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Examining whether spirituality predicts subjective well-being: How to avoid tautology

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Running head: Spiritual well-being predicts well-being: a tautology?
Abstract

Spirituality may help people to maintain a high level of well-being despite adversity, but several studies that claim to support this statement have used spirituality scales and outcome measures that have overlapping content. This practice seems to be widespread: In an exploratory survey of eight well-cited journals we found that 26 of 58 studies used a spirituality scale that contains 25% or more of well-being items to examine whether spirituality predicts well-being or distress. These spirituality questionnaires would be more appropriate for use as indicators of the domain of quality of life called spiritual well-being. We urge researchers to only use spirituality questionnaires of which less than 25% of the items refer to emotional well-being – such as the SWB Questionnaire or the Spiritual Attitude and Involvement List - when investigating the causal relationship between spirituality and emotional well-being.

Keywords: spirituality; questionnaire; well-being; distress
Spirituality is an important part of the lives of many people. It involves beliefs about the meaning of events and about what is of value in life. Spirituality remains difficult to precisely define, but there is general agreement that it refers to a connection with a larger reality that gives one’s life meaning, experienced through a religious tradition or, increasingly in secular Western culture, through meditation, nature, or art (Peteet & Balboni, 2013). Most definitions emphasize the overlap between spirituality and religion. We define spirituality as “one’s striving for and experience of connection with the essence of life” (de Jager Meezenbroek et al., 2012a, p. 142), which encompasses three main dimensions: connectedness with oneself, connectedness with others and nature, and connectedness with the transcendent. The term ‘transcendence’ may, but does not necessarily, represent God. This definition concurs with literature on non-theistic spirituality. For example, the National Interfaith Coalition on Aging (National Interfaith Coalition on Aging, 1975) described spirituality as the affirmation of life in a relationship with the self, community, environment and God; a working definition that emerged from several meetings with representatives from various religions. Several reviews have also asserted that connectedness is a predominant theme in definitions of spirituality (Chiu, Emblen, van Hofwegen, Sawatzky, & Meyerhoff, 2004; Dyson, Cobb, & Forman, 1997).

Spirituality is related with higher well-being, as has been shown in several reviews and meta-analyses (Ano & Vasconcelles, 2005; George, Larson, Koenig, & McCullough, 2000; Hackney & Sanders, 2003; Sawatzky, Ratner, & Chiu, 2005; Smith, McCullough, & Poll, 2003; Visser, Garssen, & Vingerhoets, 2010; Yonker, Schnabelrauch, & Dehaan, 2012). The findings of these reviews and meta-analyses
may give the impression it has been proven beyond doubt that spirituality contributes to a sense of well-being. However, most of the studies included in these reviews and meta-analyses have used a cross-sectional design. Longitudinal studies may provide indications for the existence of causal relationships, but so far they have shown mixed findings (Visser et al., 2010).

Another problem in this area of research is that several studies have used spiritual well-being (SWB) scales to test the effect of spirituality on well-being. This problem is the focus of the present paper. According to Gomez and Fisher SWB can be defined in terms of a state of being that reflects positive feelings, behaviors, and cognitions of relationships with oneself, others, the transcendent and nature. This state of being provides the individual with a sense of identity, wholeness, satisfaction, joy, contentment, beauty, love, respect, positive attitudes, inner peace and harmony, and purpose and direction in life (Gomez & Fisher, 2003). So on a conceptual level there is considerable overlap between SWB and emotional well-being (EWB). This makes SWB scales suitable for use as outcome variables. However, if an SWB scale is used to assess a person’s level of spirituality in order to predict his/her level of EWB from this, then the content overlap between the questionnaires will artificially increase the strength of the association.

We do not dispute that SWB is a concept that has theoretical meaning within the well-being framework. There are also numerous situations in which it is important to determine whether a person experiences peace, comfort, strength, satisfaction, etc. within or from their spirituality. For example, when a mental health professional wants to determine whether it would be appropriate to include a person’s spirituality in a psychological intervention, or when one tries to determine
whether a person experiences religious struggle (which would be the opposite of SWB). However, when examining whether a causal relationship exists between two concepts it is of the utmost methodological importance that the measurement instruments that are used to assess the concepts are unique. Otherwise, it is impossible to determine the effect of, in this case, spirituality on emotional well-being, because the conceptual overlap would cause inflation in the strength of the relationship.

