

## Validation of the Japanese version of the Spiritual Health and Life-Orientation Measure (SHALOM) among nursing students

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### ABSTRACT

The Spiritual Health and Life-Orientation Measure (SHALOM) assesses spiritual well-being (SWB) across four relational domains by comparing ideal and lived states. The aim of this study was to develop and validate the Japanese version of SHALOM among university nursing students. A cross-sectional survey was conducted among 213 undergraduate nursing students at two universities in Japan. Reliability was evaluated using Cronbach's  $\alpha$  and test–retest reliability with intraclass correlation coefficients (ICCs). Construct validity was examined through exploratory factor analysis, concurrent validity through correlations with the Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp-Non-Illness), and known-groups validity by comparing SHALOM scores between students with high and low self-esteem based on the Rosenberg Self-Esteem Scale–Japanese version. Cronbach's  $\alpha$  ranged from 0.79 to 0.90, and ICCs ranged from 0.67 to 0.78. Exploratory factor analysis supported a four-domain structure, although one environmental item (“magic in the environment”) loaded on the transcendental domain, and one personal item (“inner peace”) loaded on the communal domain. Correlations with the FACIT-Sp-Non-Illness were as follows: total  $r = 0.45$ , personal  $r = 0.59$ , communal  $r = 0.45$ , environmental  $r = 0.25$ , and transcendental  $r = 0.09$ . Students with higher self-esteem showed significantly higher personal and communal SHALOM scores. These findings provide preliminary support for the reliability and validity of the Japanese SHALOM. The measure may offer a culturally adaptable, non-religious framework for assessing SWB in nursing education and practice.

**Keywords:** spiritual well-being, spirituality, nursing students, instrument validation, SHALOM

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### INTRODUCTION

Spiritual well-being (SWB) is a state of health characterized by a sense of meaning, purpose, and inner harmony derived from relationships with self, others, the environment, and a transcendent reality.<sup>1</sup> Since the World Health Organization (WHO) proposed including spirituality in its

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definition of health,<sup>2</sup> SWB has gained recognition as a determinant of mental health and quality of life, particularly in palliative and chronic care settings. The National Interfaith Coalition on Aging defined SWB as “the affirmation of life in relationship with God, self, community, and environment that nurtures and celebrates wholeness.”<sup>3</sup> Fisher later conceptualized SWB as harmony across four domains—personal, communal, environmental, and transcendental—viewing spiritual health as the integration of all dimensions of human well-being.<sup>1</sup> Despite conceptual progress, measuring SWB remains challenging because spirituality is culturally shaped and personally defined. Existing instruments often emphasize religion or inner peace while neglecting communal or ecological dimensions. For example, the Spiritual Well-Being Scale consists of Existential and Religious subscales,<sup>4</sup> limiting its applicability to non-religious populations. Other instruments, such as the Spiritual Orientation Inventory,<sup>5</sup> the Spiritual Inventory,<sup>6</sup> and the Mental, Physical and Spiritual Well-being Scale,<sup>7</sup> partially address meaning and interpersonal relationships but omit environmental aspects. The Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp-Non-Illness) includes Meaning/Peace and Faith factors yet remains limited to a two-factor structure, which does not sufficiently capture broader dimensions of spirituality such as environmental connectedness or communal relationships.<sup>8</sup> Japanese spirituality-related instruments such as the World Health Organization Quality of Life–Spiritual, Religious, and Personal Beliefs module (WHOQOL-SRPB) face cultural constraints due to limited discussion of religion in Japan.<sup>2</sup>

Fisher’s Spiritual Well-Being Questionnaire (SWBQ) and its successor, the Spiritual Health and Life-Orientation Measure (SHALOM), address these limitations by assessing spirituality across four relational domains.<sup>1,9</sup> SHALOM uniquely compares ideal (desired) and lived (experienced) states, capturing harmony or dissonance between spiritual values and everyday life. This dynamic framework has been validated in multiple countries and contexts.<sup>10</sup> Given Japan’s cultural distinctiveness and the growing need for assessment tools applicable to nursing education and practice, we aimed to develop and validate the Japanese version of SHALOM and examine its reliability and validity among university nursing students.

## MATERIALS AND METHODS

### *Setting*

The study was conducted at two universities in Aichi Prefecture, a major industrial and academic hub in central Japan: a national university with a nursing major and a private nursing college.

### *Participants*

Participants were undergraduate nursing students aged 18 years or older from all academic years. Students who were unable to attend the explanation session or provide informed consent were excluded.

### *Data collection procedures*

An anonymous, self-administered questionnaire was distributed after classroom explanations between April and August 2024. Students returned their responses within five days. For the test–retest reliability assessment, a second survey was administered one week later to second- and third-year students. Participants created an eight-character identification code, which was used to anonymously match their first and second responses.

