

RELIGION AND SPIRITUALITY CONCEPTUALIZATIONS
ACROSS THE LIFESPAN: A MIXED METHODS
APPROACH

by

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ABSTRACT

Research suggests that lay persons' conceptualizations of religion and spirituality may differ from how researchers operationalize these terms. Also, emerging evidence has identified that one's cohort may influence how one defines religion compared to spirituality. More research is needed to explore how cohort differences influence participant responses on measures of these terms. Specifically, this study employed a mixed-methods design to compare religiousness and spirituality conceptualizations across the lifespan. A community-dwelling sample with equal representation from four age cohorts were recruited for participation in this study through Amazon's Mechanical Turk platform. Participants completed a battery of quantitative measures and provided typed open-ended responses to qualitative items. The two forms of data were analyzed separately; then, the results were merged to interpret the points of convergence and divergence. The results of this study suggest that the quantitative measures included in the study adequately represent the differences per cohort on defining religiousness compared to spirituality. Additional analyses of the qualitative data may further explain those differences. Thus, the results of this study have the potential to guide researchers in revising quantitative measures of these terms to account for cohort differences. Lastly, the study suggests the importance of respecting clients' conceptualizations of these terms and the potential use of these terms by mental health professionals' when clients receiving services express interest in discussing their religious and spiritual beliefs.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's alpha: a coefficient of internal consistency
CI	Confidence Interval
F	Fisher's F ratio: A ratio of two variances
λ	Wilk's Lambda statistic
LL	Lower Limit
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
N	Total sample size
n	Subset of total sample size
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
SD	Standard deviation
UU	Upper Limit
X^2	Chi-Square statistic
<	Less than
\leq	Less Than or Equal To
=	Equal to

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INTRODUCTION

As estimated by the Pew Research Center's Forum on Religion and Public Life study, there are approximately 5.8 billion religiously affiliated adults and children globally, accounting for 84% of the worldwide population (Pew Research Center, 2012). Due to such a high proportion of the population endorsing religious beliefs, researchers across disciplines have directed their attention to improving our understanding of how religion and spirituality influence health outcomes. Reviews of the research indicate that these factors influence both mental and physical health outcomes (Abu-Raiya & Pargament, 2015; Hill & Pargament, 2008; Park et al., 2017; Zimmer et al., 2016). Further, many researchers are investigating how religious and spiritual beliefs influence one's coping strategies (Koenig, 2012; Wachelder et al., 2016). More generally, research findings on these concepts have far reaching implications for adding nuanced understanding to personality development, cognitive functioning, and emotion regulation abilities (Hill, 2000).

Defining Religiousness and Spirituality

Religion and spirituality are complex constructs that have been difficult to conceptualize and define for their use as variables in health research. Early studies measured religion based on self-reported attendance of religious services and conceptualized spirituality as simply a part of religion (Flannelly, Jankowski, & Flannelly, 2014). As spirituality gained more attention it was increasingly defined as separate from religion (Flannelly et al., 2014). However, most scales developed to measure spirituality operationally define it in terms of positive emotional states without terms that are distinctly spiritual (Koenig, 2008; Koenig, McCullough, & Larson, 2001).

Today, religion and spirituality are commonly treated as overlapping, yet distinct constructs. Spirituality typically extends broader than religion; spirituality is frequently associated with a search for or a connection with the sacred and transcendent (Lucette, Ironson, Pargament, & Krause, 2016). Comparatively, religion is typically defined based on having an affiliation with a denomination that has a structured set of beliefs with activities that are organized and reflect long-established traditions (Lucette et al., 2016). In a recent review article, Zimmer and colleagues summarized this challenge, “Distinguishing the difference between religiosity and spirituality has not been easy for any single culture let alone cross-nationally, and centuries of thinking have yet to provide standard delineations of the two concepts” (2016, p. 375). As a result of this challenge to define the terms, along with the complex nature of these constructs, numerous measures for religiousness and spirituality have been developed from a variety of definitions (Harris, Spengler, & Gollery, 2016).

Hall, Meador, and Koenig (2008) conducted a review of the measures used to assess the multiple dimensions of religious experience and indicated that more than 100 measures have been developed to assess this complex construct. While measures of religiousness have been more commonly included in research studies, multiple reviews of the measures used to assess spirituality have also been conducted and they highlight the common flaws that influence the quality of the measures available for assessing spirituality (Hill & Hood, 1999; MacDonald, Friedman, & Kuentzel, 1999; MacDonald, Kuentzel, & Friedman, 1999; de Jager Meezenbroek et al., 2012; King & Crowther, 2004). In particular, de Jager Meezenbroek and colleagues (2012) reviewed the measures of spirituality that explore experiences that transcend religious belief. Popular measures like the Daily Spiritual Experiences Scale (DSES; Underwood & Teresi, 2002) and the Brief Multidimensional Measure of Religiousness (BMMRS; Fetzer Institute/ National

Institute on Aging [NIA] Working Group, 1999) were excluded from inclusion based on their overlap with assessing religiousness and spirituality simultaneously. Moreover, these reviews highlight the difficulty of measuring global religiousness and spirituality in a meaningful way that avoids tautology with measures of general well-being (Hall et al., 2008). One common flaw, across measures of religiousness and spirituality, is that people may interpret the same question with a variety of different meanings based on their own religious or spiritual context of experience (Hall et al., 2008). Subsequently, it has been suggested that further research continue to explore people's context of experience so that we can create meaningful categories for interpreting results in light of their context of experiences. The significant variation in operational definitions of the terms and the resulting wide variety of measures used in research studies limits the generalizability of the results reported. Given the continual challenge in conceptualizing these terms, more research has begun to explore if there are differences between how lay audiences define these terms compared to definitions used by academic researchers.

