

The Spiritual Intelligence Self-Report Inventory (SISRI) Psychometric Scale Development and Preliminary Testing



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Abstract

A definition and model of spiritual intelligence have recently been proposed which satisfy traditional criteria for intelligence (see below). The purpose of the current study was to develop a self-report measure of this spiritual ability set. An original pool of 84 items was developed and tested in a sample of 619 university undergraduates. Internal consistency was found to be high. An exploratory factor analysis revealed 4 factors closely resembling the 4 proposed capacities of spiritual intelligence, supporting the model. Problematic items were removed from the original pool, resulting in a more stable 42-item Spiritual Intelligence Self-Report Inventory (SISRI). Future studies will examine construct validity and additional indicators of reliability.

Sample Characteristics

- 619 university students enrolled in undergraduate psychology courses.
- 488 females, 131 males
- Age Range: 17 to 59 years
- Mean Age = 22.53 years (SD = 5.5)
- All participants responded to the preliminary 84-item pool.
- Cases with missing data were deleted.

Results & Analyses

- Response distributions relatively normal (item means close to median response of 2). Skewness and kurtosis low for each item (problem items later removed).
- Inter-Item Correlations all below .80, indicating low redundancy of items.
- Cronbach's Alpha (internal reliability): .97 for all 84 original items.
- Multivariate Skewness: -.02; Multivariate Kurtosis: .02

Exploratory Factor Analysis (EFA)

Table 1. Factor loadings for select items.

| Item | F1 | F2 | F3 | F4 | F5 | F6 |
|---------|-------------|-------------|-------------|-------------|-------------|-------------|
| Item 1 | 0.58 | 0.19 | 0.08 | -0.05 | 0.21 | 0.19 |
| Item 2 | 0.43 | 0.22 | 0.25 | 0.19 | 0.10 | -0.02 |
| Item 3 | 0.46 | 0.24 | 0.19 | 0.19 | 0.83 | -0.01 |
| Item 4 | 0.21 | 0.82 | 0.26 | 0.24 | 0.30 | -0.23 |
| Item 5 | 0.71 | 0.14 | 0.09 | -0.02 | 0.24 | -0.11 |
| Item 6 | 0.12 | 0.17 | 0.28 | 0.44 | 0.22 | 0.07 |
| Item 7 | 0.75 | 0.08 | -0.06 | 0.02 | 0.13 | -0.01 |
| Item 11 | 0.16 | 0.19 | 0.16 | 0.17 | 0.60 | 0.08 |
| Item 17 | 0.50 | 0.17 | 0.04 | 0.10 | 0.15 | 0.42 |
| Item 19 | 0.12 | 0.74 | 0.03 | 0.11 | 0.22 | 0.11 |
| Item 22 | 0.04 | 0.89 | -0.02 | 0.11 | 0.20 | 0.09 |
| Item 25 | 0.27 | 0.31 | 0.15 | 0.58 | 0.33 | 0.04 |
| Item 26 | 0.62 | 0.10 | 0.06 | 0.04 | 0.05 | -0.12 |
| Item 28 | 0.19 | 0.64 | -0.01 | 0.13 | 0.31 | 0.15 |
| Item 29 | 0.15 | 0.24 | 0.08 | 0.17 | 0.87 | 0.03 |
| Item 31 | 0.23 | 0.82 | 0.13 | 0.08 | 0.26 | 0.22 |
| Item 33 | 0.02 | 0.30 | 0.14 | 0.67 | 0.10 | -0.04 |
| Item 34 | 0.14 | 0.88 | 0.02 | 0.14 | 0.14 | -0.13 |
| Item 35 | 0.08 | 0.17 | 0.42 | -0.01 | 0.47 | -0.22 |
| Item 36 | 0.22 | 0.35 | 0.07 | 0.13 | 0.58 | 0.00 |
| Item 37 | 0.73 | 0.15 | -0.07 | 0.11 | 0.09 | 0.01 |
| Item 38 | 0.53 | 0.30 | 0.06 | 0.39 | 0.23 | -0.03 |
| Item 39 | 0.59 | 0.24 | 0.07 | 0.10 | 0.22 | 0.07 |
| Item 42 | 0.15 | 0.75 | 0.08 | 0.21 | 0.24 | -0.08 |
| Item 43 | 0.23 | 0.74 | 0.03 | 0.14 | 0.18 | -0.06 |
| Item 46 | 0.16 | 0.13 | 0.14 | 0.83 | 0.87 | -0.02 |
| Item 47 | 0.11 | 0.71 | -0.04 | 0.16 | 0.09 | -0.04 |
| Item 48 | 0.31 | 0.31 | 0.09 | 0.63 | 0.19 | -0.10 |
| Item 54 | 0.23 | 0.25 | 0.10 | 0.21 | 0.83 | 0.08 |
| Item 55 | 0.15 | 0.71 | 0.02 | 0.21 | 0.27 | 0.04 |
| Item 56 | 0.16 | 0.24 | 0.07 | 0.67 | 0.06 | -0.04 |
| Item 59 | 0.74 | 0.10 | -0.03 | 0.19 | 0.17 | 0.07 |
| Item 63 | 0.23 | 0.34 | 0.10 | 0.22 | 0.82 | 0.03 |
| Item 65 | 0.10 | 0.76 | -0.07 | 0.17 | 0.16 | 0.13 |
| Item 70 | 0.53 | 0.07 | -0.11 | 0.12 | 0.16 | 0.13 |
| Item 74 | 0.16 | 0.20 | 0.12 | 0.56 | 0.30 | 0.03 |
| Item 78 | 0.45 | 0.24 | 0.11 | 0.21 | 0.81 | 0.01 |
| Item 79 | 0.20 | 0.29 | 0.04 | 0.22 | 0.81 | 0.05 |
| Item 80 | 0.18 | 0.21 | 0.08 | 0.14 | 0.85 | 0.04 |
| Item 81 | 0.09 | 0.06 | -0.03 | 0.50 | 0.26 | 0.19 |