Our concern has been expressed before (Garssen, Visser, & de Jager Meezenbroek, 2012a; Garssen, Visser, & de Jager Meezenbroek, 2012b; Kapuscinski & Masters, 2010; Koenig, 2008; Migdal & MacDonald, 2013; Tsuang, Simpson, Koenen, Kremen, & Lyons, 2007; Visser et al., 2010), and most sharply by Koenig, who wrote: “[Spirituality scales] are heavily contaminated with questions assessing positive character traits or mental health: optimism, forgiveness, gratitude, meaning and purpose in life, peacefulness, harmony, and general well-being. Spirituality, measured by indicators of good mental health, is found to be correlated with good mental health. This research has been reported in some of the world's top medical journals. Such associations are meaningless and tautological” (Koenig, 2008, p. 349). However, we are under the impression that, despite Koenig’s warning, the practice is still widespread. Therefore, the purpose of this paper is not only to make the readers aware once again that the problem exists, as we have done above, but also to provide guidelines on which spirituality or SWB questionnaires might better not be used as measures of spirituality to determine its effect on EWB.

If the described problem of contamination would be found in a very few publications in relatively unknown journals, one might conclude that the problem
does exist but is relatively unimportant. Therefore, we also provide, as an addition, an impression of the proportion of studies that have inappropriately used these scales as a predictor for well-being. We will end the paper with an advice on which questionnaires might be most appropriate to use in research examining the causal relationship between spirituality and EWB.

**Spirituality questionnaires that contain emotional well-being items**

We included all published SWB scales in our evaluation, supplemented with spirituality scales of which we had found previously that they contained well-being items (de Jager Meezenbroek et al., 2012b). Also included were spirituality questionnaires and questionnaires on religious or spiritual coping that we came upon during our survey of the eight journals (see below).

To determine which items refer to EWB, the three authors of the present paper independently evaluated the questionnaires and determined which items express feelings of well-being or distress. We used the following guideline: If an item of a spirituality or SWB scale could also be an adequate item of an emotional well-being or distress scale, it was selected as an EWB item. Any disagreements were discussed until consensus was reached. We also selected items that suggest a relationship between spirituality/religion and EWB, such as "Faith contributes to my well-being". These items are labeled as SWB items. In other words, an item is labelled an EWB item if it suggests (asks for) the presence of a positive or negative affect, such as joy, pleasure, anger, and sadness, or a positive mental state, such as peace of mind and strength. If the experience of such an affect or mental state is
suggested to occur through the force of a religious entity, such as “I experience joy through my prayers” or “God gives me peace of mind”, the item is labeled as an SWB item. Although the experience of purpose in life or meaning in life is close to experiencing positive feelings, we have considered these aspects to be conceptually different from EWB. The overview of the questionnaires evaluated and the items that we considered to be EWB or SWB items are presented in Table 1.

INSERT TABLE 1 HERE

Although every emotional or spiritual well-being item in a spirituality scale may contribute to an artificially high relationship with EWB, it would be an overstatement to dismiss every scale that contains a confounding item. Therefore, a scale was deemed acceptable as a unique measure of spirituality, if less than 25% of the items referred to SWB or EWB.

We have based the choice of the cut-off score of 25% on a simulation study. In order to conduct such a simulation one starts with the assumption of no (real) relationship between spirituality and EWB, if unique scales for each concept would have been used. In the simulation, an increasing number of EWB items were introduced in the spirituality scale to see when the correlation coefficient between the total scores of the two scales became significant. The change appeared to occur between an overlap of 20% and 30% of the items. With 25% overlap, the correlation between both simulated scales is $r=.22$, and $p=.03$ with a one-tailed test and $N=100$

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1 In fact, the EWB items were drawn from a scale closely associated with the (simulated) EWB scale, such that the highest possible correlation coefficient is $r=.80$. This was done, because it is unlikely that scales for two similar concepts would have a perfect correlation of $r=1.00$. 