Lay Persons' Definitions

For example, Schlehofer, Omoto, and Adelman (2008) examined lay persons' definitions of spirituality and religiousness in a sample of older adults by collecting qualitative data. Their results suggest that older adults may not conceptualize these terms as differentiated concepts, which is in conflict with the way researchers have commonly polarized religiousness and spirituality in measurement. Also, they found that religiousness was more strongly associated with personal beliefs and community affiliations compared to spirituality. Their sample of older adults were all highly religious, highly spiritual, and predominantly identified as Protestant; thus, these results need to be replicated with a sample of older adults who are more representative of the full spectrum of beliefs. Also, Hyman and Handal (2006) conducted a study to explore the

definitions of these terms with a sample of religious leaders. They found significant variability for conceptualizing religion and spirituality as overlapping constructs; differences were highlighted across religious leaders with different denominations as well as religious leaders within the same denominations. Additionally, Lazar (2014) explored differences in conceptualizations in a sample of Jewish adults by comparing results from the Spiritual Orientation Inventory (SOI; Elkins, Hedstrom, Hughes, Leaf, & Saunders, 1988), a multidimensional measure of humanistic spirituality, to participants' responses on two items measuring overall spirituality and overall religiousness. They found the more experiential focused items on the SOI were more strongly associated with the overall item on spirituality. Again, as the sample represents only one denomination of religious affiliation, additional research is needed to explore the generalizability of these findings. Lastly, another study electronically gathered qualitative data from a variety of countries to explore these differences in conceptualization (Gall, Malette, & Guirguis-Younger, 2011). In addition to the qualitative items, the authors asked participants to indicate their level of religiousness, level of spirituality, frequency of prayer, frequency of religious service attendance, and to self-identify how these two terms overlap for them. Notable differences in conceptualization of religiousness and spirituality were identified. The authors indicated the importance for future studies to explore how these conceptualizations are evolving for other samples of adults (Gall et al., 2011). Thus, there is an identified need for additional studies conducted on the differences between lay audience conceptualizations or religiousness and spirituality compared to that of researchers.

Age and Cohort Differences

In addition to the cluster of research on lay audience conceptualizations, a stream of research has been investigating how religious and spiritual beliefs differ across cohorts (Barton

& Miller, 2015; Bengtson, Silverstein, Putney, & Harris, 2015; Gay & Lynxwiler, 2013). Cohort “denotes a group of individuals who enter an environment at the same point in time” (Schaie & Caskie, 2005). One of the most commonly identified findings from studies on cohort differences is that older cohorts are associated with more religious involvement compared to younger cohorts (Bengtson et al., 2015; Gay & Lynxwiler, 2013; Sutherland, Poloma, & Pendleton, 2003). Yet, it remains unclear as to whether this finding reflects more of a developmental trajectory with religiousness or more of an influence from cohort membership (Brown, Chen, Gehlert, & Piedmont, 2013). From the perspective of cohort membership, researchers have highlighted how being socialized in such different political, social, and economic climates could contribute to the significant differences between cohorts. Differences on religiousness and spirituality measures may be due to both developmental and cohort specific factors; however, to disentangle the contribution of these factors, more longitudinal studies are needed (Gay & Lynxwiler, 2013).

Recent research has demonstrated that definitions of religiousness and spirituality may differ per cohort. Barton and Miller’s study (2015) gathered quantitative support for how spiritual beliefs differ per cohort. Particularly, they found a stronger polarization of beliefs in the older adult sample compared to younger adults. In the older adult sample, the moderate level of personal spirituality subgroup was absent despite its presence in the younger cohorts. Brown and colleagues (2013) conducted an additional study illustrating age differences on quantitative data from the Assessment of Spirituality and Religious Sentiments scale (Piedmont, 2010). They found that the participants of the middle age group scored higher on spirituality than the older adults in this sample. Another study conducted by Gay and Lynxwiler (2013) utilized data from the General Social Surveys to explore cohort differences on subjective religiosity and subjective

spirituality. The results from this study found that while Millennials are consistently less religious than Baby Boomers, they have some similarities with participants from Generation X regarding prayer and attendance of religious services. Overall, exploring cohort differences on religiousness and spirituality is gaining attention and could benefit from additional studies to support recent findings.

Four Part Classification for the Religiously Unaffiliated

Another notable shift in the research on religiousness and spirituality is the increase in attention to those who identify as religiously unaffiliated. Globally, it is predicted that the number of people who identify as religiously unaffiliated will decrease from 16% in 2010 to 13% in 2050 (Templeton Foundation, 2015). To identify as religiously unaffiliated means identifying oneself as Atheist, Agnostic, or Nothing in Particular. For the United States, the Templeton Foundation (2015) predicts this group of individuals will increase from 16% in 2010 to 26% in 2050. Interestingly, the increase in the religiously unaffiliated in the United States is more substantial in the younger cohorts like the Millennials compared to the older cohorts like the Baby Boomers. Moreover, a classification system has been developed for more comparison studies that separate adults based on how religious and spiritual they identify as (Ammerman, 2013; Jang & Franzen, 2013; Hill et al., 2000; Schlehofer et al., 2008). The classification system identifies participants as Religious and Spiritual (RAS), Religious but not Spiritual (RBNS), Spiritual but not Religious (SBNR), and Neither Religious nor Spiritual (NRNS). The use of these categories alongside cohort groupings lead Gay and Lynxwiler (2013) to find that the Generation X participants were the most likely cohort to identify as SBNR. Unfortunately, perpetual methodological concerns regarding the measurement of religiousness and spirituality

impede the progress we could make with these avenues of research on cohort differences and the religiously unaffiliated.