### Measures

**SHALOM.** This tool comprises 20 items across four domains—personal, communal, environmental, and transcendental—each rated twice: the ideal state (Life Orientation Measure, LOM) and the lived state (Spiritual Health Measure, SHM) on a 5-point Likert scale (1 = very low to 5 = very high). Two additional items assess the perceived importance of religion and spirituality. A discrepancy of  $\geq 1.0$  point between ideal and lived domain mean scores indicates “dissonance.”

The translation followed a forward–backward procedure with permission from the scale developer, Professor John W. Fisher. Two bilingual researchers translated the items, a separate translator performed a back-translation, and the author confirmed accuracy. A pilot test with 10 adults verified clarity.

**FACIT-Sp-Non-Illness.** This is a 12-item questionnaire that assesses two domains—Meaning/Peace and Faith—on a 5-point Likert scale. Higher scores indicate greater SWB. The Japanese version developed by Irie et al was used to assess concurrent validity.<sup>11</sup>

**Rosenberg Self-Esteem Scale.** The Rosenberg Self-Esteem Scale–Japanese version (RSES-J) comprises 10 items rated on a 4-point scale,<sup>12</sup> with higher scores reflecting stronger self-acceptance. Participants were classified into high and low self-esteem groups based on upper and lower score quartiles, and these groups were used to examine known-groups validity.

### Data analysis

All analyses were conducted using JMP Pro 17 (JMP Statistical Discovery).

In this study, psychometric evaluation was conducted using the lived-state (SHM) scores rather than the ideal-state (LOM) scores. Although SHALOM assesses both ideal and lived dimensions of SWB, the construct of SWB is defined as the state actually experienced in daily life. Therefore, the lived-state scores were considered the most appropriate for evaluating reliability and validity.

The ideal-state scores represent personal values or aspirational standards and serve as a reference framework rather than a direct measure of current SWB. Previous studies have consistently used lived-state scores when examining internal consistency and construct validity of SHALOM.

Furthermore, the discrepancy between ideal and lived scores (Lived–Ideal gap) is conceptually interpreted as an indicator of spiritual dissonance and is analyzed separately from psychometric validation.

This approach is consistent with the original conceptualization of SHALOM, in which lived experience represents the operationalized form of SWB. This approach is also consistent with previous validation studies conducted in different cultural contexts, which have used lived-state scores to evaluate the psychometric properties of SHALOM.<sup>10,13</sup>

**Construct validity.** Descriptive statistics were calculated for all items to examine score distributions and potential ceiling or floor effects, defined as  $(\text{mean} + \text{SD}) > 5$  and  $(\text{mean} - \text{SD}) < 1$ , respectively. Exploratory factor analysis (EFA) was then performed using the maximum likelihood estimation method with Promax rotation to verify the factor structure of the Japanese SHALOM. The number of factors was determined using eigenvalues  $\geq 1.0$  and the scree plot. Structural validity was evaluated using the following criteria<sup>14</sup>: factor loadings  $\geq 0.40$ , communalities  $\geq 0.30$ , and inter-factor correlations between 0.30 and 0.70, which were considered desirable levels.<sup>15</sup> Items with factor loadings below 0.40 were considered for exclusion; however, all items were retained because the overall factor structure was theoretically interpretable and consistent with Fisher’s conceptual model. Based on EFA results, a four-factor structure consistent with the original SHALOM was identified. Subsequent reliability and validity analyses were therefore conducted using this original four-domain configuration in accordance with Fisher’s conceptual model.

**Concurrent validity.** To assess concurrent validity, Pearson’s correlation coefficients were

calculated between each SHALOM domain score and the total and subscale scores (Meaning/Peace, Faith) of the FACIT-Sp-Non-Illness. Correlations of  $r \geq 0.30$  were regarded as moderate or higher and indicative of adequate validity.<sup>15</sup>

**Known-groups validity.** Participants were classified into two groups based on total scores of the RSES-J: a “high self-esteem” group ( $\geq 29$  points, upper quartile) and a “low self-esteem” group ( $\leq 23$  points, lower quartile). Independent-samples *t*-tests (two-tailed,  $\alpha = 0.05$ ) were conducted to compare mean SHALOM domain scores between the two groups. Effect sizes were calculated using Cohen’s *d* to evaluate the magnitude of differences between groups. Effect sizes were interpreted as small (0.20), medium (0.50), and large (0.80).

