# Validation of the Spiritual Well-being Scale (SWBS) and its role in Predicting Hope among Iranian Elderly

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## Abstract

Older adults, as the most vulnerable group, are affected by decreased functional abilities and changes in physical status, such as cognitive, social, and psychological function. This study aims to investigate the validation of the Spiritual Well-being Scale (SWBS) and its role in predicting hope in Iranian older adults. 812 Iranian older adults—aged 60 years and older—participated in this study. Participants were asked to complete a demographic questionnaire, the Spiritual Well-Being Scale (SWBS), the Resilience Scale, the Depression, Anxiety, and Stress Scale -21 (DASS-21), and the Adult Hope Scale. The psychometric properties of the SWBS were analyzed using confirmatory factor analysis (CFA), while its reliability was tested using Cronbach's alpha. Discriminant validity was measured by examining the relationship with the DASS-21 subscales, and convergent validity was assessed using resilience. In addition, multiple regression analysis was used to predict hope by the SWBS subscales. The four-factor structure provided good agreement with the data. The SWBS had significant negative associations with the subscales of the DASS-21, and there was a significant positive correlation between SWBS and resilience. The results indicate that SWBS significantly predicts hope among older adults. The Spiritual Well-Being Scale (SWBS) has good validity for older adults in Iran and can be used in psychological assessments in the Iranian context.

**Keywords** Spirituality · Well-Being · Psychometrics · Mental Health · Hope

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## Introduction

As a progressive and irreversible phenomenon in the life of every human being, aging is the gradual degradation of bodily functions and organisms, prevented by time and structure (Phulkerd et al., 2021). Aging is associated with decreased functioning and various disabilities, including mental, cognitive, physical, social, and economic limitations. There are many variables that a person may experience in healthy aging that we can mention spiritual well-being (Aydın et al., 2020).

Spirituality grows and develops with age. Due to increasing life expectancy, global interest in spirituality and aging has increased, and the spiritual needs of older adults have become a societal priority. Spirituality is an integral part of health and well-being and is often particularly important to older adults (Solaimanizadeh et al., 2020). Spiritual well-being includes various aspects, one of which is the spiritual aspect of human life. Spiritual well-being is not limited to spiritual and religious behaviors and expectations. Instead, it is based on approaches influenced by popular beliefs and embodies hope for a life based on a relationship with self, others, nature, and God (Loureiro et al., 2018).

Many studies confirmed that spiritual well-being predicts high mental health (Martín-María et al., 2020). Other studies have shown a significant link between spirituality and the mental health of the elderly (Kørup et al., 2020). Older adults with spiritual well-being could meaningfully cope with problems, stress, psychological loss, physical disabilities, natural disasters such as the death of a spouse and loved ones, and cope with psychological distress (dos Santos et al., 2018).

There are many instruments for measuring psychological well-being. One of these instruments is the Spiritual Well-Being Scale (SWBS). This scale was developed by Paloutzian and Ellison in 1982 and includes 20 items and two subscales (Paloutzian et al., 2021). The Religious Well-Being subscale (RWB) questions measure the respondent's experience of a satisfying relationship with God, and the Existential Well-Being subscale (EWB) questions measure the respondent's sense of purpose and satisfaction with life (Bufford et al., 1991). The main advantage of this instrument is that it was not developed based on any particular ideological or religious orientation. This scale can be used for different religious beliefs and for people who are religious or non-religious (Paloutzian et al., 2021). The scale has been studied in many countries; including (Chaiviboontham et al., 2016) studied this scale among cancer patients in Thailand (Malinakova et al., 2017) used this scale among adolescents in the Czech Republic. It has also been used among Malaysian students (Imam et al., 2009), Greek adults (Darvyri et al., 2014), Korean adults (You & Yoo, 2016). This scale has not yet been studied for older adults.

Research findings from Western samples suggest that more factors are involved in the development of SWBS, including the three-factor structure in Caucasians and the five-factor structure in the African American sample. Differences in culture, values, and ethnicity are among the most important factors leading to differences in SWBS factor structure (Miller et al., 1998; Musa, 2016).

It appears that spiritual well-being can influence various indicators of well-being and act as a positive source of hope in older adults (Dadfar et al., 2021). Through its positive, long-term, and profound effects on the patient, spiritual well-being can contribute to having a more comprehensive view of life and a sense of hope in life (O'Callaghan et al., 2020). Although instruments with similar backgrounds have been psychometrically studied in different countries, there is limited evidence on how these instruments work with older people and in developing countries.