Mixed Methods Designs

Various studies have been conducted to separately explore lay conceptualizations of, cohort differences on, and four-part classification differences on religiousness and spirituality. These studies have created the foundation for future research that explores these differences simultaneously using multiple methods of data collection. Mixed methods designs have been implicated in studies as one way to address the concerns associated with using quantitative measures of religiousness and spirituality (Baumsteiger & Chenneville, 2015; Hall et al., 2008; Lazar, 2014). Relatedly, three particularly relevant mixed methods studies have been conducted. Zinnbauer and colleagues (1997) compared participants' definitions of religiousness and spirituality to their scores on quantitative measures (e.g. Intrinsic Religiousness [Hoge, 1972] and Quest scale [Batson & Ventis, 1982]). They found significant differences in the definitions of religiousness compared to spirituality and set the stage for future studies. Despite efforts to collect their sample from a variety of sources, the sample was still predominately Caucasian and only 3% identified as NRNS. They concluded that more research like this study is needed to address the problems with our quantitative measures by stating that, "Without careful consideration of these terms we run the risk of becoming the social scientific study of "narrow" religion and "fuzzy" spirituality.

Another study, conducted by Hyman and Handal (2006) utilized a mixed methods study to explore differences in conceptualizations with a sample of religious professionals. For the qualitative portion, participants were asked to write their own definitions of religiousness and spirituality. For the quantitative portion, participants rated the items, from a battery of

quantitative measures, on the extent they measured religiousness and on the extent they measured spirituality. The following measures were included: the Intrinsic Religious Motivation Scale (Hoge, 1972), the Personal Religiosity Inventory (Lipsmeyer, 1984), the Religious Maturity Scale (Dudley & Cruise, 1990), the Spiritual Involvement and Beliefs Scale (Hatch, Burg, Naberhaus, & Hellmich, 1998), and the Spiritual Wellbeing-Being Scale (Paloutzian & Ellison, 1982). They also found significant variability in the participants' definitions of religiousness and spirituality. Hyman and Handal (2006) concluded that additional research could explore whether the measures of religiousness and spirituality distinguish between participants who identify as religious and those who identify as spiritual. Lastly, Kimball, Cook, Boyatzis, & Leonard (2016) employed a longitudinal mixed-methods research design with two time points to explore the spiritual experiences of a sample of emerging adults. Again, the sample was highly religious due to being recruited from Christian colleges. Authors used the Quest Scale (Batson & Schoenrade, 1991) for the quantitative data collection and gathered qualitative interview data for three distinct narratives about their spiritual beliefs. Their results focus more on the developmental nature of spiritual beliefs for emerging adults.

Thus, research focused on this topic is increasing, but more comprehensive data collection is needed to address the lingering gaps. There is a need for studies with more equal representation of multiple age cohorts and more equal representation of the variety of beliefs. In order to explore differences based on the four-part classification system, recruitment strategies targeting the NRNS and SBNR adults will be needed in light of many previous studies having highly religious samples. Further, there is a dearth of studies that have collected qualitative data alongside of standardized measures of religiousness and spirituality. While there are results from

multiple quantitative studies and multiple qualitative studies conducted independently, there is a need for more mixed methods studies to comprehensively measure these complex constructs.

Present Study

The present study was designed to explore how people from the general public conceptualize religion compared to spirituality. Also, the study was designed to explore how these conceptualizations differ based on cohort membership. As prior research results have some data to address these differences, the present study employed a mixed methods design to simultaneously explore the variety of factors involved in differing conceptualizations of religiousness and spirituality. Also, as sample representativeness had been identified as a common problem with previous studies, the present study utilized a relatively new recruitment source to gather a sample with equal representation from four cohorts. For this study, participants from the following cohorts were recruited: Baby Boomers (1946-1964), Generation X (1965-1980), Older Millennials (1981-1989), and Younger Millennials (1990-1999). Recruiting participants from the Silent Generation through this recruitment source proved to be challenging. Instead, the Millennials cohort was separated into two groups based on designations provided by the Pew Research Center (2012) from their study on the global religious landscape. Also, separating this cohort into two groups appears to be a progressive direction for future studies (Dimock, 2018). This study has the following six research questions, which are separated based on the mixed methods research design.

Quantitative:

- 1) Do differences exist across cohorts between or among religiousness, theistic beliefs, spirituality, spiritual openness, and spiritual involvement? It is hypothesized that

respondents from the younger cohorts will have higher scores on the spirituality outcome measures compared to respondents from the older cohorts.

2) How much predictive power do scores from religiousness, theistic beliefs, spirituality, spiritual openness, and spiritual involvement measures have on grouping participants into the four-part classification system? It is hypothesized that respondents' scores on the spirituality measure will have significant predictive power related to the four-part classification system.

Qualitative:

3) Do lay persons conceptualize religiousness and spirituality as distinct constructs?

4) Does one's age/cohort influence how one conceptualizes and defines religion compared to spirituality?

