

# Validation of the Persian Version of Spiritual Well-Being Questionnaires

Mrayam Biglari Abhari<sup>1</sup>, MD;  
John W. Fisher<sup>2</sup>, MS, MEd, PhD,  
EdD, PhD;  
Azita Kheiltash<sup>3</sup>, MD;  
Marzieh Nojomi<sup>4,5</sup>, MD, MPH

<sup>1</sup>Community Medicine Specialist, Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran;  
<sup>2</sup>Faculty of Education and Arts, Federation University Australia; Institute of Health, Medical Sciences and Society, University of Glyndŵr, Wales, Hon;  
<sup>3</sup>Rural Health Academic Centre, Faculty of Medicine, University of Melbourne, Australia;  
<sup>4</sup>Department of Community Medicine, School of Medicine, Iran University of Medical Sciences, Tehran, Iran;  
<sup>5</sup>Preventive Medicine and Public Health Research Center, Iran University of Medical Sciences, Tehran, Iran  
<sup>6</sup>Department of Community Medicine, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

## Correspondence:

Marzieh Nojomi, MD, MPH;  
Preventive Medicine and Public Health Research Center, Iran University of Medical Sciences, Crossroads of Hemmat and Chamran Expressways, Postal Code: 15875-6171, Tehran, Iran  
**Tel:** +98 21 88602225  
**Fax:** +98 21 88602217  
**Email:** mnojomi@iums.ac.ir  
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## What's Known

- Spiritual Well-Being Questionnaire (SWBQ) and Spiritual Well-Being Scale (SWBS) are 2 valid and reliable scales to measure spiritual quality of life, which is an important aspect of quality of life evaluated as an important outcome measure in many trials recently. These scales have been translated and validated in many languages in the world.

## What's New

- The Persian version of the SWBQ and the SWBS were translated and validated in the current study for the 1st time in Iran and the copyright was received.

## Abstract

**Background:** Spiritual well-being is an important issue in health sciences, hence the need for validated instruments to assess this aspect of health in the Iranian population. The aim of the current study was to determine the validity of the Persian versions of 2 most common measures of spiritual health (Spiritual Well-Being Questionnaire [SWBQ] or Spiritual Health and Life-Orientation Measure [SHALOM] and Spiritual Well-Being Scale [SWBS]).

**Methods:** This was a cross-sectional study via a convenience sampling method in Iran University of Medical Sciences with 170 participants aged above 18 years comprising students, teachers, and administrative staff and managers. The study was conducted from September 7, 2014 to September 20, 2015 in Tehran. Four questionnaires, namely the SWBQ, SWBS, General Health Questionnaire (GHQ-12), and Oxford Happiness Questionnaire (OHQ), were used. Statistical analysis was done using SPSS 18 and LISREL (version 8.2). Cronbach's alpha, intra-class correlation coefficient, Pearson correlation, and confirmatory factor analysis were employed to assess the validity and reliability of the questionnaires.

**Results:** Cronbach's alpha for the SWBQ and the SWBS was greater than 0.85. The repeatability of both questionnaires was between 0.88 and 0.98. The Pearson correlation for the SWBQ and the SWBS ranged from 0.33 to 0.53; and all the correlations were significant. The respondents who indicated a higher spiritual well-being also reported better general health and happiness.

**Conclusion:** The Persian versions of the SWBS and the SWBQ have good reliability, repeatability, and validity to assess spiritual health in the Iranian population.

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• Surveys and questionnaires

## Introduction

Spirituality and spiritual well-being and its impact on physical health and quality of life has recently received special attention by health researchers. Religious beliefs and spirituality may relieve the symptoms and severity of mental and physical disorders, expedite recovery, and reduce the risk of the recurrence of diseases.<sup>1</sup> For instance, a positive association has been reported between spirituality and a better quality of life in patients with chronic obstructive pulmonary disease.<sup>2</sup> Religious beliefs reduce the mortality of cancers and cardiovascular diseases.<sup>3</sup>

Spirituality can have different meanings to different people.<sup>4</sup> Integrating various definitions, Fisher provided a general meaning of spiritual health: "Spiritual health is a dynamic state of being, shown by the extent to which people live in harmony within relationships in up to four domains of spiritual well-being, namely with themselves, others, the environment and with a transcendent one, commonly called God."<sup>5</sup> Despite the absence of a consensus vis-à-vis the definition of spirituality, researchers have developed several questionnaires to assess the crucial variable of spiritual well-being.<sup>6-8</sup>

