
Zahra Hallaj,¹ Hasan Rafiey,¹ Yadollah Abolfathi Momtaz,²
RobabTeimori,³ Qholamreza Qaed Amini Haroni,¹
Robab Sahaf.*²

MEASURING RELIABILITY AND VALIDITY OF PERSIAN VERSION OF SPIRITUALITY SCALE AMONG ELDERLY IRANIAN POPULATION

Abstract: Objective: The aim of this study was to measure the validity and reliability of Persian version of spirituality scale among elderly Iranian people.

Methods: Based on the international quality of life assessment (IQOLA) project approach, Persian version of the spirituality scale was prepared. Data on 200 elderly people (over 60 years old) were entered into SPSS software.

Results: The findings of the descriptive results of the current study showed that there was no correlation between the demographic data collected in this study such as age, religion and marital status with spirituality. On the other hand, after performing the exploratory factor analysis, calculating test-retest and intra-class correlation coefficient and measuring *Cronbach's Alpha* coefficient for *internal consistency*, the results showed that respectively the reliability, the face and content validity of the questionnaire were confirmed in high level. Also, through the exploratory factor analysis, the construct validity was confirmed.

¹. Department of Social Welfare, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

². Iranian research centre on ageing, University of Welfare and Rehabilitation Sciences, Tehran, Iran.

³. Pediatric Neurorehabilitation Research Center, University of Social Welfare & Rehabilitation Sciences, Tehran, Iran.

* Corresponding author: Dr. Robab Sahaf

Iranian research centre on ageing, University of Welfare and Rehabilitation Sciences, Tehran, Iran. Email: robabsahaf@gmail.com

Conclusions: The Persian version of the spirituality scale in the elderly people with an acceptable reliability and validity can be used in clinical assessment and research.

Keywords: spirituality, elderly, religion, validity, reliability

Introduction

Quality of life (QOL), based on the national institutes of health (NIH), includes health, cultural, psychological, interpersonal, spiritual, financial, temporal, and philosophical dimensions.¹ The importance of a person's health perceptions and his/her ability to function is also seen as connecting to the health related QOL.²

Spirituality is an important component of quality of life, and a resource in patients coping with illness.³⁻⁴ In elderly populations, spirituality is probably a significant factor when facing disability and approaching death.⁵⁻⁷ While spirituality was associated with better mental, physical and social health in most researches,⁸⁻⁹ other studies have also suggested that some negative aspects of spirituality (e.g., "low spiritual well-being" or "religious struggle"), might be associated with worse health outcomes.⁹⁻¹²

Coyle (2002) stated that the difficulty in defining spirituality is partly due to the fact that it is complex, highly subjective, and difficult to measure.¹³⁻¹⁴ Furthermore, Tuck et al. (2001) argued that the most validated spirituality tools concentrate on religion or higher beings and may only apply to religious people or those whose spirituality encompasses religion.¹⁵ Based on Tanyi research in 2002, the religion is an aspect of spirituality for many people, but it is not synonymous with spirituality. Also, the spirituality usually involves humans' search for meaning in life but religion involves rituals and practices and a higher power or God.¹⁶

Several researchers in their studies had defined spirituality component.² McColl et al (2000) defined spirituality in terms of relationships with the world, with a supreme power, with others and with one's self.¹⁷ Likewise, Castellaw et al. (2004) argued that the spirituality refers to the personal beliefs that give meaning to existence and provides a sense of connection to the universe or a higher power.¹⁸ On the other hand, Cavendish and colleagues (2000) stated that spirituality included the connection between an individual and a higher entity by suggesting that spirituality is a universal phenomenon with an assumption of the wholeness of individuals.¹⁹

Spirituality has been reported in health and nursing literature as an element that contributes to people's mental, physical and psychosocial wellbeing.²⁰ Similarly, it has been described as a protective factor against alcohol abuse in the young adult population.²¹ Older adults often need to find a way to cope with serious illnesses and end of life issues while re-evaluating life and spirituality. Research has shown that patients rely on their religion to help them cope with their illnesses and want their clinicians to ask about their spiritual concerns.²⁰

Unfortunately, due to the high number of questionnaires assessing religious beliefs and attitudes for all sections of society, there is no inventory specific to measurement of spirituality in elderly people (rather than religion). Based on these documents and with attention to this issue that the validation scales is considered as an important part of the science and knowledge development, we have provided the reliability and validity of Persian version of spirituality scale among elderly Iranian population over 60 years.

Methods

Participants:

A total of 200 older adults (100 men and 100 women) with aged over 60 years participated in this research. All subjects were informed of the aim of research and were assured of confidentiality.