5) Does exposure to the survey items in this study influence participants' conceptualizations of religiousness and spirituality as the same construct?

Mixed:

6) Do the quantitative results converge with or diverge from the qualitative responses?

It is important to note that the qualitative coding is still ongoing. Therefore, at this point there is not enough analyzed data points to fully address the mixed methods research question.

This is explained in more detail in the following sections.

METHOD

Study Design

The present study utilized a mixed methods approach, which relies on the assumption that collecting both quantitative and qualitative data “provides a better understanding of the research problem than either form of data alone” (Creswell, 2014). Based on a convergent design, qualitative and quantitative data were collected simultaneously and analyzed separately. Then, the results were merged together to interpret the results from multiple perspectives (see Figure 1). The study was approved by the University of Alabama Institutional Review Board (IRB; see Appendix A).

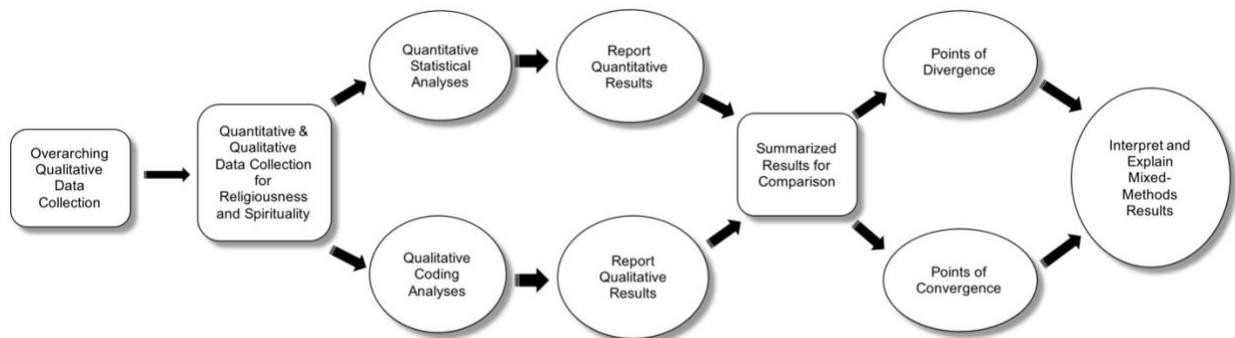


Figure 1. Creswell’s (2014) Mixed Methods Convergent Design for Current Study

Participants

Overall, 330 people consented to participating in this study. To be included, participants were required to be at least 18 years old, reside in the United States of America, and have computer and internet access. Additionally, participants needed to correctly respond to two items, which assessed their attention to survey instructions. Based on these inclusion criteria, the

final sample consisted of 225 adults who completed the survey materials. Of these, four of the completed surveys were excluded from analyses because they were from the Silent Generation (1928-1945). Also, one of the completed surveys was excluded because the participant completed the qualitative items in a language other than English. Thus, there were 220 participants with completed surveys and useable data. Following preliminary data analyses, which will be addressed in detail in a later section, an additional 25 participants were excluded from the main analyses due to missing data resulting in a final sample of 195 (see Appendix B for flow of participant inclusion).

The following demographic information describes the 195 participants who were included in the analyses. The sample had approximately equal representation of four age cohorts: 26.7% Baby Boomers (1946-1964), 24.1% Generation X (1965-1980), 27.2% Older Millennials (1981-1989), and 22.1% Younger Millennials (1990-1999). Further, the sample is primarily: White/Caucasian (85.6%), married (47.7%), college graduates (41.0%), and employed full time (65.6%), with an approximately equal representation of men (44.6%) and women (53.3%). For socioeconomic status (SES), the majority of participants (57.9%) identified their annual income as \$40,000 or more, and the majority of participants (66.2%) indicated they had little to no difficulty paying for basic needs with their income.

Also, there was an approximately equal representation from the regions of the United States, except for the Southwest (9.2%). Most participants appraised their current living situation as a medium-sized town (40%) or urban/city (28.2%). Relatedly, nearly all of participants (91.3%) live in a mostly urban setting based on comparing zip codes to the 2010 Census Data (U.S. Census Bureau, 2016). The majority of participants (64.6%) indicated that they have zero physical health conditions and most (57.9%) identified their overall health as “good.” Also, the

majority (81.5%) reported no history of mental illness. For religious preference, 46.7% of participants indicated that they identify as None, Atheist, or Agnostic compared to 49.2% identifying as Christian, Catholic, or Jewish. See Appendix C for additional details on participant demographics and characteristics.

Procedures

Participants were recruited through Amazon's Mechanical Turk (MTurk) platform over a one-month period. MTurk is "a crowdsourcing web service that coordinates the supply and the demand of tasks that require human intelligence to complete" (Paolacci, Chandler, & Ipeirotis, 2010). The data were collected across three waves to ensure equal recruitment from each cohort. Each wave was made available on MTurk on different days of the week and at varying times of day. Participants were each paid \$2.25 as compensation for completing the survey materials. Research has shown that the median hourly wage on MTurk is \$1.38 (Horton & Chilton, 2010). However, the monetary incentive chosen to compensate participants for their time in this study was chosen based on a previous relevant study, which utilized MTurk for recruiting a portion of their sample and paid their participants \$2.25 (Barton & Miller, 2015). Once recruited through MTurk, participants were directed to complete the survey via the Qualtrics survey software. After reading the consent form, participants behaviorally indicated their consent to participate by clicking the "I agree" response button. The ordering of the measures was chosen to reflect the convergent mixed methods study design and combat response fatigue. Thus, participants completed the measures of spirituality and then the measures of religiousness with the related qualitative items interspersed with the quantitative items. The demographics questionnaire was presented at the conclusion of the study. On average, participants completed the survey in 56 minutes.