Although related structures such as spiritual intelligence and psychological well-being have been investigated in several validation studies in Iranian culture (Hassan & Shabani, 2013; Joshanloo, 2011), spiritual well-being has not been psychometrically studied in older adults. Convergent validity examines the relationship between similar measures and constructs, while discriminant validity examines unrelated measures and constructs (Peter & Churchill, 1986). Considering the relationship between depression, anxiety, and stress with spiritual well-being (Hsiao et al., 2010) and the important relationship between spiritual well-being and resilience (Duran et al., 2020), we chose two scales of Resilience Scale and Depression, Anxiety, and Stress Scale -21 (DASS-21) for convergent and discriminant validity in this study. A cross-sectional study of adaptation and cultural validation of instruments was used in this study. This study aimed to investigate Persian validation of the Spiritual Well-Being Scale (SWBS) and its role in predicting hope among older adults in Iran.

## Methods

### Participants

The population of this study was older adults who were registered in the list of community centers in the north, south, east, west, and center of Tehran in 2018–2019 and were included in the study. Convenience sampling was used according to the inclusion and exclusion criteria. As researchers, we considered 850 questionnaires, out of which 38 were excluded due to incomplete responses.

Factor analysis requires a minimum sample of five to ten times larger than the number of items in the instrument (Muthén & Muthén, 2002). The second commonly used method, based on factor analysis, recommends a sample size of 100 weak, 200 adequate, and 300 appropriate items for scale validation (Anthoine et al., 2014). In the EFA phase, we had 304 questionnaires, and in the CFA, we obtained 508 questionnaires from the target samples.

*Inclusion criteria*: Presence of informed consent, ability to communicate in Persian, sufficient literacy to answer the questionnaire, age 60 years and older, no chronic psychiatric illness, no substance abuse, no experience of the death of a loved one, no terminal illness in family members, no change of residence in the last six months. *Exclusion criteria:* Questionnaire bias.

## Measures

The participants' socio-demographic characteristics in this study were gender, marital status, level of education, Residence Status, history of chronic disease.

***Paloutzian & Ellison's Spiritual Wellbeing Scale (SWBS).*** This was developed in 1982. This scale has 20 items, 10 of which measure existential well-being and ten items measure spiritual well-being. Total scores were calculated for each subscale by summing the scores of items. Possible scores for the subscales ranged from 10 to 60. The total score for SWBS could be achieved by summing the two subscale scores and ranging from 20 to 120 (item numbers 1, 2, 5, 6, 9, 12, 13, 16, and 18 were reverse scored). A higher score shows a higher level of religious and existential well-being. Responses to the questions were ranked on a six-point Likert scale from 'strongly agree' to 'strongly disagree'.

***The Connor-Davidson Resilience Scale.*** This is a self-report scale developed by Connor and Davidson in 2003. The scale is a 25-item instrument that measures resilience structure in a five-point Likert-type from zero to four, with zero being the minimum resilience score. This scale was standardized in Iran by Jowkar et al. (2010). In the present study, Cronbach's alpha was 0.79.

***The Depression, Anxiety, and Stress Scale-21 (DASS-21).*** Lovibond and Lovibond developed the 21-item scale in 1995 to measure stress, anxiety, and depression. The subscales and associated items were as follows: Anxiety (items 2, 4, 7, 9, 15, 19, 20), Stress (items 1, 6, 8, 11, 12, 14, 18), and Depression (items 3, 5, 10, 13, 16, 17, 21). In Iran, the reliability of the DASS-21 was reported to be 0.82 using Cronbach's alpha method (Yazdanshenas Ghazwin et al., 2016). In this study, the Cronbach's alpha was 0.82.

***Adult Hope Scale*** (Snyder et al., 1991). It has 12 items, 8 of which are used, and the other 4 are lie detectors that do not enter into the scoring. The purpose of this scale is to assess the life expectancy of people. Higher scores indicate higher longevity of the subject and vice versa. Khodarahimi (2013) reported the reliability as Cronbach's alpha 0.82. In this study, the Cronbach's alpha was 0.79.

## Procedure

This investigation was divided into two phases. The first consisted of the translation technique and the cultural adaptation of the instrument, and the second consisted of the analysis of its psychometric properties and the verification of the instrument's validity. However, Hambleton and de Jong (2003) point out that this commonly used technique has shortcomings. They suggest that translators should be not only proficient in both languages but also familiar with both cultures. The extent to which the translation matched the original text was examined.

So we invited three translators who had been in academic positions for 20 years to assist us in this investigation. The translators worked independently, and no significant differences were found in how the items were translated and expressed. The authors subsequently reached a consensus with the translators on both versions.

Finally, a professor of English and other psychologists revised several items to make them more understandable and comprehensible to the target audience. We made sure that the length of the items matched the original scale. Temporal stability was tested using a sample of 53 older adults. The results showed that the coefficient for the retest and the calculated test after two weeks was 0.85 (CI = 0.84—0.87). 12 Older adults assessed eye-gaze validity. The older adults rated the items for complexity, vagueness, and comprehensibility. Finally, no Persian term was ambiguous to older adults, so no changes were made to the translated scale when designing the final Persian version of the SWBS. In the second phase of the study, a CFA was conducted to test the factor structure that had emerged in the first phase of the study.