7
(with 20% overlap $r=0.17$, $p=.09$; with 30% overlap $r=0.26$, $p=.01$). The whole procedure was repeated a hundred times to obtain stable correlation coefficients. Correlation coefficients may depend on the number of items in both scales and the range of possible responses to the items of both scales. However, the outcome was not essentially different for a simulated scale of five items and a 5-point response scale (see above), or for a simulated scale of twenty items and a 7-points response scale (20% overlap $r=0.16$, $p=0.12$; 25% overlap $r=.20$, $p=.05$; 30% overlap $r=.24$, $p=.02$).

Two SWB scales were identified that include no more than 25% of spiritual well-being or emotional well-being items, and thus might be safely used as predictors of EWB:

- Jarel Spiritual Well-Being Scale (Hungelmann, KenkelRossi, Klaasen, & Stollenwerk, 1996)
- Spiritual Well-Being Questionnaire (SWBQ; Gomez & Fisher, 2003).

The following eight questionnaires include more than 25% spiritual well-being or emotional well-being items, which makes them inappropriate for use as a predictor of EWB:

- The long 15- or 16-item version (see note a below Table 1) and the short 6-item version of the Daily Spiritual Experience Scale (DSES; Underwood & Teresi, 2002).
- Functional Assessment of Chronic Illness Therapy - SWB Scale (FACIT-sp; Cella, 1997; Peterman, Fitchett, Brady, Hernandez, & Cella, 2002)
- Religious Coping Activities Scale – subscale Discontent (Pargament et al., 1990)
- Rush Religious/Spiritual Struggle Screening Protocol (Fitchett & Risk, 2009)
- Spiritual Index of Well-Being (SIWB; Daaleman & Frey, 2004)
- Existential and Religious Well-Being Scales of the Spiritual Well-Being Scale (SWBS; Ellison, 1983; Ellison & Smith, 1991)
- World Health Organization Quality Of Life - Spirituality, Religion and Personal Beliefs scale (WHOQOL SRPB; O’Connell, Saxena, & Underwood, 2006).

To illustrate the problem that would arise if one of these eight measuring methods would be used together with an EWB questionnaire, imagine a person who scores high on an item such as “I feel peaceful” and low on such items as “There is a great void in my life at this time” or “I don’t enjoy much about life”. These are items included in the spirituality questionnaires FACIT-sp, SIWB and SWBS, respectively. This person will probably also score high on items such as “I still enjoy the things I used to” or “I was happy”, and low on such items as “I feel miserable and sad”, “I feel depressed”, or “I feel unhappy”. These are items from the distress scales HADS, CES-D, and POMS. Determining a relationship between these measures would only provide information on the subject’s EWB, not on the effect of spirituality on EWB. Therefore, it is puzzling to us what would motivate a researcher to study a relationship between concepts using questionnaires that have such similar content.

**Exploratory survey**

After having identified the scales that contain a substantial number of SWB or EWB items, we determined how many studies have been published that used these scales to predict EWB, distress, or quality of life. This will provide an indication of the extent
to which contamination has occurred in the current body of evidence toward a relationship between spirituality and EWB.

We narrowed our search to eight well-cited scientific journals that are relevant to our field of research (health psychology and the psychology of religion and spirituality): the Annals of Behavioral Medicine, Journal of Behavioral Medicine, International Journal of Behavioral Medicine, Psycho-Oncology, Journal of Consulting and Clinical Psychology, Supportive Care in Cancer, Journal for the Scientific Study of Religion, and Psychology of Religion and Spirituality. We have sought relevant references in Web of Sciences and PubMed till July 2014. In the health psychological journal we used the keywords SPIRIT* or RELIG* or FAITH in Title and/or Topic, and the name of the journal. In the other two journals the keywords we used were DISTRESS and/or WELL-BEING in Topics. Reviews, conference abstracts, letters, and qualitative studies were excluded. Also excluded were analyses in which spirituality was measured with a single item scale or if the items to the scale could not be found in any publication. Finally, studies were excluded in which the association between SWB and EWB scales was investigated for the purpose of validating the SWB scale.