As previously noted, there were two items assessing participants' attention to study instructions and careful responding embedded into the survey materials. The first item instructed the participant to "Choose the response choice furthest to the left, the strongly disagree option." This item was the 22nd item participants completed and was embedded into the administration of the Spiritual Experience Index (SEI-R) measure (Genia, 1997). Similarly, the second item instructed participants, "If you're reading this, choose the not at all response option," which was the 73rd item participants completed and was embedded into the administration of the BMMRS. Participants who responded incorrectly to either of these attention items were immediately excluded from the study and prevented from completing the study. Based on these items, 15 participants were excluded by responding incorrectly to the first attention item and an additional four participants were excluded by responding incorrectly to the second attention item.

Measures

Spirituality.

Daily Spiritual Experiences Scale [DSES] (Underwood & Teresi, 2002). The DSES is a 16-item measure that is designed to assess ordinary experiences of connection with the transcendent. The first 15 items use a 6-point Likert scale ranging from Never (1) to Many times a day (6) (See Appendix D). The last item ("In general, how close do you feel to God?") uses a 4-point Likert scale ranging from not at all close (1) to as close as possible (4) and is reverse scored. The DSES addresses a variety of concepts like relationship with the transcendent, awe, gratitude, mercy, inspiration and a sense of deep inner peace. Underwood and Teresi (2002) reported moderate to high internal consistency among the items for the full version (Cronbach's alpha of .94 for test and .95 for retest). As reported by Underwood (2011), the DSES continues to be frequently used in studies with at least 70 publications having used the DSES and the

Cronbach's alpha's for the scale have been consistently high, 0.89 or more. Further, test-retest results have indicated strong reliability with a Pearson correlation of 0.85 over two days (Underwood, 2011). Scores for this scale can range from 16-94 and higher scores indicate more frequent experiences of spirituality.

Spiritual Experience Index [SEI-R] (Genia, 1997). For the purpose of this study, only the 10-item Spiritual Openness (SO) subscale of the SEI-R was administered. This measure uses a 6-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (6) (see Appendix D). The original validation study found high internal consistency ($\alpha = .89$) for the overall scale with a Cronbach alpha of .95 for the SS subscale and an alpha of .79 for the SO subscale. Analyses indicated that both subscales were unrelated to social desirability, depression, and self-esteem (Genia, 1997). A follow up validation study found similar results for internal consistency for the overall scale ($\alpha = .87$) with a Cronbach alpha of .95 for the SS subscale and an alpha of .75 for the SO subscale (Reinert & Bloomingdale, 2000). The researcher chose to exclude the 13-item Spiritual Support (SS) subscale from this study due to a strong overlap in items on the BMMRS. Given the distinctness of the two subscales as highlighted by the original factor analyses (Genia, 1977) and subsequent factor analyses (Reinert & Bloomingdale, 2000), participant burden outweighed the potential gains from including the SS subscale in this study. Scores for the subscale can range from 10-60 with higher scores indicating higher levels of openness to spiritual experiences.

Spiritual Involvement and Beliefs Scale –Revised [SIBS-R] (Hatch, Burg, Naberhaus, & Hellmich, 2001). The SIBS-R is a 22-item version of the original 39-item SIBS (Hatch et al., 1998), which aims to be widely applicable across religious traditions and assess beliefs as well as actions related to spirituality. The SIBS-R is administered using a 7-point Likert scale

ranging from Strongly Disagree (1) to Strongly Agree (7); but, the last item (“How spiritual a person do you consider yourself?”) uses a 7-point Likert scale with “7” being the most spiritual (See Appendix D). For the original SIBS, Hatch and colleagues (1998) demonstrated that the scale had high reliability (Cronbach α .92), test-retest reliability (r .93), and strong construct validity in samples that included adults and elderly women. Comparatively, the SIBS-R has received less rigorous evaluation of its psychometric properties, but it continues to be utilized in various recent studies with good psychometric results. Hyland, Whalley, and Geraghty (2007) reported a Cronbach’s alpha of .92 based on their data using the SIBS-R and another study reported an alpha of .83 for their data (Litwinczuk & Groh, 2007). Despite the minimal amount of published data regarding this scale, the revised version was chosen due to its item wording being more appealing to non-Judeo-Christian participants (e.g. items refer to a higher power rather than any specific God). Further, this measure was included to explore its relationship to the other more well validated measures in this study. The factors in the revised version include: Core Spirituality, Spiritual Perspective/Existential, Personal Application/Humility, and Acceptance/Insight (Cadell et al., 2014). Scores can range from 22-154 with higher scores indicating individuals who are strongly spiritual.

Religiousness.