## Statistical Analysis

The IBM SPSS Statistics 22.0 (IBM SPSS Statistics, Inc., Armonk, USA) was used to analyze the demographic frequencies and measure the Pearson correlation between the SWBS with resilience and DASS-21. In addition, Confirmatory Factor Analysis (CFA) was tested using LISREL 8.8. Model fit indices with the following cut-off criteria were used to determine the level at which the model was fit Comparative Fit Index (CFI) > 0.90, Root Mean Square Residual (RMR), Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFA) > 0.90, Incremental Fit Index (IFI) > 0.90, Relative Fit Index (RFI) > 0.90, Adjusted Goodness of Fit Index

**Table 1** Association between SWBS with the socio-demographic characteristic (N = 812)

|  | N | % | M | SD | F | p |
|---|---|---|---|---|---|---|
| *Gender Status* |  |  |  |  | 3.92 | **0.001** |
| Male | 264 | 32.51 | 69.42 | 9.76 |  |  |
| Female | 548 | 67.48 | 72.23 | 9.47 |  |  |
| *Marital Status* |  |  |  |  | 18.93 | **0.048** |
| Deceased | 368 | 45.3 | 70.21 | 8.88 |  |  |
| Married | 409 | 50.4 | 72.27 | 9.96 |  |  |
| Divorced | 35 | 4.3 | 70.57 | 11.65 |  |  |
| *Level of Education* |  |  |  |  | 0.44 | 0.78 |
| The extent of Reading and Writing | 252 | 31.0 | 71.93 | 9.56 |  |  |
| Primary Education | 278 | 34.2 | 70.88 | 9.85 |  |  |
| High school | 52 | 6.4 | 71.44 | 9.20 |  |  |
| Diploma | 193 | 23.8 | 71.06 | 9.83 |  |  |
| Above the diploma | 37 | 4.6 | 71.62 | 6.09 |  |  |
| *Residence Status* |  |  |  |  | 0.24 | 0.81 |
| Owner | 464 | 57.1 | 71.25 | 9.66 |  |  |
| Tenant | 348 | 42.9 | 71.45 | 9.45 |  |  |
| *History of Chronic Disease* |  |  |  |  | 4.75 | 0.091 |
| Yes | 59 | 7.3 | 65.69 | 8.97 |  |  |
| No | 753 | 92.7 | 71.76 | 9.48 |  |  |

(AGFI) > 0.80, Goodness of Fit Index (GFI) > 0.85, Root-Mean-Square of Approximation (RMSEA) < 0.08 and, CMIN/df < 5 (Byrne, 2001) Internal consistency of SWBS was determined using Cronbach's Alpha. In addition, multiple regression analysis was used to predict hope by the subscales of the SWBS.

## Results

### Descriptive Statistic

A total of 812 older adults from Iran participated in the survey. The mean (SD) age of the participants was 66.28 (3.92) years (see Table 1).

### Factor Structure

#### Item Analysis

Inter-item and inter-item correlations overall were examined and are shown in Table 2. Of the 190 inter-item correlations, only one was insignificant, with a substantial number exceeding 0.30 (74.8%). Item-total correlations were also highly significant, ranging from 0.25 to 0.621, and there were no negative or extremely low item-total correlations. No item was excluded based on the item analysis.

#### Exploratory Factor Analysis (EFA)

The internal structure of the Spiritual Well-Being Scale (SWBS) in Iranian older adults was tested by EFA using principal component analysis (PCA) with Varimax rotation. The Kaiser–Meyer–Olkin index (KMO) was 0.91, which was higher than the recommended value of 0.6, and Bartlett's test for sphericity reached statistical significance ($\times 2 = 3202.3$, $p < 0.001$), indicating that the data were suitable for factor analysis. The initial results of the analysis revealed four factors with eigenvalues greater than 1, which explained 63.65% of the variance. Inspection of the scree plot showed clear separation by the four components. This was also supported by the similar analysis results, which revealed four components with eigenvalues above the corresponding criterion values for a randomly generated data matrix of the same size (20 variables × 304 respondents). These four components explained 63.65% of the variance. PCA also showed that all factor loadings on four factors were above 0.50, except for item 10 (Table 3).

As Fig. 1, we used primary factor analysis with varimax rotation. Our EFA sample included 304 participants. The first EFA yielded four factors, a 20-item solution.

