3]. A review of more than a thousand studies included in the Handbook of Religion and Health[3] showed that the vast majority of them indicate a beneficial effect from religious/spiritual beliefs and practices on health indicators such as, better immunological function, better blood pressure control, lower stress and depression, greater social support, lower use of alcohol and other substances, lower use of healthcare services, and higher levels of well-being, hope and optimism. Conversely, expressions of religiosity and spirituality characterized as less healthy and even as pathological may lead to harmful effects to the health of people and communities. As examples, the dependence on religion and conformism interfering with rational and critical thought, fanaticism, asceticism, mortification and oppressive traditionalism, religious and existential conflicts, which manifest themselves in feelings of punishment, guilt, anger, and abandonment, may be cited[4]. Researchers of the area highlight the need to identify the different forms of expression and uses of religiosity and spirituality that can lead to health benefits or impairments[4-5].

In the study of religiosity and spirituality one great difficulty is to establish clear distinctions between such complex and overlapping concepts. Religiosity is defined as the extent to which the individual engages with a system of beliefs, practices, rituals and symbols shared by a community and designed to facilitate proximity to the sacred or transcendent (God, higher power or ultimate truth/reality). Spirituality refers to the personal search for answers to fundamental questions about life, its meaning and purpose, and the relationship to the sacred or the transcendent that may (or may not) be experienced in the context of a specific religion[3]. Religiosity and spirituality are considered independent, yet related concepts, since spirituality can manifest itself in the context of a religious system and religiosity involves spiritual experiences. In general, religiosity has been evaluated in terms of affiliation, religious practice or attendance of services, but these strategies are limited for the study of such a complex variable[2]. The same can be said for the ways of measuring spirituality, without there being, at present, a generally accepted instrument.

To assess the religious/spiritual dimension instruments are needed that are easy to use and that include relevant aspects of the different religious/spiritual beliefs and practices[2]. Few instruments with these characteristics exist and those which are available in the literature were developed mainly in English-speaking countries. The application of these instruments in other languages and cultures implies the need to submit them to the procedures of cultural adaptation and validation[6].

Studies on the religious/spiritual dimension in the context of healthcare in Brazil are of great importance, considering the high level of religiosity of the population[7] and its potential positive or negative effects on health indicators. Aiming to contribute to the expansion of the knowledge in this area of research, this study proposes to make available, in Brazil, an internationally recognized instrument to measure the spiritual experiences in the daily lives of people. The Daily Spiritual Experience Scale (DSES), developed by Dr. Lynn Gordon Underwood(8), is considered one of the most significant recent innovations in the conceptualization and measurement of religiosity/spirituality[11] and will be the object of analysis in this study.

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The development of the DSES was based on sources from theology, religion and the social sciences, on the revision of available instruments and on interviews with people of various countries and cultures, with different religious and non-religious perspectives and varied characteristics in relation to gender, age, socioeconomic status and educational level[8]. The instrument was designed as a measure of religiosity/spirituality, considering the two concepts as overlapping circles[9-10]. It includes a wide variety of experiences that can be found in various religious and spiritual traditions and seeks to evaluate the nature and intensity of these experiences. Spiritual experiences are defined as feelings and emotions in relation to the divine or the transcendent, as expressions of religiosity/spirituality not focused on beliefs or behaviors of a specific religious-spiritual doctrine[8-10]. The DSES evaluates how often people experience, in their routine daily lives, feelings such as the God's presence, strength and comfort in the religion or the spirituality, connection to all of life, love for others, admiration for nature, inner peace, gratitude for blessings and desire to be close to God[8-10]. Some of its items include the word God (theistic items), while others use secular or nontheistic language. In the theistic items, the respondents who do not feel comfortable with the word. God are instructed to replace it with another that signifies the divine or sacred to them. Thus, the instrument is applicable to non-religious respondents, including atheists and agnostics[10-11]. After being adapted and having its psychometric properties tested, it is expected that the DSES will be a useful instrument for nursing research and practice, in the context of integral healthcare for the Brazilian population.