The Spiritual Well-Being Questionnaire (SWBQ) or the Spiritual Health and Life-Orientation Measure (SHALOM) is a valid and reliable measure to assess spiritual health developed by John W. Fisher in 2003. It comprises 4 different domains as follows: 1) personal: the individual's beliefs and perceptions about his/her own existence, 2) communal: the individual's relatedness with other people and community, 3) environmental: the extent of the individual's relationship with environment and nature, and 4) transcendental: the individual's beliefs and deep relations with a greater and higher power and admiration for God.<sup>9-10</sup>

The SHALOM has been used for different samples by Fisher including students, teachers, and those involved in manufacturing industries. This questionnaire has been translated into 27 different languages and has been or is being used in over 500 studies in Australia and overseas.<sup>11</sup>

In Iran, there is increasing interest in the assessment of spiritual well-being and its impact on diseases. Some studies have been conducted to validate questionnaires with a view to assessing spiritual health. The Spiritual Well-Being Scale (SWBS) has been validated for different populations including the elderly and patients with various chronic diseases.<sup>12-14</sup> Research in this area has so far focused on the correlations between spiritual health and quality of life, general health, and coping with stresses and disabilities.<sup>15-18</sup> Recently, an Islamic native questionnaire was developed to assess religious spirituality, as spiritual health. It contained 3 domains and 48 questions.<sup>19</sup>

Having a valid and reliable measure to assess this domain of health in healthy and young adults with different religions is a requirement for community; accordingly, we sought to determine the validity and reliability of the Persian versions of the SHALOM and the SWBS as 2 common measures with some different aspects of life and spirituality.

## Participants and Methods

### *Inclusion Criteria*

All students, teachers, and staff aged above 18 years at Iran University of Medical Sciences were studied.

*Exclusion criteria:* People without the ability to read and write were excluded from the study. Additionally, individuals who did not answer the questions appropriately and completely were excluded.

### *Sampling Method and Sample Size*

A convenience sample of 200 persons from Iran University of Medical Sciences was assessed. The sample comprised managers, staff, students, and teachers aged over 18 years, both men and women. Approximately, 92% of the relevant articles have reported a subject-to-item ratio equal to or greater than 2 to estimate the sample size.<sup>20</sup> It can be a rule for calculation; however, in short scales, it may lead to inadequate sample sizes.<sup>21</sup> The 2<sup>nd</sup> most common method based on factor analysis recommends that a sample size of 100 is poor, 200 is fair, and 300 is good for the validation of a scale.<sup>20</sup> Therefore, given that there are 20 items in both questionnaires, we selected about 8 to 10 subjects per each item.

### *Measurements*

#### Spiritual Health and Life-Orientation Measure (SHALOM)

The SHALOM or the SWBQ has 20 items, with 5 items for each domain: personal (items 5, 9, 14, 16, and 18), communal (items 1, 3, 8, 17, and 19), environmental (items 4, 7, 10, 12, and 20), and transcendental (items 2, 6, 11, 13, and 15). Respondents are asked to indicate what they think about an ideal condition and how well they feel the statements in the items describe their personal experience over the last 6 months, in separate columns, using a 5-point Likert scale, ranging from very low (rated 1) to very high (rated 5). A higher score indicates higher well-being.<sup>22</sup> In the present study, the mean score calculated for each domain together with the mean of the 4 domains provided a total SWB score in line with a previous investigation, which showed that the 4 domains cohered into a single higher-order factor.<sup>23</sup> The SHALOM takes 10 to 12 minutes to complete.

#### Spiritual Well-Being Scale (SWBS)

This scale was developed by Raymond Paloutzian and Craig W. Ellison in 1991 as a general indicator of the subjective state of well-being and perceived spiritual quality of life.