Item / Factor Retention

- Factors 1, 2, 4, and 5 were retained, as these corresponded to the 4 proposed components of spiritual intelligence (CET, CSE, PMP, and TA, respectively).
- Factor 3 was removed, as all significant loadings were reverse-coded items. Due to apparent instability of these items, 12 of 13 reverse-coded items were removed.
- Factor 6 was removed, having only 3 significant yet theoretically unrelated items.
- In total, 42 items were retained for the final version of the SISRI.

Final Version of the SISRI



- Reduced pool of 42 items (CET x 12, PMP x 9, TA x 10, CSE x 11).
- Time commitment: 15-20 minutes.
- Provides a Total Spiritual Intelligence score, four subscale scores for CET, PMP, TA, and CSE, and a theoretical subscale of adaptive application.

Properties of the Reduced Item Pool

- Cronbach's Alpha: .95 for all items, .88 for CET, .87 for PMP, .89 for TA, and .96 for CSE.
- Average Inter-Item Correlation: .36 (between .35 and .60 for each subscale).
- EFA reveals 4-factor structure for reduced pool.

Discussion

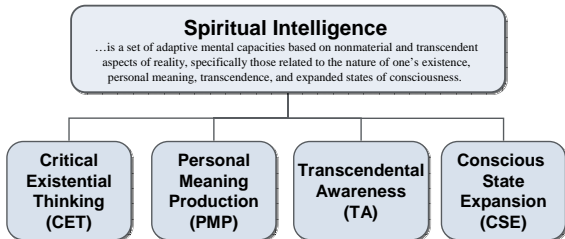
- Proposed model of spiritual intelligence was well-supported by this study.
- Subscales from final item pool were moderately intercorrelated (.52 to .67), supporting intelligence theory (i.e., an intelligence should comprise moderately interrelated capacities).
- Contemplating meaning/purpose is distinct from deriving meaning/purpose.
- Awareness of interconnectedness may be an 'epi-capacity' evolving from high transcendental awareness and high personal meaning production.

What's Next?

- Confirmatory factor analysis in a second sample of 200-300 participants.
- Construct validity by relating SISRI to measures of spirituality, spiritual well-being, meaning, mystical experiences, life satisfaction, emotional intelligence, IQ, and intrinsic/extrinsic religiosity.
- Testing the utility of the SISRI in a community-dwelling sample of adults and in samples of individuals expected to be high in spiritual intelligence (e.g., Buddhist monks, TM groups, nuns).

References

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Purpose of this Study

The purpose of this study was two-fold: (1) to develop a self-report measure of spiritual intelligence and (2) to test the model's factor structure. Although some authors have claimed that spiritual intelligence cannot be quantified using self-report measures (e.g., Emmons, 2000a; Wolman, 2001; Zohar & Marshall, 2000), others (e.g., Halama & Strizenc, 2004) claim that pre-existing measures of spirituality are already tapping aspects of spiritual intelligence. Recently, two other scales have been proposed (Amram & Dryer, 2007; Nasel, 2004), but it is argued that these are less direct/valid measures of spiritual intelligence.

Scale Development

- Accurate conceptualization and operationalization of target construct based on the above model of spiritual intelligence.
- Original pool of 84 items developed based on theoretical conception.
- 5-point likert scale, from "Not at all true of me" to "Completely true of me."
- Included 13 reverse-coded items.
- Original item pool reviewed by 30 students and professors for readability.