**Reliability.** Item discrimination was examined using item–total (IT) correlations, with  $r \geq 0.30$  considered acceptable.<sup>16</sup> Internal consistency for each SHALOM domain was assessed using Cronbach’s  $\alpha$ , with  $\alpha \geq 0.70$  regarded as satisfactory.<sup>17</sup> Test–retest reliability was evaluated by re-administering the SHALOM one week later to the same participants, and computing intraclass correlation coefficients (ICCs), Cohen’s kappa coefficients ( $\kappa$ ), and agreement rates (%). ICC  $\geq 0.75$  was considered good and ICC  $\geq 0.50$  moderate.<sup>18</sup> Interpretation of  $\kappa$  followed the classification by Landis and Koch,<sup>19</sup> with 0.61–0.80 indicating substantial agreement and 0.81–1.00 indicating almost perfect agreement.

### *Ethical considerations*

This study was approved by Bioethics Review Committee of Nagoya University Graduate School of Medicine (approval no. 23-113-2). All procedures involving human participants were conducted in accordance with the ethical standards of the institutional research committee and with Declaration of Helsinki (adopted in 1964 and amended in 2024). Written informed consent was obtained from all participants, and anonymity was ensured using identification codes.

## RESULTS

### *Participant characteristics*

Of 579 eligible students, 231 responded (39.8%), and 213 valid responses were analyzed (Table 1). Participants were predominantly female (96.7%). The majority were first- or second-year students (69.7%), had bereavement experience (63.4%), reported no specific religion (91.6%), and lived with family (75.6%).

**Table 1** Participant characteristics

|                           |                | N   | %    | M $\pm$ SD |
|---------------------------|----------------|-----|------|------------|
| Institution               | University 1   | 135 | 63.4 |            |
|                           | University 2   | 78  | 36.6 |            |
| Age $\pm$ SD              | 19.3 $\pm$ 1.2 |     |      |            |
| Gender                    | Female         | 206 | 96.7 |            |
| Academic                  | 1st year       | 82  | 38.5 |            |
|                           | 2nd year       | 65  | 30.5 |            |
|                           | 3rd year       | 24  | 11.3 |            |
|                           | 4th year       | 40  | 18.8 |            |
| Experience of bereavement | Yes            | 135 | 63.4 |            |

|                       |                 |     |              |
|-----------------------|-----------------|-----|--------------|
| Religious affiliation | Yes             | 19  | 8.9          |
| Type of religion      | Christianity    | 2   | 10.5         |
|                       | Buddhism/Shinto | 14  | 73.7         |
|                       | Other           | 1   | 5.3          |
| Degree of religiosity | None (1–2)      | 89  | 41.8         |
|                       | Moderate (3–5)  | 78  | 36.6         |
|                       | Strong (6–7)    | 7   | 3.3          |
| Living with family    | Yes             | 161 | 75.6         |
| FACIT-Sp-Non-Illness  |                 |     | 27.75 ± 9.19 |
| RSES-J                |                 |     | 26.37 ± 4.65 |

FACIT-Sp-Non-Illness: Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being  
RSES-J: Rosenberg Self-Esteem Scale–Japanese version

For test–retest survey, 150 questionnaires were distributed, and 35 responses were returned (23.3%). After excluding responses with missing values or unmatched ID codes, 29 valid paired responses were analyzed (valid response rate, 82.8%).

#### Construct validity

EFA using maximum likelihood estimation and Promax rotation was conducted. The scree plot and eigenvalues  $\geq 1.0$  supported a four-factor structure. Bartlett’s test of sphericity was significant ( $\chi^2 = 2191.93$ ,  $df = 184.50$ ,  $p < .0001$ ), confirming data adequacy for factor analysis. The cumulative contribution rate was 63.73%. Except for two items (Items 5 and 9), all factor loadings exceeded 0.40, indicating adequate item–factor associations. Most items loaded onto their expected domains (personal, communal, environmental, and transcendental; Table 2). Two deviations from the original factor structure were observed: “sense of magic in the environment” loaded on the transcendental factor instead of the environmental factor, and “inner peace” loaded on the communal factor rather than the personal factor.