It is comprised of 20 items with 2 subscales: existential well-being (EWB) and religious well-being (RWB), with each subscale containing 10 items. The EWB items include such components as having purpose in life, satisfaction, being related with others, and environment surrounding the person, with no specific religious word or concept. The SWBS contains some positive and some negative items. Scoring is ordered by a 6-point Likert scale as follows: 1) strongly disagree, 2) moderately disagree, 3) disagree, 4) agree, 5) moderately agree, and 6) strongly agree. The negative items are reverse-scored. Based on the sum of the scores, there are 3 scales for this questionnaire: 1) RWB, 2) EWB, and 3) total SWB.<sup>24</sup>

The scores for the EWB and RWB scales range between 10 and 60. Therefore, the total score of the SWBS can range from 20 to 120. Less than 10 minutes is required to complete the questionnaire. We categorized the score of the SWBS as low (20–40), moderate (41–99), and high (100–120). For the RWB scale, a score of 10 to 20 reflects a sense of unsatisfactory relationship with God and scores of 21 to 49 and 50 to 60 reflect moderate and positive views of the individual's relationship with God, respectively. For the EWB scale, the same range of scores was categorized as "low satisfaction with life", "relative lack of clarity about purpose in life", and "moderate and high level of satisfaction and purpose in life", respectively.<sup>24</sup>

#### Twelve-item General Health Questionnaire (GHQ-12)

We used the GHQ-12, translated and validated in Persian by Montazeri et al.<sup>25</sup> in 2003, as a measure of current mental health. We utilized this instrument to investigate the discriminant validity of the SWBS and the SHALOM. The GHQ-12 contains positive and negative items. For the positive items, scores from 1 to 4 reflect "more than often", "not more than often", "less than often", and "much less than often". For the negative items, scores 1 to 4 reflect "not at all", "not more than often", "a little more than often", and "much more than often", correspondingly. Overall, the answers scoring 1 and 2 show better mental conditions and 3 and 4 reflect a lower state of well-being. We scored the answers in bimodal way (0–0–1–1).<sup>25</sup> Answers 1 and 2 get a score of 0 and answers 3 and 4 get a score of 1, so the total score will be 0 to 12. A lower score means better mental condition and health.<sup>26</sup> We defined 2 groups as "fair health condition" (scores>the median) and "poor health condition" (scores<the median).

We used median because we did not have the normal distribution of the GHQ-12 scores.

#### Oxford Happiness Questionnaire (OHQ)

Argyle and Hills provided and promoted an optimized version of the Oxford Happiness Questionnaire (OHQ), encompassing 29 items with a 6-point Likert scale. The total scores range from 29 to 174, with higher scores showing greater happiness.<sup>27</sup> The Persian version, with 29 questions, was translated and validated by Hadinezhad and Zaree<sup>28</sup> in 2008. We drew upon this measure to assess another aspect of the discriminant validity of the studied questionnaires. We defined 2 groups based on the score of this sample's OHQ score: those with a score more than the mean were defined as "happy" and the others as "not happy".

*Translation procedure:* Three terminologists and experts in both English and Persian languages, who were familiar with concepts related to spiritual and psychological health and were au fait with English society/cultural contexts, were invited. Their original speaking language was Persian. Each expert translated the source language questionnaires to the target language separately. They also noted the age, sex, and culture of the respondents and avoided ambiguous and equivocal words, so that cultural and religious beliefs and social norms of the individuals were taken into account. Two expert bilingual (Persian and English) terminologists scrutinized the translations, deleted wrong or inappropriate words, phrases, and idioms, and corrected the items by consensus before coming up with the default Persian versions. The default versions of the target language questionnaires were back-translated into English by 2 independent translators, who were completely fluent in both English and Persian and had no awareness of the English versions of the questionnaires. We sent the back-translated version to the developers of each questionnaire and on the basis of their recommendations, we prepared the final back-translated versions.<sup>29</sup> The experts compared the revised and original questionnaires. The 1<sup>st</sup> Persian drafts of both questionnaires were prepared to apply to a pilot sample of participants.

*Pretest and preparation of the final version:* Thirty individuals in Iran University of Medical Sciences, who were similar to the main study population, were asked to complete the questionnaires and indicate if there were any ambiguous words, phrases, or concepts or if they found any religious, social, and personal conflict. Finally, after considering the recommendations of the participants, we finalized the final Persian versions for use.

**Data collection:** Totally, 200 questionnaires were offered to the participants, and finally 170 completed questionnaires that were returned to us were fed into analysis. Demographic variables such as age, sex, job, education, marital status, and duration of occupation were measured, as well as past history of depression and anxiety.