Data collection process:

All older adults filled in the Abbreviated Mental Test (AMT) and the Spiritual Involvement and Beliefs Scale-Revised (SIBS-R). The AMT was used to determine the lack of cognitive impairment in older adults. This test measures the amount of cognitive impairment in the elderly or the impaired ability to think and understand the surrounding world. This questionnaire is consisting of 10 questions. An ideal cut-off point of score 6, a sensitivity of 85% and a specificity of 99% were determined to do so, and the obtained score of less than 10/7 is considered as a cognitive impairment.²²

The SIBS-R is a 22 item self administered measure of spiritual beliefs and actions that has an extensive focus and is widely applicable to a variety of religious traditions. The instrument measures four factors: (1) core spirituality, (2) spiritual perspective, (3) personal application/humility, and (4) acceptance/insight. The items are rated on a 7 – point Likert scale ranging in response from (7) agree strongly to (1) disagree strongly.²³ Furthermore, after a meeting with the presence of social welfare and aging professionals, its number was reduced to five options in order to be placed in a Likert scale and to be understandable for the elderly. This questionnaire differentiates between being religious and being spiritual, and measures the degree of importance. Importance is rated in order to give weight to the answers on the importance of spirituality in life; and finally, the scores reflect the importance of spirituality in various aspects of life that is worth to them. The original version of the SIBS (Hatch and colleagues, 1998) a 39 item version was administered in New Zealand to 444 subjects by Faull and co-administered with the DUREL (Duke Religiosity Scale) it was administered to 304 medical students and a diverse sample of the elderly.²³ Findings in the New

Zealand subjects showed that the Cronbach Alpha was 0.95. Findings in the Medical Students and Elderly showed that the Cronbach Alpha was 0.93. Item analysis of the data indicated that most items had high correlations ($< .3$). No significant ceiling effect or restricted range was reported. Based on this data the scale was shortened to the best 22 items, selected from the retaining items that showed consistent factor loading in the different groups.²⁴

Results

Descriptive results

The findings of the present study are divided into two parts. The first part includes the descriptive results, which is described in table 1. This study was conducted among 200 elderly people in Tehran. In general, participants include 100-men (50%) and 100-women (50%), among which 60% are married, and the spouses of 40% have died. In terms of age range, the highest percentage (53.5%) is in the age group of 60-64 years, and the lowest percentage (0.5%) in the age group of 75-80 years. In terms of religion, by taking into account the followers of 3-religions that the highest and lowest frequencies were related to Muslim (87%) and Zoroastrianism (3%).

Table 1. The demographic characteristics among older adults

Age	Frequency	Frequency percentage
60-64	107	53.5
65-69	61	30.5
70-74	31	15.5
75-80	1	0.5
Religion	Frequency	Frequency percentage
Muslim	174	87
Christian	21	10.5
Zoroastrian	5	2.5
Marital status	Frequency	Frequency percentage
Married	120	60
Died spouse	80	40
Single	0	0

Since the p-value of each demographic information is greater than 0.05, thus none of the demographic information has increased or decreased effect on spirituality that is caused by small differences in the variance between groups.

Validity and Reliability results

In this study, the standard method of IQOLA (International Quality of Life Assessment Project) translation model will be used for the translation of the scale of spirituality among older Iranian population, which its stages are given below, respectively.

1. Translation from English to Persian
2. Measuring the translation quality
3. Translation of Persian version into English
4. Comparing the English version obtained with the original version

Furthermore, to evaluating the reliability of the Persian Version of spirituality questionnaire we determine the correlation of answers between each other (reliability in terms of internal consistency, and intra-class correlation coefficient).

The obtained data from the correlation assessment of 21 questions in 30 test-retest samples showed that there was no correlation between questions 4, 7, 10, 13, 16, 17, and 3, because their p-value was greater than 0.05 (there is no correlation between the questions in the two assessments).

A. internal consistency (Cronbach's alpha) and intra-class correlation

Table 2: Cronbach's alpha without adding re test and the number of 200 samples

Scale	Number of questions	Cronbach's alpha
Spirituality	21	0.850

In this research the alpha level was obtained 0.85 (table 2). According to the classification made in research methods, the alpha level of 0.8 is a good range, meaning that all questions are correlated at a good level. Also, the intra-class correlation coefficient between the two tests performed on 30 samples was obtained 0.475 at the level of $P=0.003$.

Measuring reliability

On the other hand, test-retest reliability was used to determine the correlation between the results of two tests. Results showed that the spearman correlation was significant at the level of $P<0.05$. Based on test-retest results, the reliability of this questionnaire with $r=0.87$ is high.

Measuring validity

- Face validity

To assess face validity, the questionnaire was distributed among some elderly people and experienced persons, and questions were evaluated and modified in terms of layout and appearance. Results showed that the face validity of this questionnaire is very good.

- Content validity

To examine the content validity, the questionnaire was distributed among 10 experts, and questions were examined in terms of being cleared, simple and understandable; and according to experts, it was used to improve the questionnaire.