**Table 2** Inter-item and item-total correlations

| | b1 | b2 | b3 | b4 | b5 | b6 | b7 | b8 | b9 | b10 | b11 | b12 | b13 | b14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM1 | 1 | | | | | | | - | | | | | | |
| ITEM2 | 0.464** | 1 | | | | | | - | | | | | | |
| ITEM3 | 0.433** | 0.296** | 1 | | | | | - | | | | | | |
| ITEM4 | 0.227** | 0.261** | 0.386** | 1 | | | | - | | | | | | |
| ITEM5 | 0.421** | 0.375** | 0.656** | 0.243** | 1 | | | - | | | | | | |
| ITEM6 | 0.331** | 0.408** | 0.230** | 0.307** | 0.399** | 1 | | - | | | | | | |
| ITEM7 | 0.386** | 0.237** | 0.401** | 0.376** | 0.324** | 0.277** | 1 | - | | | | | | |
| ITEM8 | 0.216** | 0.197** | 0.168** | 0.269** | 0.098 | 0.228** | 0.281** | 1 | | | | | | |
| ITEM9 | 0.502** | 0.370** | 0.587** | 0.276** | 0.659** | 0.323** | 0.377** | 0.176** | 1 | | | | | |
| ITEM10 | 0.259** | 0.246** | 0.301** | 0.503** | 0.243** | 0.411** | 0.455** | 0.359** | 0.288** | 1 | | | | |
| ITEM11 | 0.432** | 0.307** | 0.619** | 0.384** | 0.585** | 0.291** | 0.407** | 0.195** | 0.579** | 0.379** | 1 | | | |
| ITEM12 | 0.369** | 0.504** | 0.329** | 0.489** | 0.327** | 0.539** | 0.345** | 0.362** | 0.409** | 0.477** | 0.333** | 1 | | |
| ITEM13 | 0.605** | 0.405** | 0.532** | 0.259** | 0.579** | 0.347** | 0.429** | 0.198** | 0.598** | 0.383** | 0.496** | 0.446** | 1 | |
| ITEM14 | 0.245** | 0.270** | 0.391** | 0.485** | 352** | 0.472** | 0.327** | 0.360** | 0.349** | 0.684** | 0.429** | 0.485** | 0.365** | 1 |
| ITEM15 | 0.421** | 0.217** | 0.542** | 0.338** | 0.502** | 0.277** | 0.472** | 0.159** | 0.510** | 0.383** | 0.583** | 0.319** | 0.474** | 0.437** |
| ITEM16 | 0.206** | 0.319** | 0.246** | 0.343** | 0.339** | 0.454** | 0.223** | 0.160** | 0.303** | 0.302** | 0.292** | 0.545** | 0.375** | 0.300** |
| ITEM17 | 0.375** | 0.219** | 0.508** | 0.282** | 0.440** | 0.208** | 0.446** | 0.158** | 0.476** | 0.336** | 0.532** | 0.287** | 0.476** | 0.319** |
| ITEM18 | 0.375** | 0.459** | 0.395** | 0.470** | 0.532** | 0.462** | 0.353** | 0.196** | 0.524** | 0.398** | 0.459** | 0.609** | 0.436** | 0.440** |
| ITEM19 | 0.347** | 0.238** | 0.491** | 0.330** | 0.464** | 0.246** | 0.458** | 0.143* | 0.504** | 0.390** | 0.502** | 0.324** | 0.481** | 0.346** |
| ITEM20 | 0.232** | 0.221** | 0.361** | 0.493** | 0.332** | 0.296** | 0.354** | 0.223** | 0.358** | 0.387** | 0.376** | 0.371** | 0.240** | 0.503** |
| Total | 0.33** | 0.27** | 0.441** | 0.503** | 0.381** | 0.46** | 0.530** | | | | | | | |

**Table 2**  (continued)

| b8 | b9 | b10 | b11 | b12 | b13 | b14 |
|---|---|---|---|---|---|---|
| 0.364** | 0.27** | 0.551** | 0.480** | 0.31** | . 34** | 0.530** |

| b15 | b16 | b17 | b18 | b19 | b20 | Total |
|---|---|---|---|---|---|---|
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| 1 | | | | | | |
| 0.196** | 1 | | | | | |
| 0.662** | 0.198** | 1 | | | | |
| 0.340** | 0.487** | 31** | 1 | | | |
| 0.649** | 0.212** | 0.753** | 334** | 1 | | |
| 0.375** | 0.255** | 0.336** | 0.523** | 0.341** | 1 | |
| 0.621** | 0.25** | 0.578** | 0.29** | 0.575** | 0.487** | 1 |

## Confirmatory Factor Analysis (CFA)

We conducted CFAs with a sample of 508 older adults. The first CFA began with the solution of four factors and 20 items resulting from the last EFA. The final CFA resulted in the solution of four factors and 20 items: the factor loadings and the fit statistics. The explained variance (partial R-squared) was 61.06% (Table 4, Fig. 2).

The CFA results for a four-factor structure are shown in Table 5. These results are acceptable because the factor loadings of all items were significant, and all items except item 8 were above 0.50. The CFA results also show that the four-factor structure provides a good fit for the data. In the present study, the fit indices of the model were RMSEA = 0.078; SRMR = 0.065, RMR = 0.19, CFI = 0.95, NFI = 0.94, IFI = 0.95, RFI = 0.93, GFI = 0.85, and AGFI = 0.81. All the items of the loadings showed a significant factor as in Table 5.