#### Data Analysis

The data analyses were performed using SPSS, version 18.0 (SPSS Inc., Chicago, Ill., USA). Cronbach's alpha was used to assess the consistency of the questionnaires. A value more than 0.70 was considered acceptable. Test-retest analysis using intra-class correlation coefficient (ICC) was used in order to evaluate the reliability of the scales. The Chi-square  $\chi^2$  test and the Independent Samples *t* Test were utilized to assess discriminant validity. Additionally, the Pearson correlation analysis was applied to evaluate convergence between all the scales. The Kaiser-Meyer-Olkin (KMO) sampling adequacy test was performed as a statistical significance of the sampling size. A KMO value equal to or more than 0.6 was considered significant.<sup>20</sup> Confirmatory factor analysis was done using LISREL, version 8.2.

## Results

Out of the 170 participants, 50% were men. The mean age was 31.79 (8.39) years old. Approximately 54% of the respondents were married. Table 1 depicts the characteristics of the whole study population by gender. Table 2 illustrates the scores of the SHALOM and the SWBS by their domains.

#### Consistency

Sample size sufficiency was checked using the KMO and the Bartlett tests. The KMO was 0.90 for the SHALOM and 0.84 for the SWBS. Thus, the sample size was adequate for analysis. The Bartlett statistics were significant for both questionnaires ( $P < 0.001$ ). Cronbach's alpha, as a measure of consistency, was 0.94 for the SHALOM and 0.89 for the SWBS. For the domains of the SHALOM, the consistency was between 0.79 and 0.87. Cronbach's alpha was 0.84 and 0.81 for the EWB and RWB, respectively.

#### Repeatability and reliability

To assess the reliability and repeatability of the questionnaires using test-retest analysis, we used a convenient sample of 35 individuals to complete the questionnaires at 2 times. The 1<sup>st</sup> test was done with 35 participants and

the 2<sup>nd</sup> one with 33 persons 3 weeks later. We excluded 2 questionnaires that were not completed at the 2<sup>nd</sup> time. The ICC was 0.93 and 0.94 for the SHALOM and the SWBS, correspondingly.

#### Discriminant validity

To assess discriminant validity, we examined the scores of 2 scales across the groups of the other scale to confirm the ability of the questionnaires for discrimination. A significant difference between the SHALOM and SWBS scores was seen between "happy/not happy" using the OHQ and "fair/poor health" using the GHQ-12 (table 3). The correlations between all the scales are depicted in table 4. The correlation between the SHALOM and the SWBS was more than 0.50, which was significant ( $P = 0.0001$ ). Also, there was an almost good and significant correlation between the OHQ and the SHALOM ( $r = 0.26$ ,  $P = 0.007$ ). The SWBS had a good correlation with the GHQ-12 ( $r = -0.32$ ,  $P = 0.001$ ). Due to the reverse scaling of the GHQ-12 and the SWBS, the correlation was negative.

#### Content validity

Confirmatory factor analysis was performed using LISREL, version 8.2. Since the sample size must be more than 200 for running LISREL, we included the main sample questionnaires and 33 questionnaires of the ICC evaluation. All factor loadings for each item on both questionnaires correlated significantly with the relevant domains. Statistics for the SWBS were goodness of fit index ( $\chi^2 = 103.36$ ,  $P = 0.0081$ ) and root mean square error of approximation of 0.0047 and for the SHALOM goodness of fit index ( $\chi^2 = 83.71$ ,  $P = 0.022$ ) and root mean square error of approximation of 0.001. *T*-values were calculated to assess the relationship between the domains and their specific items (through path diagram and *t*-value mode). For all the items and all the domains of both questionnaires, the *t*-values were significant (*t*-value  $\geq 8.52$  for the SHALOM and *t*-value  $\geq 5.46$  for the SWBS).

## Discussion

The Persian versions of the SHALOM and SWBS exhibited good reliability and validity among the Iranian participants. Significant negative correlations between EWB and the GHQ-12 may be justified by the innate condition of existential and mental health and situation, despite the absence of any correlation between religious views. It may be due to improvements in the religious domains of the existence of humans in their efforts to cope with hardships