**Table 2** Factor loadings and communalities of the Japanese version of SHALOM (n = 213)

| Lived experience |    |                              |             |             |       |                    |      |
|------------------|----|------------------------------|-------------|-------------|-------|--------------------|------|
| Domain-item no.  |    | Factor loading               |             |             |       | Communi-<br>nality |      |
|                  |    | 1                            | 2           | 3           | 4     |                    |      |
| Personal         | 5  | Sense of identity            | <b>0.35</b> | 0.19        | 0.10  | −0.02              | 0.19 |
|                  | 9  | Self-awareness               | <b>0.34</b> | 0.33        | 0.11  | −0.06              | 0.25 |
|                  | 14 | Joy in life                  | <b>0.83</b> | 0.15        | −0.05 | −0.02              | 0.72 |
|                  | 16 | Inner peace                  | <b>0.17</b> | 0.61        | −0.04 | −0.02              | 0.42 |
|                  | 18 | Meaning in life              | <b>0.62</b> | 0.11        | 0.10  | 0.06               | 0.39 |
| Communal         | 1  | Love of other people         | 0.21        | <b>0.45</b> | 0.10  | 0.05               | 0.28 |
|                  | 3  | Forgiveness toward others    | −0.10       | <b>0.65</b> | 0.10  | −0.06              | 0.45 |
|                  | 8  | Trust between individuals    | 0.09        | <b>0.68</b> | −0.01 | 0.06               | 0.47 |
|                  | 17 | Respect for others           | −0.03       | <b>0.78</b> | −0.04 | −0.01              | 0.61 |
|                  | 19 | Kindness toward other people | 0.00        | <b>0.80</b> | 0.01  | 0.01               | 0.64 |

|                     |    |                                           |       |       |             |             |      |
|---------------------|----|-------------------------------------------|-------|-------|-------------|-------------|------|
| Environ-<br>mental  | 4  | Connection with nature                    | 0.12  | 0.10  | <b>0.58</b> | 0.07        | 0.37 |
|                     | 7  | Awe at a breathtaking view                | −0.03 | 0.11  | <b>0.51</b> | 0.06        | 0.29 |
|                     | 10 | Oneness with nature                       | 0.00  | −0.06 | <b>0.88</b> | −0.02       | 0.78 |
|                     | 12 | Harmony with the environment              | 0.11  | 0.06  | <b>0.54</b> | 0.02        | 0.31 |
|                     | 20 | Sense of ‘magic’ in the environment       | −0.06 | −0.01 | <b>0.34</b> | 0.48        | 0.35 |
| Transcen-<br>dental | 2  | Personal relationship with the Divine/God | 0.02  | 0.13  | −0.15       | <b>0.87</b> | 0.79 |
|                     | 6  | Worship of the Creator                    | −0.03 | 0.04  | −0.09       | <b>0.89</b> | 0.80 |
|                     | 11 | Oneness with God                          | −0.11 | 0.01  | 0.14        | <b>0.79</b> | 0.64 |
|                     | 13 | Peace with God                            | −0.02 | −0.08 | 0.24        | <b>0.73</b> | 0.63 |
|                     | 15 | Prayer life                               | 0.19  | −0.15 | −0.06       | <b>0.74</b> | 0.59 |

Exploratory factor analysis was conducted using the maximum likelihood extraction method with Promax rotation.

SHALOM: Spiritual Health and Life-Orientation Measure

**Table 3** Validity analyses of the Japanese version of SHALOM

| (A) Inter-factor correlations                               |                            |                           |               |                  |
|-------------------------------------------------------------|----------------------------|---------------------------|---------------|------------------|
| Domain                                                      | Personal                   | Communal                  | Environmental | Transcendental   |
| Personal                                                    | 1.00                       |                           |               |                  |
| Communal                                                    | 0.71                       | 1.00                      |               |                  |
| Environmental                                               | 0.41                       | 0.38                      | 1.00          |                  |
| Transcendental                                              | 0.14                       | 0.16                      | 0.54          | 1.00             |
| Total                                                       | 0.74                       | 0.73                      | 0.79          | 0.67             |
| (B) Correlations between SHALOM and FACIT-Sp-Non-Illness    |                            |                           |               |                  |
| Domain                                                      | Total                      | Meaning/Peace             | Faith         |                  |
| Personal                                                    | 0.59                       | 0.60                      | 0.45          |                  |
| Communal                                                    | 0.45                       | 0.43                      | 0.41          |                  |
| Environmental                                               | 0.25                       | 0.21                      | 0.26          |                  |
| Transcendental                                              | 0.09                       | 0.05                      | 0.16          |                  |
| Total                                                       | 0.45                       | 0.42                      | 0.42          |                  |
| (C) Comparison of SHALOM domain scores by self-esteem level |                            |                           |               |                  |
| Domain                                                      | High (n = 67)<br>Mean ± SD | Low (n = 52)<br>Mean ± SD | p-value       | Cohen’s <i>d</i> |
| Personal                                                    | 3.92 ± 0.62                | 3.05 ± 0.76               | <.0001        | 1.23             |
| Communal                                                    | 4.04 ± 0.59                | 3.50 ± 0.79               | <.0001        | 0.79             |
| Environmental                                               | 2.93 ± 0.70                | 2.77 ± 0.77               | .23           | 0.22             |
| Transcendental                                              | 1.88 ± 0.88                | 2.19 ± 0.82               | .05           | −0.36            |

SHALOM: Spiritual Health and Life-Orientation Measure

FACIT-Sp-Non-Illness: Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being

Despite these minor deviations, the overall factor pattern supported the theoretical four-domain model. Therefore, subsequent reliability and validity analyses were conducted using the original SHALOM domain structure in accordance with Fisher's conceptual framework and previous validation studies.