Included studies used the following scales as outcome measure:

- Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)
- Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977)
- Profile Of Mood States (POMS; McNair, Lorr, & Drappelman, 1971)
- Beck Depression Inventory (BDI; Beck, Erbaugh, Ward, Mock, & Mendelsohn, 1961)
- Montgomery-Ashberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979)
• Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988)
• Bradburn Affect Balance Scale (ABS; Bradburn, 1969)
• Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983)
• Mental Health Inventory (MHI-5; Berwick et al., 1991)
• Psychological distress subscale of the Psychological Adjustment to Illness Scale (PAIS; Derogatis, 1986)
• Mental Health Component Score of the Rand Medical Outcomes Study 12-item Health Survey (SF-36 or SF-12; Ware, Kosinski, & Keller, 1996)
• Emotional Well-Being scale of the Functional Assessment of Cancer Therapy - General or Spiritual (FACT-G or FACT-Sp; Cella, 1997)

Each of the three researchers of the present study independently determined whether individual studies should be included in this evaluation, based on two criteria: 1. The authors stated in the Abstract and/or Introduction that the purpose of the study is to determine the role of spirituality as a predictor of EWB (distress, quality-of-life, mood, adjustment); 2. In the Discussion section the authors considered the implications of their findings in terms of the influence or effect of spirituality on EWB.

The search of the eight journals yielded 495 publications about spirituality, religion or faith; 61 were included on the basis of the above mentioned criteria, of which 3 could not be evaluated because of lacking information about the R/S scale
used in these studies (see Figure 1). Of the 58 remaining publications nearly half (26 studies) investigated the relationship in question using one of the eight spirituality questionnaires that we had identified as inappropriate for this purpose. Here we present an overview of the frequency with which each questionnaire was used.

- The 15-item version of the DSES was used in one study (Shannon, Oakes, Scheers, Richardson, & Stills, 2013), the 16-item version in another study (Underwood & Teresi, 2002), and the 6-item version in two studies (Jackson & Bergeman, 2011; Shahabi et al., 2002).
- The FACIT-sp was used in 16 studies (Brady, Peterman, Fitchett, Mo, & Cella, 1999; Colgrove, Kim, & Thompson, 2007; Cotton, Levine, Fitzpatrick, Dold, & Targ, 1999; Edmondson, Park, Blank, Fenster, & Klis, 2008; Holt et al., 2011; Kim, Carver, Spillers, Crammer, & Zhou, 2011; Kim, Wellisch, Spillers, & Crammer, 2007; Kristeller, Sheets, Johnson, & Frank, 2011; Krupski et al., 2006; Mazzotti, Mazzuca, Sebastiani, Scoppola, & Marchetti, 2011; Nelson et al., 2009; Salsman, Yost, West, & Cella, 2011; Whitford & Olver, 2012; Whitford, Olver, & Peterson, 2008; Yanez et al., 2009; Zavala, Maliski, Kwan, Fink, & Litwin, 2009)
- Religious Coping Activities Scale – subscale Discontent was used in one study (Thompson & Vardaman, 1997)
- The Rush Protocol was applied in one study (King, Fitchett, & Berry, 2013)
- The SWBS was used in three studies (Laubmeier, Zakowski, & Bair, 2004; McCoubrie & Davies, 2006; Murphy et al., 2000)
- The SIWB was used in one study (Vespa, Jacobsen, Spazzafumo, & Balducci, 2011)
The WHOQOL SRPB was used in none of the studies.

Discussion

The primary purpose of this paper was to remind the reader that spirituality questionnaires that contain items referring to spiritual or emotional well-being (SWB or EWB) should not be used to investigate the causal relationship between spirituality and EWB. In addition, we have provided an overview of spirituality questionnaires that contain a problematic number of SWB or EWB items and that should, therefore, be more appropriate for use as outcome measures than as predictors of EWB. To illustrate the extent of the problem for the body of evidence regarding the relationship between spirituality and EWB, we have explored how many studies on this topic that have been published in well-cited journals within the fields of health psychology and the psychology of religion and spirituality have used any of the eight questionnaires in the criticized manner. We found that this applied to about half of the studies. Notably, half of these studies had been published after 2008; the year Koenig vehemently warned against this practice (Koenig, 2008). In the years that followed, several others have also expressed their concern about the undesirable practice of using conceptually overlapping questionnaires to investigate the causal relationship between spirituality and EWB (Garssen et al., 2012a; Garssen et al., 2012b; Kapuscinski & Masters, 2010; Koenig, 2008; Migdal & MacDonald, 2013; Tsuang et al., 2007; Visser et al., 2010).