**Table 1: Demographic and mental characteristics of the participants based on gender**

| Variables (Characteristics) | Male |       |           |       | Female |       |           |       |
|-----------------------------|------|-------|-----------|-------|--------|-------|-----------|-------|
|                             | N=85 | %     | Mean±SD   | Range | N=85   | %     | Mean±SD   | Range |
| Age (y)                     |      |       | 30-87±7.7 | 18-51 |        |       | 32.8±9.05 | 18-55 |
| 18-30                       | 52   | 30.58 |           |       | 38     | 22.35 |           |       |
| 31-40                       | 17   | 10    |           |       | 27     | 15.88 |           |       |
| 41-50                       | 10   | 5.88  |           |       | 11     | 6.47  |           |       |
| +50                         | 1    | 0.58  |           |       | 3      | 1.76  |           |       |
| Unknown                     | 5    | 2.94  |           |       | 6      | 3.52  |           |       |
| Education                   |      |       |           |       |        |       |           |       |
| Diploma                     | 13   | 7.64  |           |       | 5      | 2.94  |           |       |
| Post-diploma                | 10   | 5.88  |           |       | 7      | 4.11  |           |       |
| Bachelor of science         | 30   | 17.64 |           |       | 30     | 17.64 |           |       |
| Master of science           | 14   | 8.23  |           |       | 4      | 2.35  |           |       |
| MD, PhD                     | 17   | 10    |           |       | 29     | 17.05 |           |       |
| Unknown                     | 1    | 0.58  |           |       | 10     | 5.88  |           |       |
| Marital status              |      |       |           |       |        |       |           |       |
| Single                      | 36   | 21.17 |           |       | 24     | 14.11 |           |       |
| Married                     | 45   | 26.47 |           |       | 47     | 27.64 |           |       |
| Others                      | 4    | 2.35  |           |       | 14     | 8.23  |           |       |
| Job status                  |      |       |           |       |        |       |           |       |
| Administrative              | 48   | 28.23 |           |       | 35     | 20.58 |           |       |
| Student                     | 29   | 17.05 |           |       | 34     | 20    |           |       |
| Teaching staff/manager      | 6    | 3.52  |           |       | 4      | 2.35  |           |       |
| Unknown                     | 2    | 1.17  |           |       | 12     | 7.05  |           |       |
| History of depression       |      |       |           |       |        |       |           |       |
| Yes                         | 8    | 4.7   |           |       | 12     | 7.05  |           |       |
| No                          | 77   | 45.29 |           |       | 73     | 42.94 |           |       |
| History of anxiety          |      |       |           |       |        |       |           |       |
| Yes                         | 11   | 6.47  |           |       | 8      | 4.7   |           |       |
| No                          | 74   | 43.52 |           |       | 77     | 45.29 |           |       |
| Years of occupation         |      |       | Median=5  | 1-25  |        |       | Median=7  | 2-34  |

**Table 2: Scores of the SHALOM and SWBS domains**

| Questionnaires and domains | Male      |        | Female     |       |
|----------------------------|-----------|--------|------------|-------|
|                            | Mean±SD   | Range  | Mean±SD    | Range |
| Ideal SHALOM               |           |        |            |       |
| Personal                   | 4.32±0.75 | 1.8-5  | 4.57±0.659 | 1.6-5 |
| Communal                   | 4.27±0.72 | 2.4-5  | 4.37±0.66  | 2.2-5 |
| Environmental              | 4.1±0.81  | 2-5    | 4.2±0.7    | 1.6-5 |
| Transcendental             | 4.44±0.89 | 1-5    | 4.7±0.44   | 3-5   |
| Final score                | 4.29±0.68 | 2-5    | 4.5±0.52   | 2.8-5 |
| Experienced SHALOM         |           |        |            |       |
| Personal                   | 3.8±0.83  | 1.8-5  | 3.9±0.85   | 1.2-5 |
| Communal                   | 3.8±0.74  | 1.8-5  | 3.96±0.85  | 1.2-5 |
| Environmental              | 3.68±0.81 | 1.8-5  | 3.77±0.70  | 1.8-5 |
| Transcendental             | 3.9±0.82  | 2-5    | 4.24±0.65  | 2.4-5 |
| Final score                | 3.8±0.71  | 2.14-5 | 4.03±0.58  | 2.5-5 |
| SWBS                       |           |        |            |       |
| Existential                | 32.28±3.8 | 21-40  | 32.7±3.21  | 22-63 |
| Religious                  | 31.1±3.03 | 25-41  | 31.7±4.8   | 22-38 |
| Total SWBS                 | 63.40±5.1 | 47-110 | 64.46±6.23 | 44-97 |

SHALOM: Spiritual health and life-orientation measure; SWBS: Spiritual well-being score

like sickness. Attention to the religious aspects of treatment is on a rapid rise today.<sup>30</sup> Naturally,

we detected no correlation between RWB and general health.