**Table 3** Exploratory factor loadings of 20-items in Spiritual Well-being Scale (SWBS) with for factors (n = 304)

| Item No | Factors of attitude sub-questionnaire | M | SD | Factor loading | | | |
|---|---|---|---|---|---|---|---|
| | | | | Factor1 | Factor2 | Factor3 | Factor4 |
| Factor 1: *Relation with God (% of variance = 41.474, eigenvalue = 8.295)* | | | | | | | |
| 1 | I don't find much satisfaction in private prayer with God | 2.73 | 1.52 | 0.520 | | | |
| 3 | I believe that God loves me and cares about me | 4.97 | 1.75 | 0.725 | | | |
| 5 | I believe that God is impersonal and not interested in my daily situations | 1.96 | 1.35 | 0.664 | | | |
| 9 | I don't get much personal strength and support from my God | 2.38 | 1.40 | 0.677 | | | |
| 11 | I believe that God is concerned about my problems | 4.49 | 1.90 | 0.694 | | | |
| 13 | I don't have a personally satisfying relationship with God | 2.55 | 1.46 | 0.612 | | | |
| 15 | My relationship with God helps me not to feel lonely | 4.33 | 2.06 | 0.771 | | | |
| 17 | I feel most fulfilled when I'm in close communion with God | 4.62 | 1.85 | 0.788 | | | |
| 19 | My relation with God contributes to my sense of well-being | 4.42 | 2.00 | 0.763 | | | |
| Factor 2: *Relation with life (% of variance = 9.873, eigenvalue = 1.957)* | | | | | | | |
| 2 | don't know who I am, where I came from, or where I'm going | 2.76 | 1.50 | | 0.712 | | |
| 6 | I feel unsettled about my future | 3.21 | 1.58 | | 0.613 | | |
| 12 | I don't enjoy much about life | 2.91 | 1.49 | | 0.653 | | |
| 16 | I feel that life is full of conflict and unhappiness | 3.87 | 1.49 | | 0.637 | | |
| 18 | Life doesn't have much meaning | 2.54 | 1.56 | | 0.627 | | |
| Factor 3: *Relation with good feel (% of variance = 7.288, eigenvalue = 1.458)* | | | | | | | |
| 4 | I feel that life is a positive experience | 4.17 | 1.97 | | | 0.696 | |
| 10 | I feel a sense of well-being about the direction my life is headed in | 4.00 | 1.96 | | | 0.602 | |
| 14 | I feel good about my future | 4.03 | 2.01 | | | 0.667 | |
| 20 | I believe there is some real purpose for my life | 4.56 | 1.85 | | | 0.688 | |
| Factor 4: *Relation with meaningful life (% of variance = 5.103, eigenvalue = 1.102)* | | | | | | | |
| 7 | I have a personally meaningful relationship with God | 3.90 | 2.14 | | | | 0.445 |
| 8 | I feel very fulfilled and satisfied with life | 2.77 | 1.94 | | | | 0.736 |
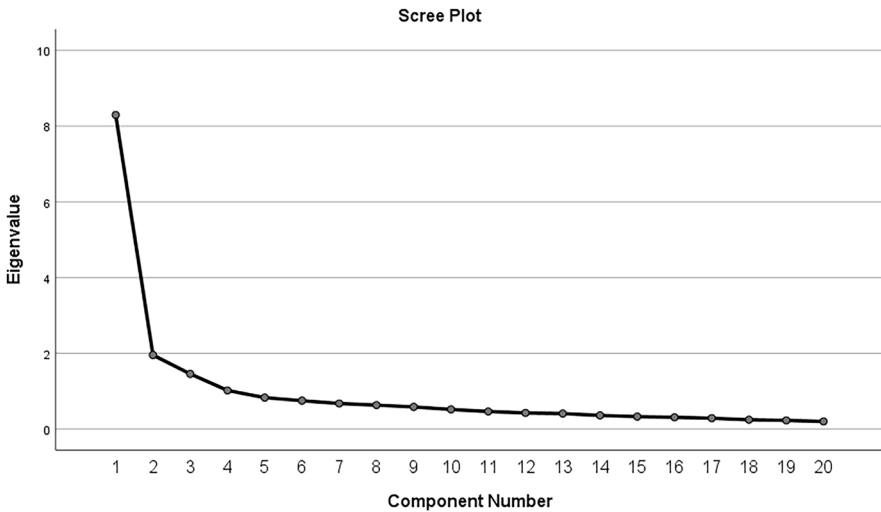
**Fig. 1** Scree plot

## Reliability

### Internal Consistency

Reliability refers to the degree of consistency and repeatability of an instrument's results. Cronbach's alpha for all participants was 0.712. Cronbach's alpha for the first factor was 0.57, the second was 0.77, the third was 0.79, and the fourth factor was 0.66, indicating that the internal consistency of Iranians' SWBS is acceptable (Table 6).