Brief Multidimensional Measure of Religiousness [BMMRS] (Fetzer Institute/ NIA Working Group, 1999). As the primary measure of religiousness, specific domains from the BMMRS were administered (see Appendix D for items per subscale). The following subscales were included: 2) Meaning, 5) Private Religious Practices, 6) Religious or Spiritual Coping, 8) Organizational Religiousness, and 9) Religious Support. There is also one additional item on current religious preference, which was treated as a demographic item as it is not scored with the

other subscales. Response scales differ per subscale. Evidence for the validity and reliability of this measure comes from its inclusion in the 1998 General Social Survey, which collected responses from 1,445 English-speaking adults residing in the United States. The results from that survey provided evidence supporting the internal consistency and found age and sex differences that supported construct validity (Fetzer Institute/ NIA Working Group, 1999; Idler et al., 2003). A more recent validation study found the BMMRS to have satisfactory psychometric properties by conducting a confirmatory factor analysis of the BMMRS (Masters et al., 2009). Higher scores indicate higher religiousness and spirituality.

Theistic Belief. To assess participants' theistic beliefs, 1-item (Gay & Lynxwiler, 2013) was included, "Which statement below comes closest to expressing what you believe about God?" Participants could indicate one from the following responses: "I don't believe in God"; "I don't know whether there is a God, and I don't believe any way to find out"; "I don't believe in a personal God, but I do believe in a Higher Power of some kind"; "I find myself believing in God some of the time, but not at others"; "While I have doubts, I feel that I do believe in God"; "I know God really exists and I have no doubts about it."

Four Part Classification System. A 2x2 typology was used to classify participants as: 1) Religious and Spiritual (RAS), 2) Spiritual but not Religious (SBNR), 3) Religious but not Spiritual (RBNS), 4) Neither Religious nor Spiritual (NRNS). To determine this classification participants responded to two items. One item assessed religiousness by asking, "To what extent are you a religious person?" The other item assessed spirituality by asking "To what extent are you a spiritual person?" Respondents used a four-point scale: not at all (0), slightly (1), moderately (2), and very religious/spiritual (3). Thus, a participant would classify as SBNR if they endorsed 2 or 3 on the spirit item and either a 0 or 1 on the religious item. This method of

classification has been used by multiple noteworthy studies and appears to be a promising method for future research (Ammerman, 2013; Jang & Franzen, 2013; Hill et al., 2000; Schlehofer et al., 2008).

Qualitative Items. To start the survey, participants responded to one broad qualitative item: “For you, are religiousness and spirituality the same? Please explain.” Then, before completing the demographic items, participants were presented with their response to this item and asked, “Has participating in this survey influenced how you would now respond to this question? Please explain.” The additional qualitative items were administered as follow up questions to each section of quantitative measures. The qualitative questions were developed based on the wording of quantitative measures and previous semi-structured qualitative interviews conducted on the constructs of interest in this study (see Appendix E for the full list of qualitative items).

Demographics. The following demographic information was collected: age, gender, race, ethnicity, marital status, highest level of education completed, employment status, occupation, socioeconomic status, perceived household income adequacy, subjective appraisal of rural or urban dwelling, and self-identified region of the U.S. Additionally, participants completed a brief measure of depressive symptoms (PHQ-9; Spitzer, Kroenke, & Williams, 1999; Kroenke, Spitzer, & Williams, 2001), a 7-item anxiety scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006), two items that assess subjective physical health, and two items that assess participants’ use of mental health treatment. Based on the method of recruitment, a more comprehensive approach to demographic information was chosen to better describe the population of adults available through MTurk. Moreover, given the wide range of ages, measures on physical health and mental health were included to comprehensively describe the sample.

Patient Health Questionnaire [PHQ-9] (Kroenke et al., 2001). The PHQ-9 is a 9-item self-report screening measure for symptoms of depression. Respondents indicate how often, ranging from (0) Not at all to (3) Nearly every day, that they have experienced the symptom described in each item. Multiple systematic reviews and meta-analyses have been conducted (Gilbody, Richards, Brealey, & Hewitt, 2007; Kroenke, Spitzer, Williams, & Löwe, 2010; Williams, Pignone, Ramirez, & Perez, 2002; Wittkamp, Naeije, Schene, Huyser, & van Weert, 2007) with positive findings in support of the PHQ-9's use. Results indicate that the PHQ-9 has good internal consistency (Cronbach's alpha of .86 to .89) and test-retest results have indicated strong reliability with a Pearson correlation of 0.84 (Kroenke et al., 2010). Scores can range from 0 to 27 with higher scores indicating greater severity of depression. Cutpoints of 5, 10, 15, and 20 mark the levels of severity of mild, moderate, moderately severe, and severe respectively.

Generalized Anxiety Disorder [GAD-7] (Spitzer et al., 2006). The GAD-7 is a 7-item self-report screening measure for symptoms of anxiety. Respondents indicate how often, ranging from (0) Not at all to (3) Nearly every day, that they have experienced the symptom described in each item. Research has demonstrated that the GAD-7 has good psychometric properties related to sensitivity and specificity (Spitzer et al., 2006). Further, GAD-7 has good internal consistency ($\alpha = 0.89$) (Löwe et al., 2008). Scores can range from 0 to 21 with higher scores indicating greater severity of anxiety. Cutpoints of 5, 10, and 15 mark the levels of severity from mild to moderate to severe respectively.

Data Analysis

In preparation for the main analyses, descriptive statistics were performed for the continuous variables and frequencies were generated for the categorical variables. As illustrated in Figure 1, separate analyses were conducted for the quantitative data and the qualitative data.