**Table 3:** Discriminant validity of the SHALOM and the SWBS using the GHQ-12 and the OHQ

| Questionnaires and domains score | General health condition (GHQ-12) |       |        | Happiness (OHQ) |         |       |
|----------------------------------|-----------------------------------|-------|--------|-----------------|---------|-------|
|                                  | Fair                              | Poor  | P      | Happy           | Unhappy | P     |
| <b>SWBS</b>                      |                                   |       |        |                 |         |       |
| EWB                              | 46.50                             | 41.38 | 0.0001 | 46.23           | 42.97   | 0.019 |
| RWB                              | 51.9                              | 50.03 | 0.098  | 52.72           | 49.9    | 0.012 |
| Total SWBS                       | 98.64                             | 91.61 | 0.004  | 99.4            | 92.98   | 0.011 |
| <b>SHALOM</b>                    |                                   |       |        |                 |         |       |
| Personal                         | 4.01                              | 3.61  | 0.003  | 4.009           | 3.74    | 0.048 |
| Communal                         | 3.93                              | 3.80  | 0.276  | 3.99            | 3.79    | 0.051 |
| Environmental                    | 3.72                              | 3.72  | 0.95   | 3.86            | 3.62    | 0.077 |
| Transcendental                   | 4.14                              | 3.99  | 0.212  | 4.2             | 4.002   | 0.104 |
| Final score                      | 3.99                              | 3.86  | 0.287  | 4.06            | 3.84    | 0.049 |

SHALOM: Spiritual health and life-orientation measure; SWBS: Spiritual well-being score; GHQ-12: Twelve-item general health questionnaire; OHQ: Oxford happiness questionnaire

In similar studies on other versions such as German,<sup>31</sup> African,<sup>32</sup> Portuguese,<sup>33</sup> Greek,<sup>4</sup> Hong Kongese,<sup>34</sup> and Turkish,<sup>35</sup> Cronbach's alpha was estimated between 0.79 and 0.94. Thus, the reliability measures in the present project were as strong as those reported in the previous studies.

In other countries, the mean of the scores is near to the mean in our country. The mean score of the transcendental domain was 3.9 for the men and 4.24 for the women, which is consistent with the results in Indonesia: 4.20,<sup>36</sup> Turkey: 4.43,<sup>35</sup> American nurses: 4.3,<sup>37</sup> Iranian medical sciences students (which was done simultaneously with this study by one of the authors): 4.58, and Puerto Rico: 4.33.<sup>37</sup> Also, the score of the transcendental domain was more than that in the other dimensions in the current study, similar to the results in Turkey and Indonesia, 2 countries with a majority of Muslim population.<sup>35,36</sup> Consequently, can we conclude that Muslims pay more attention to the transcendental aspect of life and relation with God? A convincing answer requires studies on Muslims and the followers of other religions to compare the condition.

The correlations between the SHALOM and the SWBS, as comparison measures, were acceptable (between 0.334 and 0.531). In the original study done by Fisher whilst developing the SHALOM, the correlations between these 2 measures were between 0.12 and 0.74.<sup>23</sup> The correlations between EWB, RWB, SWBS, and final SHALOM score were 0.41, 0.52, and 0.58. In our study, these correlations were estimated to be 0.47, 0.49, and 0.52. The results of these 2 studies are comparable with each other.

The differences in the SWBS scores between the respondents with fair health condition and those with poor health were significant, and there were correlations between the scores

of the questionnaires. Other studies have shown similar correlations between spiritual and general mental health.<sup>35</sup> Thus, the Iranian SWBS has acceptable discriminant validity. The personal score of the SHALOM was higher in the participants with fair health condition, whereas in the other domains, there were no significant differences between the means in the poor and fair health groups.

An inspection of the 12 items in the GHQ-12 revealed that they fitted well into the personal domain of the SHALOM and the EWB factor of the SWBS, and not the other factors, which was demonstrated by the statistical tests reported here.

The scores of EWB, RWB, and SWBS were higher in the respondents with good OHQ scores, based on the arbitrary division of the sample by mean values on the OHQ. This indicates that the SWBS has enough ability to discriminate between happy and unhappy individuals. The correlation between spiritual health and happiness has been found in other similar investigations.<sup>30</sup> However, no correlation was found across the total OHQ score with EWB or RWB from the SWBS. Overall, these results show that the Iranian SWBS has limited discriminant validity.