- Construct validity

It should be noted that these data were obtained with 5 factors and a 62.08 data covering.

Table 3: Table of naming factors with the Covering questions

First factor	Second factor	Third factor	Fourth factor	Fifth factor
Spiritual life	Spiritual beliefs	Trust in God	Fatalism	Closeness to God
30.56	41.39	49.20	56.19	62.08
Q10	Q18	Q21	Q7	Q16
Q12	Q19	Q5	Q6	Q3 (Negative)
Q14	Q1	Q11	Q15	
Q17	Q9	Q4		
Q13				
Q22				
Q8				
Q2				

Table 4. Pearson correlation between all factors

Factor	Pearson correlation			
	Spiritual life	Spiritual beliefs	Trust in God	Fatalism
Spiritual life	-----	0.032	0.569*	0.347*
Spiritual beliefs	0.032	-----	0.414*	0.335*
Trust in God			-----	
Fatalism				-----
Closeness to God				

As data from 200 samples were normal, the Pearson correlation was used to determine correlations between the factors; and only there is no correlation between spiritual beliefs and spiritual life with closeness to God.

Discussion

One of the issues that are important in studying the functional consequences of spirituality for researchers and specialists is to develop appropriate measures for assessment, to perform intervention studies among the elderly people for improvement of performance in this period, and to increase their longevity. The purpose of this selection is to acquire tools that are desirable to meet the needs of research. In addition, researchers are seeking tools that cover as far as possible their intended concepts in an exact and complete way.

Spirituality is important to the older adult population and may play a positive role in their maintaining and recovering from illness. Koenig et al. (2004) noted that religion is the most widely used strategy that elderly persons utilize to deal with stress. The notion that religious beliefs may significantly influence the psychological well-being and coping abilities of the older adult is well established.⁹ The intended concepts for researchers are assessed to evaluate the effects of spirituality, the impact of strategies and interventions, and to examine the progress of programs, either individually or as a group, and finally decide to stop or modify the actions.¹⁰⁻¹⁴ Ease of translation and good quality of the version translated into a second language are important features that should always be considered when selecting an outcome measurement tool; and experts pay special attention to it. Certainly, a smooth and clear text in the tool would ensure that, in different languages, researchers are able to provide translated versions of the tool to provide the next steps in their studies. Such an advantage can also be clearly seen in the present study. In other words, the two colleague translators of this research, who have reasonable proficiency and experience in the translation from English to Persian, confirmed the ease and satisfactory quality of the translation process. As already mentioned, since the original version of the questionnaire has been not translated into any language, an easy and high-quality translation of the tool in Persian and the importance and health of the elderly people and the effects of spirituality on their health can be considered as advantages of the questionnaire.

In this study, given the internal consistency and reliability in the high test-retest of the questionnaire and also the confirmation of face validity and factorial validity of the questionnaire, it can be stated that the translated Persian version in this study is consistent with the original instrument and can be used as a valid instrument of spiritual instrument among older Iranian population.

Suggestions for future research:

Since this study was conducted only on the elderly people, it is better that the ways to validate the studied tool are more widely examined in the other groups.

1. It is better that in future studies, intervention studies are performed on the elderly people using this scale, so that the relationship between interventions and spirituality, as well as its effects on the elderly can be measured

2. The purpose of these studies is to obtain similar and same tool in different countries and communities. It is only in such circumstances that the results and the values obtained from the studies and the measurements obtained from the samples in one country can be compared with similar values and studies in other countries. Hence, comparative studies between different countries can be an important topic for future research.

3. Since, the spiritual assessment inventory has been measured among the Persian-speaking elderly people in Tehran, it is proposed that the inventory is measured for the elderly people who speak Turkish, Kurdish and so on, so that it can be clear that it will be valid and reliable among the elderly people of other cities in Iran

4. It is proposed that the tool be validated among the non-Muslim and non-Shia elderly people

Recommendations to use the findings:

1. Since today, the main objectives of countries are improving the health and well-being of the elderly people and achieving economic growth and development, and given that the previous dominant view of health and well-being (i.e. mere bio-medical attitude to health issues) has been changed, the necessity to consider and measure this variable in future interventions makes it necessary as one of the criteria evaluating service and policies. In addition, the use of this lexicalized tool also provides the possibility to compare the results of Iranian studies with those in other countries so that it can cause the adoption of more holistic and deeper approaches by policy makers and those involved in the welfare and health of the elderly people and can be a step towards the development and excellence of the community of senior people (the older population).

2. Most studies on the older population have been made in the field of health, while it seems that attention to spirituality has impacts on the health of elderly people. Thus, the identification of spirituality in the older population as well as the evaluation of interventions in this regard, are considered other applications of this index.

3. Since the results indicate that the Persian version of the spiritual assessment inventory has good reliability (internal consistency and reliability in the test-retest) and validity (face and construct/factor validity), it can be used by the aging and health experts in their studies.