In this field full of pitfalls, it is important to avoid tautology when trying to demonstrate that spirituality predicts well-being, quality of life, or distress. To this
end, our advice to researchers who wish to study this relationship is to not use the DSES, FACIT-Sp, the SIWB, the SWBS, or the WHOQOL SRPB as measures of spirituality. We stress that the problem lies not in the spirituality scales themselves, but in how they are used. Even though the Jarel includes only a small proportion of well-being items, we would also advise against its use as a predictor of well-being, because its psychometric qualities are insufficiently demonstrated (Monod et al., 2011; Sessanna, Finnell, Underhill, Chang, & Peng, 2011).

It should be noted that it was not our intention to provide an accurate, representative estimation of the number of studies that have used the criticized practice. We have chosen to include only journals that had published articles on R/S that had at least a moderately high impact factor, and were representative of our particular fields of study; health psychology (Supportive Care in Cancer, Annals of Behavioral Medicine, International J of Behavioral Medicine), clinical psychology (J Consulting Clinical Psychology), and the psychology of religion and spirituality (J Scientific Study of Religion, Psychology of Religion and Spirituality). Our aim was to provide an impression of whether or not the problem of contamination affects a substantial proportion of the body of evidence on the causal relationship between spirituality and EWB. Our finding that 26 of 58 in at least moderately high impact journals have used inappropriate measures of spirituality indicates that the problem has clearly eroded this field of research.

We also want to point out that the cut-off point of 25% that we used to determine which questionnaires contained too many items referring to EWB or SWB is not an absolute rule. The starting point in our simulation was the assumption of a near zero correlation between the fictitious spirituality and EWB scales and a sample
of one hundred persons. With larger samples, the correlation coefficients will become significant with less contamination of the spirituality scale. So, in order to avoid any risk of the bias discussed here, it is safer to use a questionnaire that contains no SWB or EWB items at all. Table 1 can help researchers to determine for themselves which questionnaire might be most appropriate for their purposes and their circumstance.

When it comes to an advice about which spirituality scale is suitable, more characteristics have to be taken into account than just the number of SWB or EWB items. Several spirituality scales do not contain such items, but they may suffer from a lack of sufficient psychometric quality. In an earlier publication, we have reviewed spirituality questionnaires in relation to psychometric properties, item formulation, suitability for use among non-religious individuals and confusion with emotional well-being and distress (de Jager Meezenbroek et al., 2012b). To evaluate the formulation of the items, we determined whether the items are comprehensible, have a consistent meaning, and are answerable by all respondents. For instance, the words ‘spiritual’, ‘spirituality’, or ‘spirit’ will be differently understood by people, and should – in our view – be omitted in the wording of the items. In this review and on the basis of our current findings we conclude that the SWBQ is a suitable questionnaire, because it contains a small proportion of EWB items and we found that it has excellent psychometric properties (de Jager Meezenbroek et al., 2012b). The Spiritual Attitude and Involvement List (SAIL) may also be suitable if it the Trust subscale is omitted. The remaining subscales of the SAIL do not include any well-being items and have sufficient psychometric qualities (de Jager Meezenbroek et al., 2012a).
References


Americans with cancer: testing a mediational model. *Journal of Behavioral Medicine, 34*, 437-448.