Personal, environmental, and SHALOM final scores were higher among the happy respondents, while the communal and transcendental scores were not different between the 2 arbitrary groups assigned on the OHQ. These results indicate that the Iranian SHALOM has fair discriminant validity. Nonetheless, significant correlations were shown between the 4 domains on the SHALOM and the OHQ (which did not occur with the SWBS, as was reported above). These findings suggest great sensitivity of the SHALOM, compared with the SWBS, in regard to assessing the relationship between happiness and spiritual well-being.

**Table 4:** Correlation between the scores of the SWBS and the SHALOM and the GHQ-12 and the OHQ

| Domains        | GHQ-12                      |       | OHQ                         |       | EWB                         |        | RWB                         |        | Total SWBS                  |       |
|----------------|-----------------------------|-------|-----------------------------|-------|-----------------------------|--------|-----------------------------|--------|-----------------------------|-------|
|                | Correlation coefficient (r) | P     | Correlation coefficient (r) | P     | Correlation coefficient (r) | P      | Correlation coefficient (r) | P      | Correlation coefficient (r) | P     |
| SHALOM         |                             |       |                             |       |                             |        |                             |        |                             |       |
| Personal       | -0.236                      | 0.001 | 0.303                       | 0.001 | 0.518                       | 0.0001 | 0.439                       | 0.0001 | 0.531                       | 0.001 |
| Communal       | -0.016                      | 0.847 | 0.182                       | 0.053 | 0.334                       | 0.0001 | 0.384                       | 0.0001 | 0.393                       | 0.001 |
| Environmental  | -0.094                      | 0.245 | 0.292                       | 0.002 | 0.42                        | 0.0001 | 0.394                       | 0.0001 | 0.442                       | 0.001 |
| Transcendental | -0.071                      | 0.393 | 0.182                       | 0.049 | 0.477                       | 0.0001 | 0.492                       | 0.0001 | 0.516                       | 0.001 |
| Final SHALOM   | -0.108                      | 0.223 | 0.265                       | 0.007 | 0.476                       | 0.0001 | 0.49                        | 0.0001 | 0.526                       | 0.001 |
| SWBS           |                             |       |                             |       |                             |        |                             |        |                             |       |
| EWB            | -0.418                      | 0.001 | 0.039                       | 0.638 | -                           | -      | -                           | -      | -                           | -     |
| RWB            | -0.128                      | 0.134 | 0.151                       | 0.114 | -                           | -      | -                           | -      | -                           | -     |
| Total SWBS     | -0.317                      | 0.001 | 0.106                       | 0.273 | -                           | -      | -                           | -      | -                           | -     |

SHALOM, Spiritual health and life-orientation measure; SWBS, Spiritual well-being score; GHQ-12: Twelve-item general health questionnaire; OHQ, Oxford happiness questionnaire

There was no significant difference in spiritual health between the men and the women, which chimes in with the results of similar studies in other cultures.<sup>36,37</sup> Differences between the married and unmarried respondents were significant for the SHALOM scores, as was shown in a study in Nigeria.<sup>38</sup> A previous study reported that better spiritual condition led to better marital quality in couples in Iran.<sup>39</sup>

The great challenge in this issue is the importance of relationship with God, the transcendental power in life on whom one can rely. No alternative could cover its absence.<sup>40,41</sup> In our study, the mean of the experienced transcendental dimension was higher than that of the others. Of course, the respondents confirmed this dimension of spiritual health more than they did the others. As a result, thinking of God may be a crucial issue in our community, which should be assessed especially in future studies.

We recommend further investigations of the effects of each of the 4 domains of spiritual health (as assessed with the SHALOM) on happiness and vice versa in wider population samples across the Iranian culture to identify better or more determinants of spiritual health and happiness in Iran. This should help to develop more effective interventions with a view to promoting mental and spiritual health of community. We also suggest that more studies be undertaken to assess these issues in the Iranian community.

The strong point of the current study is that we for the 1<sup>st</sup> time validated 2 scales in spiritual health in the Persian language. These validated questionnaires can be used as an outcome measure in interventional and observational studies.

The salient limitation in the present study is that we selected our sample from an organization setting; it would be more advisable to validate the scale in other samples too. We, therefore, suggest that validation studies be undertaken on different populations such as other religious communities, the elderly, and the illiterate.

## Conclusion

The Persian versions of the SHALOM and the SWBS have good reliability and validity. Both instruments are useful, but the SHALOM shows greater sensitivity for assessing the spiritual aspect of health to demonstrate spiritual needs in different groups of community. Moreover, the SHALOM concentrates on the innate concepts of humanity.

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