Inter-factor correlations based on the original four-domain structure were generally moderate, supporting the distinct yet related nature of these domains (Table 3).

#### *Concurrent validity*

Correlations with the FACIT-Sp-Non-Illness were as follows: total  $r = 0.45$ , personal  $r = 0.59$ , communal  $r = 0.45$ , environmental  $r = 0.25$ , and transcendental  $r = 0.09$ .

Correlations between SHALOM domains and the Meaning/Peace subscale were  $r = 0.60$  (personal),  $r = 0.43$  (communal),  $r = 0.21$  (environmental), and  $r = 0.05$  (transcendental).

Correlations with the Faith subscale were  $r = 0.45$  (personal),  $r = 0.41$  (communal),  $r = 0.26$  (environmental), and  $r = 0.16$  (transcendental).

#### *Known-groups validity*

Students with high self-esteem had significantly higher personal and communal scores ( $p < .0001$ ) and slightly higher transcendental scores ( $p = .05$ ). Environmental scores did not differ significantly ( $p = .23$ ).

#### *Reliability*

IT correlations ranged from  $r = 0.46$  to  $0.65$ , indicating adequate item discrimination (Table 4). Cronbach's  $\alpha$  values were  $0.89$  (total),  $0.81$  (personal),  $0.82$  (communal),  $0.78$  (environmental), and  $0.90$  (transcendental). ICCs ranged from  $0.67$  to  $0.78$ . Agreement rates ranged from  $20.7\%$ – $72.4\%$  (Table 5).

**Table 4** Internal consistency and discrepancy between ideal and lived spiritual well-being scores (n = 213)

| Domain-item no.                 | Ideals          |                           |          | Lived experience |                           |          | Dissonance<br>n (%) |
|---------------------------------|-----------------|---------------------------|----------|------------------|---------------------------|----------|---------------------|
|                                 | Mean $\pm$ SD   | Item-total<br>correlation | $\alpha$ | Mean $\pm$ SD    | Item-total<br>correlation | $\alpha$ |                     |
| Personal                        | 4.44 $\pm$ 0.59 | –                         |          | 3.51 $\pm$ 0.69  | –                         |          |                     |
| 5 Sense of identity             | 4.37 $\pm$ 0.77 | 0.44                      | 0.83     | 3.36 $\pm$ 0.88  | 0.56                      | 0.81     | 102 (47.8)          |
| 9 Self-awareness                | 4.32 $\pm$ 0.80 | 0.69                      |          | 3.50 $\pm$ 0.83  | 0.63                      |          |                     |
| 14 Joy in life                  | 4.56 $\pm$ 0.70 | 0.42                      |          | 3.67 $\pm$ 1.00  | 0.38                      |          |                     |
| 16 Inner peace                  | 4.55 $\pm$ 0.72 | 0.61                      |          | 3.61 $\pm$ 0.89  | 0.61                      |          |                     |
| 18 Meaning in life              | 4.38 $\pm$ 0.83 | 0.52                      |          | 3.40 $\pm$ 0.98  | 0.45                      |          |                     |
| Communal                        | 4.50 $\pm$ 0.48 | –                         |          | 3.76 $\pm$ 0.66  | –                         |          |                     |
| 1 Love of other people          | 4.49 $\pm$ 0.64 | 0.65                      | 0.76     | 3.69 $\pm$ 0.89  | 0.58                      | 0.82     | 79 (37.0)           |
| 3 Forgiveness toward others     | 4.38 $\pm$ 0.70 | 0.62                      |          | 3.65 $\pm$ 0.78  | 0.53                      |          |                     |
| 8 Trust between individuals     | 4.42 $\pm$ 0.70 | 0.43                      |          | 3.57 $\pm$ 0.96  | 0.53                      |          |                     |
| 17 Respect for others           | 4.57 $\pm$ 0.65 | 0.52                      |          | 3.91 $\pm$ 0.87  | 0.50                      |          |                     |
| 19 Kindness toward other people | 4.65 $\pm$ 0.59 | 0.70                      |          | 3.97 $\pm$ 0.79  | 0.63                      |          |                     |