For the quantitative data, Pearson correlations for all quantitative measures were analyzed and the alpha level for these correlation analyses was set at $p \leq .05$. Given the multiple dependent variables included in this study, the multivariate analysis of variance (MANOVA) approach was chosen as the most appropriate statistical analysis to avoid inflating the Type I error rate by conducting multiple univariate analysis of variance (ANOVA). Prior to data collection, a power analysis was conducted, using the G*Power software program (Faul, Erdfelder, Lang, & Buchner, 2007). This analysis indicated that 204 participants (51 per cohort) would provide .95 power for a small effect size ($f = .10$) using the Multivariate Analysis of Variance (MANOVA) approach.

MANOVA was used to examine differences between scores on the quantitative measures of religiousness and spirituality by cohort groups. Also, MANOVA was used to examine differences between scores on the quantitative measures of religiousness and spirituality by the four-part classification system groups. If the omnibus test indicated a significant multivariate main effect, additional post hoc analyses were conducted to determine which cohort or classification differed. Analyses were performed using the software package IBM SPSS Statistics version 25.0 (IBM, 2016).

The written qualitative responses were analyzed using content analysis and descriptive analysis approaches (Sandelowski, 2000). The content analysis approach allows for codes to be developed directly from the data themselves and the descriptive analysis approach allows the coder to utilize the participants' own words for defining religiousness and spirituality (Sandelowski, 2000). Thus, the coding process mainly focused on the manifest content of the responses, but also generated codes for the latent content (Bernard, Wutich, & Ryan, 2016). This focus on the manifest content aligns with the overall goal of the study to explore

conceptualizations of religiousness and spirituality as indicated by the participants themselves, not the researchers' conceptualizations.

For the qualitative analyses, 40 participants from the full sample were chosen to be included based on concerns of informational redundancy (Lincoln & Guba, 1985; Russell & Gregory, 2003). In order to select a representative set of qualitative responses, participants were chosen based on their four-part classification system per cohort. For example, two participants within the Baby Boomers group, who were labeled as the SBNR group, were chosen using a random number generator and this process continued for the other three classifications. This selection process yielded eight participants from each cohort and the additional two participants per cohort were randomly selected regardless of their four-part classification group. This use of purposeful sampling was employed to analyze cases that reflected the full range of religiousness and spirituality, which coincides with the purpose of the study (Sandelowski, 1995).

To ensure rigorous analysis of the qualitative data, the PI consulted with a qualitative expert (RSA) regarding the methodology of the study. As described by Russell and Gregory (2003), the validity for qualitative analyses is described "in terms of rigour, credibility, trustworthiness, and believability." Thus, the following techniques were implemented to increase the validity of the qualitative analyses: reflection, reflexivity, and investigator triangulation (Russell & Gregory, 2003). Prior to the coding process, the analysis team members engaged in reflection and examined the reflexivity (i.e. what the coder brings to the coding of qualitative data). A three-member analysis team, all with experience in qualitative coding, independently analyzed the written qualitative responses per participant and generated codes. Of the 40 qualitative responses selected to be coded, 20 were randomly assigned to one graduate student coder (EB) and the other 20 were assigned to another graduate student coder (KC). The PI (DD)

for the study coded all 40 responses. Therefore, investigator triangulation was implemented and served to increase investigator's awareness of potential bias in coding. There were minimal differences in individual coding interpretations; yet, when differences arose the codes were discussed amongst the analysis team and resolved. Lastly, careful documentation and note taking was utilized by the analysis team in group coding meetings to track the analysis process (Bradley, Curry, & Devers, 2007). After analyzing the quantitative and the qualitative data separately, the main results from both methods were summarized in a table. This side-by-side comparison (Creswell, 2014) was generated to facilitate identifying the points of convergence and divergence. It is important to note that additional content and thematic analyses of the data are ongoing, which will help to more clearly illustrate points of convergence and divergence between the sources of data.

RESULTS

Quantitative

Preliminary analyses. A total of 220 study participants were included in the preliminary analyses. Descriptive statistics and correlation analyses were conducted for the continuous dependent variables (see Table 1). All of the Pearson correlation analyses conducted on the dependent variables were found to be significant except for the correlations between the SEI-R and the other dependent variables. SEI-R was only significantly correlated with the BMMRS ($r = -.17, p = .01$). Of the other dependent variables, the highest correlation was between the DSES and SIBS-R ($r = .85, p = .0005$); the lowest of these correlations was between the BMMRS and the SIBS-R ($r = .76, p = .0005$). These results confirmed that the data do not violate the assumption of MANOVA stating that dependent variables should be no more than moderately correlated with each other.

Table 1

Descriptive Analyses (N = 220)

Measure	n	Range	<i>M</i>	<i>SD</i>
DSES	210	16-94	46.7	23.1
SEI-R	209	10-60	39.2	8.5
SIBS-R	216	22-154	94.1	28.5
BMMRS	219	16-104	38.5	20.3
Theistic Belief	220	1-6	3.6	2.1

Note. DSES = Daily Spiritual Experiences Scale; SEI-R = Spiritual Experience Index-Revised; SIBS-R = Spiritual Involvement and Beliefs Scale –Revised; BMMRS = Brief Multidimensional Measure of Religiousness.

After confirming the suitability of the MANOVA approach, the preliminary analyses were performed again due to identifying participants with missing data (see Table 2). A total of 195 study participants were included in the multivariate analyses. 25 participants were excluded from these analyses due to missing data. Using the MTurk platform for data collection may have played a role in the amount of missing data, but it is also difficult to rule out if participants intentionally skipped certain items. As the missing data could be purposeful, procedures for data imputation were considered, but ultimately not implemented in this study to support the nature of the research questions. There were concerns that the use of data imputation could distort the results to reflect the researcher's conceptualizations of religiousness and spirituality, which is a primary concern of the study. A series of Welch's unequal variances t-tests were run on the continuous variables (i.e. BMMRS, DSES, SEI-R, SIBS-R, Theistic Belief, Age, Physical Health, PHQ-9, and GAD-7) to determine if there were any significant differences between the participants with missing data and the final sample participants. The Welch t-test was used in place of the independent samples t-test due to the unequal sample sizes. There were no significant differences on any of the variables between the group with missing data and the final sample of participants.