### Test–Retest Reliability

Temporal stability using a test–retest strategy in a small subsample of 97 participants over 15 days was assessed as 0.79 (CI = 0.77—0.81).

## Validity

### Convergent Validity

The convergent validity of the SWBS was assessed by correlating resilience scores. Positive correlations of the SWBS subscales with resilience ranging from 0.26 to 0.39 indicated acceptable convergent validity (Table 6).

## Discriminant Validity

As Table 6, negative correlations between the SWBS and subscales of DASS-21 (depression, anxiety, stress) ranged from -0.24 to -0.54. All correlations were statistically significant at $p < 0.01$, indicating acceptable discriminant validity.

Multiple linear regression was calculated to predict hope based on the components of the SWBS; results showed that the subscales of the SWBS significantly predicted hope in aging individuals ($F_{(4, 503)} = 21.06$, $p \leq 0.001$), with an $R^2$ of 0.23 (Table 7).

## Discussion

The present study examined the Persian validation of the Spiritual Well-Being Scale (SWBS) and its role in predicting hope among older adults in Iran. The results show that the SWBS has acceptable validity and reliability and can predict hope among them.

In order to investigate the minimum number of factors in the first study, we conducted the EFA. The result of EFA was a 4-factor model with 20 items, and no items were removed from the scale. The results of this study are consistent with

**Table 4** CFA of 20-item of SWBS (n = 508)

| Items | Factor Loading | Eigenvalue | | | Overall Alpha |
|---|---|---|---|---|---|
| | | Total | % of variance | Cumulative % | |
| ITEM 1 | 0.58 | 7.575 | 37.873 | 37.873 | |
| ITEM 2 | 0.57 | 2.034 | 10.169 | 48.041 | |
| ITEM 3 | 0.66 | 1.186 | 5.931 | 53.972 | |
| ITEM 4 | 0.59 | 1.018 | 5.088 | 61.060 | |
| ITEM 5 | 0.67 | 0.860 | 4.302 | 63.362 | |
| ITEM 6 | 0.66 | 0.757 | 3.787 | 67.149 | |
| ITEM 7 | 0.58 | 0.736 | 3.682 | 70.831 | 0.712 |
| ITEM 8 | 0.35 | 0.679 | 3.396 | 74.227 | |
| ITEM 9 | 0.77 | 0.649 | 3.245 | 77.472 | |
| ITEM 10 | 0.80 | 0.588 | 2.938 | 80.410 | |
| ITEM 11 | 0.79 | 0.557 | 2.787 | 83.197 | |
| ITEM 12 | 0.70 | 0.493 | 2.466 | 85.663 | |
| ITEM 13 | 0.70 | 0.470 | 2.351 | 88.014 | |
| ITEM 14 | 0.75 | 0.438 | 2.191 | 90.205 | |
| ITEM 15 | 0.73 | 0.408 | 2.039 | 92.244 | |
| ITEM 16 | 0.51 | 0.387 | 1.935 | 94.179 | |
| ITEM 17 | 0.67 | 0.318 | 1.589 | 95.768 | |
| ITEM 18 | 0.67 | 0.304 | 1.522 | 97.290 | |
| ITEM 19 | 0.70 | 0.287 | 1.433 | 98.723 | |
| ITEM 20 | 0.53 | 0.255 | 1.277 | 100.000 | |
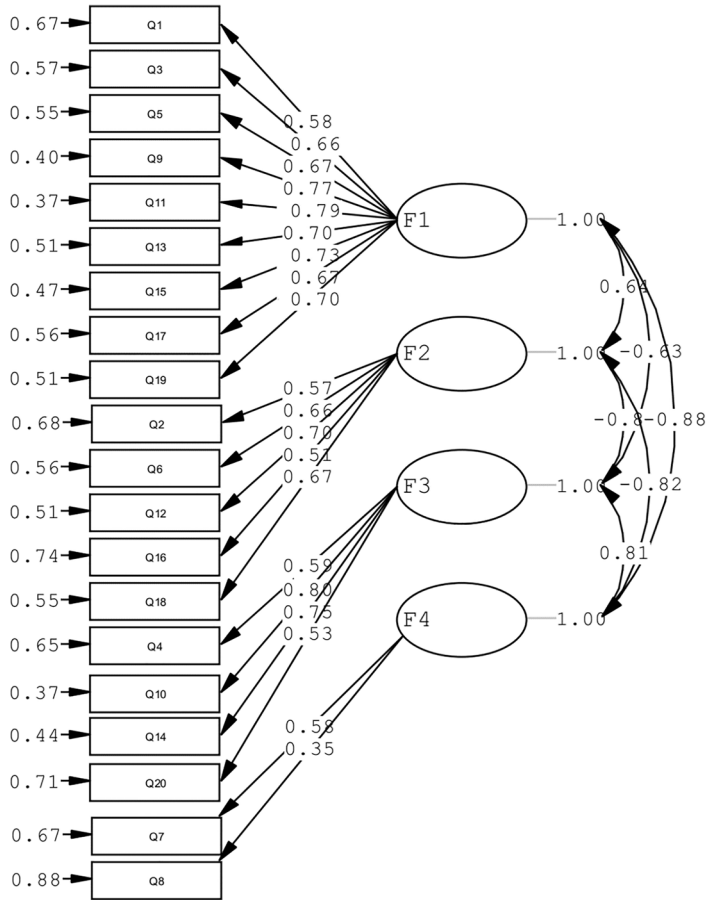
Chi-Square=469.31, df=163, P-value=0.000, RMSEA=0.078