References

1. National Institutes of Health. Quality of life assessment: practice, problems and promise. Proceedings of a workshop. Bethesda: NIH; 1990. Publication No.93-3503.
2. Chally, P., & Carlson, J.M. Spirituality, rehabilitation, and aging: a literature review *Archives of Physical and Medical Rehabilitation*, 2004,85,60-65.
3. Mueller, P., Plevak, D., & Rummans, T.A. Religious involvement, spirituality, and medicine: implications for clinical practice. *Mayo Clinical Proc*, 2001, 76:1225-1235.
4. Balboni, T.A., Paulk, M.E., Balboni, M.J., Phelps, A.C., Loggers, E.T., Wright, A.A., Block, S.D., Lewis, E.F., Peteet, J.R., Prigerson, H.G. Provision of spiritual care to patients with advanced cancer: associations with medical care and quality of life near death. *J Clinical Oncology*, 2010, 28:445-452.
5. Krause, N. Religious meaning and subjective well-being in late life. *JGerontol B Psychol Sci*,2003, 58:S160-S170.
6. Idler, E.L, Kasl S. Religion among disabled and nondisabled persons II: attendance at religious services as a predictor of the course of disability. *Journal of Gerontology Social Sciences*, 1997, 52:306-S316.
7. Monod, S., Martin, E., Spencer, B., Rochat, E., & Büla, C. validation of the spiritual distress assessment tool in older hospitalized patients.. *BMC Geriatrics*, 2012, 12:1-9.
8. Koenig, H.G., McCullough, ME, & Larson, D. *Handbook of religion and health* New York: Oxford University Press; 2001.
9. Koenig, H.G., George L.K., & Titus P. Religion, spirituality, and health in medically ill hospitalized older patients. *J Am Geriatric Society*, 2004, 52:554-562.
10. Pargament KI, Koenig HG, Tarakeshwar N., Hahn J. Religious coping methods as predictors of psychological, physical and spiritual outcomes among medically ill elderly patients: a two-year longitudinal study. *Health Psychol* 2004, 9:713-730.
11. McClain CS, Rosenfeld B, Breitbart W: Effect of spiritual well-being on endof- life despair in terminally-ill cancer patients. *Lancet* 2003, 361:1603-1607.
12. Pargament KI, Koenig HG, Tarakeshwar N, Hahn J: Religious struggle as a predictor of mortality among medically ill elderly patients: a 2-year longitudinal study. *Arch Intern Med* 2001, 161:1881-1885.
13. Parsian, N., & Dunning, T. Developing and validating a questionnaire to measure spirituality: a psychometric process, *Global Journal of Health Science*, 2009, 1:1-10.
14. Coyle, J. Spirituality and health: toward a framework for exploring the relationship between spirituality and health. *Journal of Advanced Nursing*, 2002, 37:589-597.
15. Tuck, I., Wallace, D., & Pullen, L. Spirituality and Spiritual Care Provided by Parish Nurses. *Western Journal of Nursing Research*, 2001, 23:441-453.
16. Tanyi, R.A. Towards clarification of the meaning of spirituality. *Advanced Nursing*, 2002, 39:500-509.
17. McColl, M.A., Bickenbach J., Johnston J, et al. Changes in spiritual beliefs after traumatic disability. *Arch Phys Med Rehabilitation*, 2000; 81:817-23.

18. Castellaw L.S., Wicks, M.N., Martin, J.C., Spirituality in white older women with arthritis [serial online]. *Grad Res Nurs* 1999; Available at <http://graduateresearch.com/wicks.htm#Abstract>. Accessed February 2,2004.
19. Cavendish R, Luise BK, Horne K, et al. Opportunities for enhanced spirituality relevant to well adults. *Nurs Diag* 2000; 11:151-63.
20. Díaz Heredia, L., Muñoz Sánchez, A., & de Vargas, D. Reliability and validity of spirituality questionnaire by Parsian and Dunning in the Spanish version. *Rev. Latino-Am. Enfermagem*, 2012, 20:559-566.
21. Galanter, M. Spirituality and addiction: A research and clinical perspective. *Am J Addict.* julio-ago 2006; 15:286-292.
22. Jager, E., Garssen, M., Berg, M., Dierendonck, D., Visser, A., Schaufeli, W.B. Measuring spirituality as a universal human experience: a review of spirituality questionnaires. *J Religion Health*, 2012, 51:336–354.
23. Hatch, R.L., Spring, H., Ritz, M.A., *Spiritual Involvement and Beliefs Scale – Revised (SIBS – R)*. University of Florida. 2011.
24. Koslowski, S. Effects of spirituality on professionals at risk of developing secondary traumatic stress disorder. Master of Social Work Clinical Research Papers, St. Catherine University, 2012.