OBJECTIVES

• To translate to Brazilian Portuguese and culturally adapt the Daily Spiritual Experience Scale (DSES).

• To evaluate the reliability and validity of the culturally adapted DSES instrument, applied to patients in medical-surgical units.

METHOD

The DSES is composed of 16 items and is considered a unidimensional measure, although the items are grouped as theistic and nontheistic[10-11]. The first 15 items are answered on a Likert type scale, with scores ranging from 1 (*many times a day*) to 6 (*never or almost never*). Item 16 *In general, how close do you feel to God?* is answered on a 4-point scale (1 = *not at all* to 4 = *as close as possible*). The score of item 16 must be inverted to maintain the same direction as the other items. The total score is obtained by summing the scores of the 16 items, which can vary from 16 to 94. Lower scores reflect a higher frequency of spiritual experiences[8-10]. In an overview of the publications related to the instrument[10], it can be observed that the DSES has demonstrated high levels of reliability, always presenting Cronbach's alpha coefficients above 0.90, with the majority of the studies confirming the unidimensionality. The daily spiritual experiences were significantly correlated with various psychosocial variables, such as anxiety, depression, stress, social support and quality of life[10]. The authorization for the use of the DSES in Brazil was granted by the instrument's author, Dr. Lynn G. Underwood.

Cultural adaptation of the DSES

The process of cultural adaptation of the DSES was based on procedures established in the literature[6], including the steps of translation, back translation, evaluation by a committee of judges and pretest. The original version was translated into Brazilian Portuguese by two bilingual translators whose native language was Portuguese. The two translations were compared to detect possible differences and, after the necessary adjustments, a single summary version translated into Portuguese was obtained. This version was translated back into English (back translation) by two bilingual translators whose mother tongue was English, who were lay people in the subject, and who had no prior knowledge of the instrument. The versions back translated into English were analyzed and approved by the principal author of the original DSES. Next, a committee of judges was organized to examine all the versions produced, so that the translation of the items and of the instructions were linguistically and conceptually equivalent to the original while being compatible with the Brazilian cultural context. To participate in the committee, the judges had to meet the following criteria: to be healthcare professionals; to be fluent in the English language; to have knowledge about the process of cultural adaptation of instruments; and to have knowledge on the topic of spirituality and religiosity. The committee was composed of five members, three being nurses, one a psychologist and one a social worker. Each member received the original version, the summary version in Portuguese, the versions back translated into English and a specific instrument for recording the semantic, idiomatic, cultural and conceptual evaluations. This instrument contained the definitions of each type of equivalence, as well as the instructions for its judgment. The judges analyzed the material independently over approximately 15 days. Agreement between four of the five judges (80%) was considered an indicator of equivalence between the original and translated items. After this step, the resulting version was subjected to a pretest to evaluate the comprehensibility of the items. A total of 20 patients from medical-surgical units (12 from a public hospital and 8 from a private hospital), not included in the study sample, were interviewed. After the pretest, the psychometric properties of the adapted instrument were subjected to analysis.

Analysis of the Psychometric Properties of the Adapted Instrument

Study site and sample

This stage of the study was performed in the medical and surgical units of two hospitals (one public and one private) in São Paulo city. The sample size was estimated to be at least 160 patients, considering 10 observations per item of the instrument as an acceptable proportion to perform the exploratory factor analysis planned in this study[12]. The final sample consisted of 179 patients who agreed to participate in the study and signed the Terms of Free Prior Informed Consent. The patients were selected by accessibility, according to the following criteria: minimum age of 18 years and physical and mental condition to respond to the study instruments.

Data collection instruments

The following instruments were used in this study:

• Sociodemographic and clinical questionnaire containing data regarding age, gender, presence of spouse/partner, employment status, family income, education, religion, types of religious practice, type of treatment, diagnosis of hospitalization, associated diseases and previous hospitalization.