**Fig. 2** Measurement model of SWBS among Iranian older adults

the findings of (Gouveia et al., 2012), who confirmed four factors in this scale, and contrast with (Darvyri et al., 2014), who confirmed three factors and (Musa & Pevalin, 2012) who confirmed two factors. One interpretation for these differences could be different cultural contexts for expressing spirituality (Utsey et al., 2005). (Musa, 2016) recognized the differences in the factor structure of SWBS in two different cultural and ethnic groups and confirmed (Bufford et al., 1991)'s notion of the

**Table 5** Confirmatory Factor Analysis (CFA) and Fit indexes

| model | RMSEA (CI 90%) | $_{sb}X^2$ | RMR | SRMR | CFI | NFI | IFI | RFI | AGFI | GFI |
|-------|----------------|-----------|-----|------|-----|-----|-----|-----|------|-----|
| 20 items | 0.078 (0.073 -0.083) | 469.31 | 0.19 | 0.065 | 0.95 | 0.94 | 0.95 | 0.93 | 0.81 | 0.85 |

*RMSEA* Root Mean Square Error of Approximation, *RMR* Root Mean Square Residual, *SRMR* Standardized RMR, *CFI* Comparative Fit Index, *NFI* Normed Fit Index, *IFI* Incremental Fit Index, *RFI* Relative Fit Index, *AGFI* Adjusted Goodness of Fit Index, *GFI* Goodness of Fit Index

**Table 6** Pearson correlation between SWBS with resiliency, DASS-21 subscales (depression, anxiety and stress) among participants (CFA sample, n = 508)

|  | F1 | F2 | F3 | F4 | SWBS Total |
|---|---|---|---|---|---|
| Resiliency | 0.39[**] | 0.32[**] | 0.28[**] | 0.26[**] | 0.42[**] |
| Stress | -0.33[**] | -0.36[**] | -0.31[**] | -0.24[**] | -0.37[**] |
| Anxiety | -0.37[**] | -0.41[**] | -0.33[**] | -0.29[**] | -0.41[**] |
| Depression | -0.48[**] | -0.45[**] | -0.41[**] | -0.33[**] | -0.54[**] |

$< 0.05$

**p $< 0.01$

ability of people in different cultures to use SWBS, resulting in different outcomes. (Martinez, 2019) also found that cultural context is a platform for spiritual perspectives and different spiritual perspectives in different ethnic groups. The cultural background of a society is also one factor that affects Due to the increase in mental health problems and the role of spiritual health in mental health, therapists have recently paid special attention to spiritual well-being in Iranian culture and highlighted the special place of spiritual well-being in Iranian culture (Nooripour et al., 2021). It should also be noted that just as spiritual beliefs vary among individuals, spiritual well-being also varies across cultural subgroups (Sharif et al., 2018).

In contrast to the research findings of (Soleimani et al., 2017) and (Malinakova et al., 2017) that some items did not meet the criteria, no changes were made in this questionnaire and based on the case analysis. No items were removed to clarify the desirable characteristics of this scale in older adults in Iran.

The four factors derived from the spiritual well-being scale of older adults in Iran are Relationship with God, Relationship with Life, Relationship with Good Feeling, and Relationship with Meaningful Living. Many older adults try to use religion to deal with existential issues, hope for the future, and cope with the fear of death (Koenig et al., 1997). In addition, older adults are more likely to turn to religion and a relationship with God to alleviate the problems associated with losing their health and finding meaning in life (Musick et al., 2000).