Table 1

<table>
<thead>
<tr>
<th>Name</th>
<th>Total</th>
<th>No. of items</th>
<th>No. of (spiritual) items</th>
<th>No. of well-being items</th>
<th>Spiritual well-being items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Spiritual Experience Scale (DSES)</td>
<td>16/15</td>
<td>4</td>
<td>(25/27%)</td>
<td></td>
<td>• I feel deep inner peace or harmony</td>
</tr>
<tr>
<td>(Underwood &amp; Teresi, 2002)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• During worship, or at other times when connecting with God, I find joy, which lifts me out of my daily concerns</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• I find strength in my religion or spirituality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• I find comfort in my religion or spirituality</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2</td>
<td>(33%)</td>
<td></td>
<td>• I find deep inner peace and harmony</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• I find strength and comfort in my religion</td>
</tr>
<tr>
<td>Functional Assessment of Chronic</td>
<td>12</td>
<td>5</td>
<td></td>
<td></td>
<td>• I feel peaceful</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• I find comfort in my faith or spirituality</td>
</tr>
<tr>
<td>Scale</td>
<td>Items</td>
<td>Subscale/Study</td>
<td>Percent</td>
<td>Descriptions</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Illness Therapy - Spiritual Well-Being (FACIT-sp) (Cella, 1997; Peterman et al., 2002) | • I have trouble finding peace of mind beliefs  
• I feel a sense of harmony within myself  
• I find strength in my faith or spiritual beliefs  
• I believe, I have spiritual well-being | (42%) | 27 |
| Jarel Spiritual Well-Being Scale (Jarel) (Hungelmann et al., 1996) | • I am pretty well put together  
• I am satisfied with my life  
• Felt angry with or distant from God  
• Felt angry with or distant from members of the church  
• How much strength/comfort do you get from your religion/spirituality right now? | (14%) | 21 |
| Religious Coping Activities Scale – subscale Discontent (Pargament et al., 1990) | • Felt angry with or distant from God  
• Felt angry with or distant from members of the church  
• How much strength/comfort do you get from your religion/spirituality right now? | (66%) | 3 |
| Rush Religious/Spiritual Struggle Screening Protocol (Fitchett & Risk, 2009) | • How much strength/comfort do you get from your religion/spirituality right now? | (33-50%) | 2 - 3b |
| Spiritual Index of Well-Being (SIWB) (Daaleman & Frey, 2004) | • There is not much I can do to help myself  
• I am overwhelmed when I have personal difficulties and problems  
• I don’t know how to begin to solve my problems  
• There is not much I can do to make a | (42%) | 12 |
There is a great void in my life at this time.

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

*(Ellison, 1983; Ellison & Smith, 1991)*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Count</th>
<th>Corresponding Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existential Well-Being</td>
<td>10</td>
<td>- I feel that life is a positive experience</td>
</tr>
<tr>
<td>Scale</td>
<td>7</td>
<td>- I feel very fulfilled and satisfied with life</td>
</tr>
<tr>
<td>(70%)</td>
<td></td>
<td>- I feel a sense of well-being about the direction my life is headed in</td>
</tr>
<tr>
<td>Religious Well-Being</td>
<td>10</td>
<td>- I don't enjoy much about life</td>
</tr>
<tr>
<td>Scale</td>
<td>3</td>
<td>- I feel good about my future</td>
</tr>
<tr>
<td>(30%)</td>
<td></td>
<td>- I feel unsettled about my future</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- I feel that life is full of conflict and unhappiness</td>
</tr>
</tbody>
</table>

- I don't get much personal strength and support from my God
- My relationship with God helps me not to
<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>N</th>
<th>%</th>
<th>Statements</th>
</tr>
</thead>
</table>
| Spiritual Well-Being Questionnaire (SWBQ) (Gomez & Fisher, 2003) | 20 | 10% | How well do you feel the following statements describe your personal feelings over the last six months:  
  - developing joy in life  
  - developing inner peace |
| WHOQOL Spirituality, Religion and Personal Beliefs (WHOQOL SRPB) (O'Connell et al., 2006) | 32 | 34% |  
  - To what extent do you feel peaceful within yourself?  
  - To what extent do you have inner peace?  
  - To what extent do you feel a sense of harmony in your life?  
  - How hopeful do you feel?  
  - To what extent are you hopeful about your life?  
  - Connection to a spiritual being provides comfort/reassurance  
  - Spiritual strength helps to feel happy in life  
  - Faith contributes to well-being  
  - Faith gives comfort in daily life  
  - Faith gives strength in daily life  
  - Faith helps to enjoy life |
Shannon et al. (2013) used a 15-item version of the DSES. According to the developers of this questionnaire, their scale includes 15 items + 1 extra item that says “In general, how close do you feel to God?” (Underwood & Teresi, 2002). This extra item is not an SWB item, and is probably the item omitted by Shannon et al., which leads to the percentage of 4/15 = 27.

A participant is classified with the Rush protocol as suffering from religious struggle (2 questions) or not (3 questions).
Figure 1. Flow chart

R/S = Religion or spirituality. In 2008, Koenig warned against using R/S scales that are heavily contaminated with questions assessing positive character traits or mental health (Koenig, 2008).