• Daily Spiritual Experience Scale, in its culturally adapted version.

• Brazilian version of the Duke Religious Index (DUREL)[13] - intended to evaluate religiosity and consisting of three subscales and five items: one for organizational religiosity (OR), one for non-organizational religiosity (NOR) and three items for the intrinsic religiosity dimension (IR).

Organizational religiosity refers to the institutionalized practice of religion, such as going to church, to services or other religious gatherings; non-organizational religiosity evaluates the time devoted to private religious activities such as praying, meditating, reading the Bible or other religious texts; and intrinsic religiosity assesses whether the people experience the presence of the divine in their lives and whether they strive to internalize and follow their religious beliefs[14]. The three IR items provide a score and the three subscales (RO, NOR and IR) should be analyzed separately[13-14]. The response scales are of the Likert-type and range from 1 to 6 in the RO and NOR items and from 1 to 5 in the IR items. Lower values represent greater religiosity[13-14]. In the Brazilian validation of the DUREL[14], the Cronbach's alpha coefficient was 0.73 for the total of the items and 0.76 for the IR subscale. Similar values were found in the sample of this study (0.76 and 0.77, respectively).

Data collection procedures

Data were collected from July to September 2009, after approval of the project by the Research Ethics Committees of both hospitals involved in the study. Patients eligible for the study were located from the daily census of the units. At the first contact, the patients were informed about the aim of the research, the voluntary participation, the confidentiality of the data provided and the possibility of withdrawal at any time from the study. The instruments were administered through an interview, in a private place in the unit, and complemented by consulting the patient's medical record when needed. The mean duration of the interviews was 13 minutes (SD=4.8).

Statistical treatment and data analysis

The sociodemographic and clinical data of a qualitative nature were analyzed using absolute and relative frequency (percentage) and the continuous variables were described with mean, standard deviation, median, minimum and maximum variation values. The psychometric properties of the adapted version of the DSES were analyzed for reliability and validity, according to the Classical Test Theory[15].

Reliability analysis

The reliability of the DSES was analyzed regarding the internal consistency of the items and the temporal stability. The internal consistency was verified by the Cronbach's alpha coefficient. Values equal to or greater than 0.60 were accepted as indicative of internal consistency[12]. The temporal stability of the DSES was analyzed using the test-retest method, based on data from 31 patients (19 from the public hospital and 12 from the private) with whom it was possible to apply the retest. The data from the two evaluations were collected at intervals of 14 days and analyzed using the intraclass correlation coefficient (ICC).

Validity analysis

The construct validity of the instrument was analyzed in two ways: factor analysis and convergent validity.

• Exploratory factor analysis - this method aims to identify those factors or groupings of items which are needed to explain the intercorrelations between the items of an instrument[12]. The DSES was originally proposed as a unidimensional instrument and, in this study, exploratory factor analysis was used to examine the factorial structure of the culturally adapted instrument. The Kaiser-Meyer-Olkin index and Bartlett's test of sphericity were used to confirm the factorability of the data. Next, the principal components method with Varimax orthogonal rotation was used in the extraction of the factors, selecting those with eigenvalues greater than 1. The items with the highest factor loadings were retained in the factor[12].

• Convergent validity was examined through the correlation between the DSES and the DUREL, with the hypothesis of higher correlation of the DSES with the NOR and IR subscales that evaluate private and intrinsic aspects of religiosity. This hypothesis was based on the concept that spirituality, when connected to a religious context, can express a more personal and intrinsic dimension of religious life[9]. For this analysis, the Spearman's correlation coefficient was used, given the non-normal distribution of the DSES and the DUREL scores (p=0.001 and p=0.003, respectively, in the Kolmogorov-Smirnov test). The magnitudes of the correlations were considered small for the coefficients between 0.10 and 0.29; medium for the values between 0.30 and 0.49, and large for values between 0.50 and 1[16]. The significance level adopted was 5%. The Statistical Package for the Social Sciences (SPSS) version 16.0 program was used to perform all analyzes in this study.