In terms of demographic characteristics, the findings of this study are consistent with the findings of (Bailly et al., 2018; Brown et al., 2013). Older adult women have higher spiritual well-being than men. Married older adults also had higher spiritual well-being than single and divorced individuals, consistent with the findings of (Anand et al., 2015). The relationship between the SWBS

**Table 7** Multiple regression analysis for prediction of Hope by subscales of SWBS. N = 508

|  | B | S. E | Beta | T | P | R | $R^2$ | F | P |
|---|---|---|---|---|---|---|---|---|---|
| Constant | 45.906 | 3.184 |  | 6.547 | 0.001 |  |  |  |  |
| F1 | 0.177 | 0.057 | 0.146 | 3.944 | 0.001 | 0.48 | 0.23 | 21.06 | 0.001 |
| F2 | 0.161 | 0.061 | 0.129 | 3.563 | 0.001 |  |  |  |  |
| F3 | 0.157 | 0.053 | 0.116 | 2.544 | 0.016 |  |  |  |  |
| F4 | 0.162 | 0.059 | 0.102 | 2.349 | 0.036 |  |  |  |  |

subscales and the DASS-21 scale was discriminant and negatively correlated with this scale. This is consistent with the research findings of (Chen et al., 2021; Solaimanizadeh et al., 2020), who found a negative correlation between SWBS and depression, anxiety, and stress. This is also in line with (Sharma et al., 2017), who found a negative correlation between depression and spiritual well-being.

Spiritual well-being plays a moderating role in the relationship between health-related problems and depression in older adults (Salman & Lee, 2019). Spiritual well-being may also be an important indicator of positive outcomes by controlling the destructive symptoms of depression that affect older adults' health (Bai & Lazenby, 2015; Lee & Salman, 2018). Spiritual beliefs, especially in acute and stressful situations, positively affect older adults' immune systems (You et al., 2019). A person whose spiritual well-being is threatened is vulnerable to disorders such as depression and loss of meaning in life, but a person with spiritual well-being can adapt to challenging conditions under the right circumstances (Niyazmand et al., 2018).

SWBS was assessed with resilience that there is convergent validity and a meaningful relationship with these scales. Following the results of (Duran et al., 2020; Kavak et al., 2021), there is a significant relationship between spiritual well-being and resilience. Increasing spiritual well-being as a valuable coping mechanism helps people deal with stressful situations, and it helps people make sense of pain, gain hope, and increase resilience (Manning et al., 2019).

Spiritual well-being leads to hope for the future and a search for meaning in life by providing structure through studying and interpreting life experiences and creating a sense of existential unity and cohesion. In the face of difficult circumstances, people resort to spiritual beliefs, making this dimension a determinant of meaning in life and a source of hope (Pepper et al., 2015).

In the present study, spiritual well-being plays a vital role in predicting the mortality of hope. The higher a person's spiritual level, the more hopeful they are in the face of life problems. The results of this study show that there is a positive relationship between spiritual well-being and hope in older adults, which is consistent with (Wu & Koo, 2016) that high spirituality is inversely related to individuals' hope. The findings of this study are consistent with the findings of (Abdolahrezaee et al., 2020; Espedal, 2021) that spiritual well-being is a factor in predicting hope in older adults. Hope has a supportive function for people during adverse events and is also associated with various mental and physical health conditions (Ciarrochi & Heaven, 2012).

Higher levels of hope are likely to lead to a more positive understanding of oneself and one's surroundings (Goldzweig et al., 2017). Spiritual well-being can influence other aspects of older people's lives. It is based on physical, psychological, social, and spiritual awareness, and a change in one dimension can lead to a change in other dimensions. Spiritual well-being and its subscales (existential and religious well-being) help older adults find meaning in life. Looking at the activities older adults spend their time doing, and their programs for themselves, the extent and nature of substance use and its impact on older adults' mental health, and examining variations in spiritual well-being during the aging process may provide ideas for future generations research.

## Limitations and Suggestions

This is a cross-sectional study, so caution should be exercised in generalizing the results and future longitudinal studies. Self-report instruments are one of the limitations of this study that could help people who care for (or live with) older adults complete the questionnaire. Study with other psychological variables, re-conduct this study considering the older adults' occupational status (working or retired) before retirement, economic factor, educational level, and place of residence (whether urban or rural), including suggestions for future research. This study was conducted with older adults living at home. It is suggested that future research studies could be conducted on older adults living in nursing homes and compare the outcomes of the two groups. Another suggestion is to study existential and religious well-being in different cultures. In future research, SWBS can assess the spiritual well-being of older adults in different settings and cultures.

## Conclusion

The results of the present study indicate that the SWBS can be used as a complementary instrument to assess changes in psychological well-being in older adults. The SWBS can be used as a valid and reliable instrument to examine and assess psychological well-being in older adults. This instrument and other psychological assessment tools provide a suitable platform for psychologists, clinicians, and researchers involved in aging and geriatrics for further research and practice activities. In general, the analysis of behaviors associated with spiritual well-being in older adults is not accurate regardless of sociocultural context. Therefore, addressing this topic may help this population to promote their health and spiritual well-being.

**Data Availability Statement** The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Ethical Considerations** This study was conducted with the permission of Alzahra University. All research procedures involving human subjects met the ethical standards of the 1964 Declaration of the National Research Committee of Helsinki, subsequent revisions, or equivalent ethical standards. Because elements of informed consent were included in the Internet invitation, participants provided implied consent when they returned the survey.

**Patient Consent** Before inclusion, all participants signed informed consent forms.

**Conflict of Interests** None.

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