|                                             |             |      |      |             |      |      |           |
|---------------------------------------------|-------------|------|------|-------------|------|------|-----------|
| Environmental                               | 3.68 ± 0.78 | –    |      | 2.90 ± 0.69 | –    |      |           |
| 4 Connection with nature                    | 4.06 ± 0.87 | 0.69 |      | 3.13 ± 0.93 | 0.62 |      |           |
| 7 Awe at a breathtaking view                | 3.68 ± 1.03 | 0.67 |      | 3.09 ± 1.02 | 0.54 |      |           |
| 10 Oneness with nature                      | 3.61 ± 0.96 | 0.71 | 0.83 | 2.82 ± 0.88 | 0.65 | 0.78 | 80 (37.5) |
| 12 Harmony with the environment             | 3.84 ± 0.97 | 0.57 |      | 2.94 ± 0.84 | 0.57 |      |           |
| 20 Sense of 'magic' in the environment      | 3.20 ± 1.17 | 0.61 |      | 2.50 ± 1.03 | 0.52 |      |           |
| Transcendental                              | 2.62 ± 1.04 | –    |      | 2.04 ± 0.83 | –    |      |           |
| 2 Personal relationship with the Divine/God | 2.76 ± 1.19 | 0.52 |      | 2.15 ± 1.01 | 0.46 |      |           |
| 6 Worship of the Creator                    | 2.58 ± 1.17 | 0.47 | 0.93 | 2.01 ± 0.93 | 0.43 | 0.90 | 52 (24.4) |
| 11 Oneness with God                         | 2.49 ± 1.15 | 0.59 |      | 1.92 ± 0.92 | 0.61 |      |           |
| 13 Peace with God                           | 2.67 ± 1.24 | 0.51 |      | 2.03 ± 1.03 | 0.50 |      |           |
| 15 Prayer life                              | 2.59 ± 1.15 | 0.68 |      | 2.09 ± 1.04 | 0.61 |      |           |
| Total                                       | –           | –    | 0.90 | –           | –    | 0.89 | –         |

**Table 5** Test–retest reliability of the Japanese version of SHALOM (n = 29)

| Domain-item no.                        | Time 1      | Time 2      |               |       | ICC (95% CI)     |
|----------------------------------------|-------------|-------------|---------------|-------|------------------|
|                                        | Mean ± SD   | Mean ± SD   | Agreement (%) | κ     |                  |
| Personal                               | 3.50 ± 1.02 | 3.51 ± 1.01 | 53.8          | 0.34  | 0.68 (0.42–0.83) |
| 5 Sense of identity                    | 3.28 ± 1.07 | 3.21 ± 0.94 | 48.3          | 0.30  |                  |
| 9 Self-awareness                       | 3.59 ± 0.95 | 3.69 ± 0.85 | 51.7          | 0.29  |                  |
| 14 Joy in life                         | 3.72 ± 1.00 | 3.52 ± 1.18 | 41.4          | 0.19  |                  |
| 16 Inner peace                         | 3.62 ± 1.01 | 3.59 ± 0.91 | 65.5          | 0.50  |                  |
| 18 Meaning in life                     | 3.31 ± 1.07 | 3.55 ± 1.12 | 62.1          | 0.47  |                  |
| Communal                               | 3.72 ± 0.90 | 3.78 ± 0.85 | 57.9          | 0.43  | 0.78 (0.59–0.89) |
| 1 Love of other people                 | 3.62 ± 0.90 | 3.83 ± 0.80 | 44.8          | 0.18  |                  |
| 3 Forgiveness toward others            | 3.59 ± 0.82 | 3.72 ± 0.80 | 58.6          | 0.33  |                  |
| 8 Trust between individuals            | 3.66 ± 0.97 | 3.76 ± 0.74 | 65.5          | 0.49  |                  |
| 17 Respect for others                  | 3.83 ± 0.93 | 3.76 ± 0.99 | 62.1          | 0.43  |                  |
| 19 Kindness toward other people        | 3.93 ± 0.88 | 3.83 ± 0.93 | 58.6          | 0.35  |                  |
| Environmental                          | 2.84 ± 0.98 | 2.55 ± 0.97 | 42.1          | 0.31  | 0.67 (0.41–0.83) |
| 4 Connection with nature               | 2.97 ± 0.91 | 3.03 ± 0.98 | 44.8          | 0.23  |                  |
| 7 Awe at a breathtaking view           | 3.21 ± 1.05 | 2.59 ± 1.02 | 20.7          | –0.06 |                  |
| 10 Oneness with nature                 | 2.76 ± 0.83 | 2.38 ± 0.86 | 37.9          | 0.06  |                  |
| 12 Harmony with the environment        | 2.93 ± 1.00 | 2.69 ± 0.93 | 62.1          | 0.45  |                  |
| 20 Sense of 'magic' in the environment | 2.34 ± 0.94 | 2.07 ± 0.84 | 44.8          | 0.21  |                  |