RESULTS

Cultural adaptation of the DSES

Following the translation and back translation steps, the resulting instrument was evaluated for its equivalence to the original. Items 2, 7, 8 and 13 presented some disagreements among the judges, however, by employing slight modifications in the wording agreements were reached for them all.

Regarding the analysis of conceptual equivalence, all the items achieved at least 80% concordance between the judges, indicating the content validity of the adapted instrument. Next, the instrument was subjected to a pre-test with 20 patients from the hospitals participating in the study. The adapted items were easily understood by all the patients. However, some modifications were suggested in the items 9, 12 and 16, not involving its content. These items were given the following wording, respective-

ly: *I feel the love of God for me directly*, *I feel grateful for the blessings received* and *In general, how close do you feel yourself to God?*. After the steps of the process of cultural adaptation of the DSES, five items (7, 8, 9, 12 and 16) underwent minor adjustments in the wording. Then, the final version of the adapted instrument was subjected to the analysis of its psychometric properties.

Analysis of Psychometric Properties of the Portuguese Version of the DSES

A total of 179 patients (90 from the public hospital and 89 from the private) participated in this stage of the study. The patients were predominantly female (51.4%), lived with a spouse or partner (59.2%), had a paid job (61.4%), had completed high school or higher education (66.5%), were Catholic (67.6%), and practitioners of religion (76.0%). A total of 209 types of religious practices were mentioned, of which 117 (56.0%) were of the organizational type (attending church, temples, centers, or other religious gatherings) and 92 (44.0%) were non-organizational practices (praying, meditating, practicing religious rituals, and reading the Bible or other religious texts). The ages of the patients ranged from 18 to 95 years, with a mean of 53.3 years (SD=17.9); the mean household income was approximately US$ 2,000.00 per month, with a wide variation between the minimum and maximum values. The majority were undergoing clinical treatment (63.1%) and had had at least one previous hospitalization (75.4%). Respiratory (17.9%) and cardiovascular diseases (17.3%), followed by digestive complaints (16.2%) were the leading causes of hospitalization. The duration of hospitalization up to the time of the interview ranged from 1 to 59 days, with a median of 4 days.

Reliability analysis

The Cronbach's alpha coefficient of the adapted DSES was 0.91, indicating evidence of reliability for the study sample. In a possible range of 16 to 94 points, scores varied between a minimum of 16 and maximum of 88. The mean score of 38.1 (SD=13.6) and median of 35 points indicate a moderate frequency of spiritual experiences among the study sample. The test-retest data showed a correlation of large magnitude (ICC = 0.94 - CI 95% 0.88-0.97) and highly significant (p<0.001), indicating the temporal stability of the adapted DSES.

Exploratory factor analysis

The Kaiser Meyer Olkin measure produced a coefficient of 0.91, indicating excellent adequacy of the sample. The Bartlett's test of sphericity (X^2=1462.376, p<0.001) confirmed the factorability of the data[12].

Table 1 presents the rotated matrix of the three factors.

Table 1 - Items of the Portuguese version of the DSES with their respective factorial loadings in each factor. São Paulo, 2009.

nº	Items	Factors and Factorial Loadings		
		1	2	3
9	I feel God's love for me, directly.	**0.850**	0.138	0.084
8	I feel guided by God during daily activities.	**0.777**	0.133	-0.043
5	I find comfort in my religion or spirituality.	**0.775**	0.245	0.145
15	I desire to be closer to God or in union with the divine.	**0.766**	0.160	0.042
4	I find comfort in my religion or spirituality.	**0.758**	0.220	0.263
7	I ask God for help during daily activities.	**0.758**	0.093	0.027
12	I feel grateful for the blessings received.	**0.741**	0.274	0.120
1	I feel the presence of God.	**0.680**	0.154	0.407
3	During a religious service or at other times when in connection with God, I feel joy which lifts me out of my daily concerns.	**0.659**	0.161	0.419
6	I feel deep inner peace or harmony.	**0.547**	0.392	0.040
11	The beauty of creation touches me spiritually.	**0.509**	0.368	0.388
13	I feel a selfless caring for others.	0.198	**0.741**	0.009
14	I accept others even when they do things that I think are wrong.	-0.051	**0.719**	0.130
16	In general, how close do you feel to God?	0.328	**0.546**	0.00
10	I feel God's love for me, through others.	0.361	**0.469**	0.244
2	I feel a connection to all that is life.	0.048	0.078	**0.919**

The analysis of the principal components, with the criteria of eigenvalue greater than 1, resulted in a three factor solution explaining 60.5% of the total variance. The eigenvalue of the first factor was 7.3, of the second factor 1.3 and of the third 1.1. The variances explained by the factors were, respectively, 45.5%, 8.3% and 6.7%. The factorial loadings of the items in the respective factors were all greater than 0.40. Of the 16 items, 11 had higher loadings in the first factor, with values ranging between 0.51 and 0.85. The second factor was composed of four items with loadings from 0.47 to 0.74 and the third, by only one item with a loading of 0.92. The Cronbach's alpha coefficients for factors 1 and 2 were 0.93 and 0.60, respectively. Excluding items weakly correlated with the total did not increase the alpha value.

Convergent validity analysis

The convergent validity of the DSES was demonstrated by the small to medium magnitude (0.31 to 0.56), statistically significant ($p<0.001$) correlations with the religiosity scores, measured by the DUREL instrument. The correlation of the DSES was higher with the intrinsic religiosity (r=0.56) dimension than with the organizational (r=0.31) and non-organizational (r=0.33) dimensions and the total score of the DUREL (r=0.51).

DISCUSSION

The cultural adaptation process of the DSES resulted in the development of a version equivalent to the original and easy to comprehend for the subjects of this study. In the pretest, the participants did not mention difficulties in understanding the instructions and the items; however, the alterations incorporated in the form of wording of five items contributed to improve the clarity and comprehensibility of the instrument applied to the study sample.

In the psychometric analysis, the results obtained indicate that the instrument presents good reliability and validity properties for the evaluation of the quotidian spiritual experiences of people with diverse diseases. The exploratory factor analysis showed a three factor composition, unlike the unidimensional structure proposed in the original instrument. The Cronbach's alpha coefficient of 0.91 demonstrates the internal consistency of the Brazilian version of the DSES. This result is comparable to those reported in several other studies involving different population types, in which the alpha coefficient was always above 0.90[8,11,17-20].

In the test-retest reliability with a 14 day interval, the intraclass correlation coefficient (ICC) was 0.94, which demonstrates the temporal stability of the instrument. Data regarding this property were encountered in studies with the six item version of the DSES. Values of 0.85 (Pearson correlation) and 0.73 (ICC) are reported for the retest with a two day interval, in a North American sample of 47 chemical substance users[8]. In the validation of the French version with elderly people of the general population[21] 40 subjects were evaluated with an interval of two weeks, yielding a correlation of 0.85 between the two evaluations.

The convergent validity of the DSES was verified by the correlation with the DUREL instrument, with the intrinsic religiosity (IR) dimension showing a correlation of greater magnitude (r=0.56) than the organizational religiosity (r=0.31) and non-organizational religiosity (r=0.33) dimensions. This result is justified by the fact that the items of the IR dimension refer to personal religious experiences and beliefs, attributes represented in the items of the DSES. In a religious context, spirituality can express the more personal or intrinsic dimension of religious life, for example, in the relationship with God or in the practice of private activities[9]. It was therefore expected, as in another study[22], a correlation of greater magnitude with non-organizational religiosity as well, as this refers to private activities such as prayer and meditation. The lowest correlation of the DSES with the organizational religiosity dimension (r=0.31) coincides with the results of other authors[22], who obtained a value close to that of this study (r=0.37). These authors[22] observed that spiritual experiences were present even in individuals who attended religious services few times a year, which may have contributed to the low correlation of the DSES with the OR dimension.