|                                             |             |             |      |      |                  |
|---------------------------------------------|-------------|-------------|------|------|------------------|
| Transcendental                              | 1.76 ± 0.86 | 1.77 ± 0.89 | 59.3 | 0.46 | 0.74 (0.52–0.87) |
| 2 Personal relationship with the Divine/God | 1.69 ± 0.76 | 1.76 ± 0.79 | 58.6 | 0.34 |                  |
| 6 Worship of the Creator                    | 1.79 ± 0.82 | 1.72 ± 0.84 | 65.5 | 0.46 |                  |
| 11 Oneness with God                         | 1.72 ± 0.80 | 1.66 ± 0.81 | 58.6 | 0.33 |                  |
| 13 Peace with God                           | 1.69 ± 0.81 | 1.72 ± 0.84 | 72.4 | 0.55 |                  |
| 15 Prayer life                              | 1.90 ± 1.11 | 2.00 ± 1.13 | 41.4 | 0.15 |                  |

SHALOM: Spiritual Health and Life-Orientation Measure

ICC: intraclass correlation coefficient

## DISCUSSION

### *Summary of key findings*

This study was conducted to develop and validate the Japanese version of SHALOM among university nursing students. The scale demonstrated acceptable reliability and multiple forms of validity, including structural, concurrent, and known-groups validity. EFA supported a four-domain structure largely consistent with the original SHALOM, with minor item shifts that did not affect the theoretical framework. Moderate correlations with FACIT-Sp-Non-Illness scores and higher scores among students with higher self-esteem further supported the scale's validity. These results indicate that the Japanese SHALOM is a practical and culturally adaptable instrument for assessing SWB in nursing education.

### *Structural validity*

EFA with Promax rotation produced a four-factor structure largely consistent with Fisher's original SHALOM framework. Most items loaded onto their expected domains—personal, communal, environmental, and transcendental—indicating good structural alignment. Although several items showed minor shifts in factor loadings, the theoretical four-domain structure remained intact; therefore, subsequent psychometric analyses were conducted using the original SHALOM configuration.

These item shifts may reflect cultural and linguistic nuances in how concepts such as “magic” and “inner peace” are interpreted in Japanese contexts. Cultural psychology suggests that differences in self–other boundaries across societies can influence how spiritual harmony and relational experiences are expressed.<sup>20</sup>

International validation studies have reported cultural variations in the factor structure of SHALOM. For example, the Lithuanian version identified a five-factor structure in the Lived Experience section, with partial redistribution of items across domains.<sup>13</sup> These recurring patterns suggest that such items are particularly sensitive to cultural interpretation, highlighting the contextual diversity of spiritual experience rather than undermining the conceptual model of SHALOM.

Although the four-factor structure was largely consistent with the original SHALOM framework, this finding should be interpreted as preliminary because confirmatory factor analysis (CFA) was not conducted. Future studies using CFA are required to further examine model fit and structural validity in the Japanese context.

### *Concurrent validity*

Personal and communal domains showed moderate correlations with Meaning/Peace, whereas environmental and transcendental domains showed weak associations. These differences likely

reflect conceptual differences between SHALOM, which includes ecological and non-religious transcendence, and the FACIT-Sp-Non-Illness, which does not.<sup>8,11</sup> Accordingly, SHALOM provides a more culturally inclusive assessment of spirituality. The weak correlations observed in the transcendental domain may reflect both conceptual differences between instruments and cultural characteristics of the Japanese population. In Japan, spirituality is often expressed in non-religious forms, and explicit references to the God or religious belief may not resonate with individuals who do not identify with a specific religion. In the present study, 91.6% of participants reported having no specific religion, which may have contributed to the low correlation with the faith component of the FACIT-Sp-Non-Illness. Therefore, the transcendental domain of SHALOM may capture broader existential or experiential aspects of spirituality that are not directly assessed by FACIT-Sp-Non-Illness.

#### *Known-groups validity*

Students with higher self-esteem experienced greater SWB, particularly in personal and communal domains. The weaker associations observed in the environmental and transcendental domains may reflect their theoretical independence from self-evaluative constructs such as self-esteem. These domains may represent broader perspectives, including ecological awareness and existential meaning, which are less directly related to individual self-perception.

#### *Reliability*

Cronbach's  $\alpha$  values and ICC results confirmed internal coherence and temporal stability, supporting the reliability of the Japanese SHALOM.

#### *Implications*

The Japanese SHALOM is suitable for evaluating SWB among nursing students and may support educational and clinical initiatives emphasizing meaning, relationships, and harmony with nature. Future studies should apply this measure to practicing nurses and clinical populations and conduct CFA to further strengthen structural validity.

#### *Limitations and future directions*

First, the response rate was 39.8%, comparable to those of previous studies on spirituality among university students. However, selective non-response cannot be excluded, and generalizability should be interpreted with caution.

Second, the study was conducted at two universities in a single prefecture, limiting generalizability. The sample consisted predominantly of young female students, and findings may not reflect the broader nursing population.