The DSES was originally proposed as a unidimensional instrument and, in this study, exploratory factor analysis was used to examine the factorial structure of the culturally adapted instrument. In exploratory factor analysis, the rotational matrix generated three factors with eigenvalues greater than 1, explaining 60.5% of the total variance. This result differs from those found in the majority of previous studies. A two factor structure is reported in the original study[8], in the Chinese validation[17] and in North American samples of a community and of elderly Jewish people[18]. In these studies, one dominant factor was identified composed of 14 items and a second factor of two items (13, *selfless caring for others* and 14, *acceptance of others*). In the validation of the Chinese version, the authors imposed an exploratory analysis with a one factor structure, obtaining a unidimensional model in which the 16 items loaded indices between 0.52 and 0.91[17].

In the validation study of the original DSES[8], although items 13 and 14 appeared separated into a second factor, the authors opted to maintain them aggregated to the first factor, considering the instrument as unidimensional. They justify this option from the psychometric viewpoint and due to the importance of these items for the coverage of the content addressed in the instrument[8,10]. As in previous studies, items 13 and 14 also loaded in the second factor, however with item 10 (*I feel God's love, through others*) and 16 (*How close do you feel to God*). Items 13 and 14 comprise the construct *compassionate love*, which includes the concepts of compassion and mercy, being used separately in studies to evaluate altruistic attitudes and spiritually grounded motivations[9]. Item 10 together with item 9 form a pair that has the aim of discovering how the person perceives divine love: directly (item 9) or through others (item 10). Item 16 seeks to evaluate the feeling of closeness to God[9].

Examining the meaning intended by the authors regarding the items that comprised the second factor, it can be observed that they have distinct characteristics, which makes a theoretical interpretation for the grouping of these items in the same factor difficult. Another aspect to be highlighted is the isolated allocation of item 2 (*connection to all of life*) in a third factor, with a small contribution in terms of explained variance (about 7%). To comprehend the results of factor analyzes it is important to highlight

that they depend largely on the measures included in the analysis and on the specific composition of the sample, whose scores provide the data for the analysis. Thus, the fact that factors were found that were different from the original ones can be attributed to the adaptation process of instruments originating from other cultures, as well as the way that the measured phenomena manifest themselves in specific samples in the new cultural context.

CONCLUSION

In the cultural adaptation process, the DSES was subjected to all the steps recommended in the literature and maintained its equivalence with the original version. In the psychometric analysis, the internal consistency and temporal stability data of the instrument attested to its reliability; the significant correlation of medium magnitude with the intrinsic religiosity dimension, measured by the DUREL, suggests convergent construct validity of the Brazilian Portuguese version of the DSES. The exploratory factor analysis showed a three factor composition, unlike the unidimensional structure proposed in the original instrument.

Limitations of this study should be highlighted: the clinical sample, selected by convenience in only two hospitals; the non-inclusion of measures of physical and mental health to contrast with the scores of the DSES; and the use of exploratory factor analysis only. It is, however, a preliminary study that provides a Brazilian version of a new measure of religiosity/spirituality analyzed in relation to some of its properties.

Considering that the validation of any instrument is a cumulative process, further studies with clinical and non-clinical samples should be performed in order to better evaluate the psychometric performance of this instrument, already tested and used in various countries, which appears promising for use in the Brazilian reality. The DSES measures aspects that are not covered in other instruments already available in Brazil. There is still much to be investigated within the theme of religiosity/spirituality and the Brazilian version of the DSES can contribute to the expansion of knowledge about the religious/spiritual dimension and its influence in the health-disease process. Using this instrument will also allow the comparison between studies conducted in other cultural contexts.

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Correspondence addressed to: Miako Kimura
Av. Dr. Enéas de Carvalho Aguiar, 419 – Cerqueira César
CEP 05403-000 – São Paulo, SP, Brazil