Third, concurrent validity was constrained by conceptual differences between SHALOM and the FACIT-Sp-Non-Illness.

Fourth, the test-retest reliability analysis was conducted with a relatively small subsample ( $n = 29$ ), which may limit the stability and generalizability of the reliability estimates.

Additionally, as CFA was not performed, evidence for the proposed factor structure should be considered preliminary.

Future research should employ CFA to further evaluate the structural validity of the Japanese SHALOM and test its applicability among practicing nurses, diverse age groups, and clinical populations. Longitudinal studies could also explore how SWB develops over time and in response to educational interventions.

### Conclusion

The results indicate that the Japanese SHALOM demonstrates preliminary evidence of acceptable psychometric properties and can be considered a useful instrument for assessing SWB among nursing students in Japan.

### CONFLICT OF INTEREST

The authors declare no conflicts of interest associated with this research.

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### REFERENCES

- 1 Fisher JW, Francis LJ, Johnson P. Assessing spiritual health via four domains of spiritual well-being: the SHALOM. *Pastoral Psychol.* 2000;49(2):133–145. doi:10.1023/A:1004609227002
- 2 World Health Organization. WHOQOL-SRPB field-test instrument: WHOQOL spirituality, religiousness and personal beliefs (SRPB) field-test instrument: the WHOQOL-100 questions plus 32 SRPB questions, 2012 revision. World Health Organization. 2002. Accessed June 10, 2026. <https://iris.who.int/handle/10665/77777>
- 3 National Interfaith Coalition on Aging. *Spiritual Well-Being: A Definition of Spiritual Well-Being*. National Interfaith Coalition on Aging; 1975.
- 4 Ellison CW. Spiritual well-being: conceptualization and measurement. *J Psychol Theol.* 1983;11(4):330–338. doi:10.1177/009164718301100406
- 5 Elkins DN, Hedstrom LJ, Hughes LL, Leaf JA, Saunders C. Toward a humanistic-phenomenological spirituality. *J Humanist Psychol.* 1988;28(4):5–18. doi:10.1177/0022167888284002
- 6 Kuhn CC. A spiritual inventory of the medically ill patient. *Psychiatr Med.* 1988;6(2):87–100.
- 7 Vella-Brodick DA, Allen FC. Development and psychometric validation of the Mental, Physical, and Spiritual Well-being Scale. *Psychol Rep.* 1995;77(2):659–674. doi:10.2466/pr0.1995.77.2.659
- 8 Peterman AH, Fitchett G, Brady MJ, Hernandez L, Cella D. Measuring spiritual well-being in people with cancer: the FACIT-Sp. *Ann Behav Med.* 2002;24(1):49–58. doi:10.1207/S15324796ABM2401\_06
- 9 Fisher J. The four domains model: connecting spirituality, health, and well-being. *Religions (Basel).* 2011;2(1):17–28. doi:10.3390/rel2010017
- 10 Gomez R, Fisher JW. Domains of spiritual well-being and validation of the Spiritual Well-Being Questionnaire. *Pers Individ Dif.* 2003;35(8):1975–1991. doi:10.1016/S0191-8869(03)00045-X
- 11 Irie W, Shiwaku H, Suzuki Y, Inoue Y, Aizumi I. Reliability and Validity of the Japanese Version of Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being–Non-Illness. Article in Japanese. *Tohoku Bunka Gakuen Univ Dept of Nurs J.* 2016;5(1):1–8.
- 12 Rosenberg M. *Society and the Adolescent Self-Image*. Princeton University Press; 1965.
- 13 Riklikienė O, Kaselienė S, Fisher JW. Translation and Validation of Spiritual Well-Being Questionnaire SHALOM in Lithuanian Language, Culture and Health Care Practice. *Religions.* 2018;9(5):156. doi:10.3390/rel9050156
- 14 Costello AB, Osborne J. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Pract Assess Res Eval.* 2005;10(10):Article7. doi:10.7275/jyj1-4868
- 15 Cohen J. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Lawrence Erlbaum Associates;

- 1988.
- 16 DeVellis RF. *Scale Development: Theory and Applications*. 4th ed. Sage Publications; 2017.
  - 17 Nunnally JC. *Psychometric theory*. 2nd ed. McGraw-Hill; 1978.
  - 18 Koo TK, Li MY. A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *J Chiropr Med*. 2016;15(2):155–163. doi:10.1016/j.jcm.2016.02.012
  - 19 Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 1977;33(1):159–174. doi:10.2307/2529310
  - 20 Markus HR, Kitayama S. Culture and the self: implications for cognition, emotion, and motivation. *Psychol Rev*. 1991;98(2):224–253. doi:10.1037/0033-295X.98.2.224