Chi-square analyses of association were conducted on the categorical demographic variables. Nearly all of the variables had non-significant results; yet, there was a significant association between region of the United States and participants with missing data, $X^2(4, N = 220) = 11.772, p = .019$. However, given the unequal sample sizes and the number of categories for this variable, expected cell frequencies were less than five, which indicates that these results may not be valid. Further, a Fisher's Exact test was conducted between Hispanic or Latino/a identification and participants with missing data. There was a statistically significant association

between missing data and identifying as Hispanic or Latino/a, $p = .046$. Thus, there were minimal differences found on the dependent and demographic variables between the original sample ($N = 220$) and the final sample ($N = 195$). The descriptive and correlation analyses conducted on the dependent variables for the final sample ($N = 195$) are presented in Table 2. As can be seen by comparing Table 1 to the results reported in Table 2, removal of the participants with missing data had a minimal effect on the measures of central tendency for the dependent variables.

Table 2

Summary of Intercorrelations, Means, and Standard Deviations for Scores on the DSES, SEI-R, SIBS-R, BMMRS, and Theistic Belief ($N = 195$)

Measure	1	2	3	4	5	Range	<i>M</i>	<i>SD</i>
1. DSES	-	-.05	.85***	.80***	.80***	16 - 94	47.1	23.0
2. SEI-R	-.05	-	.05	-.17*	-.06	10 - 60	39.2	8.7
3. SIBS-R	.85***	.05	-	.77**	.78***	22 - 154	93.8	28.9
4. BMMRS	.80***	-.17*	.77***	-	.77***	16 - 104	38.2	19.9
5. Theistic Belief	.80***	-.06	.78***	.77***	-	1 - 6	3.6	2.1

Note. For all scales, higher scores are indicative of more endorsement of the construct being assessed. DSES = Daily Spiritual Experiences Scale; SEI-R = Spiritual Experience Index-Revised; SIBS-R = Spiritual Involvement and Beliefs Scale –Revised; BMMRS = Brief Multidimensional Measure of Religiousness.

** $p < .01$. *** $p < .001$.

Additionally, a series of Welch’s unequal variances t-tests were run on the Physical Health, PHQ-9, and GAD-7 variables to determine if there were any significant differences per age cohort on these measures for the full sample. The Welch t-test was used in place of the independent samples t-test due to the data failing the Levene’s test for homogeneity of variances.

There were significant differences between the age groups on the GAD-7 (Welch's $F(3, 98.9) = 4.126, p = .008$) and the Physical Health (Welch's $F(3, 101.1) = 13.152, p = .0005$) variables. Games-Howell post hoc tests indicate that the Younger Millennials ($M = 5.2, SD = 5.9$) endorsed significantly higher scores on the GAD-7 compared to the Baby Boomers ($M = 1.8, SD = 3.8$) with a mean increase of 3.4, 95% CI [0.6, 6.2] ($p = .011$). For Physical Health, Games-Howell post hoc tests suggest that the Baby Boomers ($M = 1.2, SD = 1.2$) and Generation X ($M = 0.7, SD = 0.9$) participants endorsed significantly more physical health conditions than the Younger ($M = 0.2, SD = 0.4$) or Older Millennials ($M = 0.2, SD = 0.5$). There were no significant differences comparing the two oldest cohorts to one another and there were no significant differences comparing the two youngest cohorts to one another. Additionally, chi-square analyses of association were conducted on the categorical variables related to physical and mental health. The subjective physical health question, which asks respondents how their health compares to most people their age, was the only variable that had a significant association $X^2(6, N = 195) = 19.245, p = .004$. Compared to the other cohorts, more participants from the Baby Boomers cohort indicated that their health is better than most people their age. For the other cohorts, the majority of respondents indicated their health was about the same.

Multivariate Analyses. The first MANOVA examined the relationships between cohorts on the BMMRS, DSES, SEI-R, and the SIBS-R scores. The MANOVA omnibus test indicated there was a statistically significant difference in scores based on a participant's cohort, $F(15, 516) = 2.062, p < .011$; Wilk's $\lambda = 0.852$. The data suggest that the assumption of homogeneity of covariance was met. The result of the Box's M test was found to be insignificant ($p = .09$) based on the alpha criterion for this test set at $p < .001$. Overall the results suggest minimal heterogeneity of covariance. Due to a significant main effect, we continued analyzing using

ANOVA follow up tests to examine the univariate effect of the independent variable on the specific outcome variables. A Bonferroni correction was made to the α , due to concerns of inflating the Type I error rate by running multiple ANOVA follow up tests, resulting in acceptable statistical significance at $p < .01$. Univariate analyses indicated that cohort groups were not statistically related to scores on the BMMRS ($F(3, 191) = 3.54$; $p = .016$) and the SEI-R ($F(3, 191) = .071$; $p = .98$). However, cohort was statistically significant related to scores on the DSES ($F(3, 191) = 5.91$; $p = .001$), SIBS-R ($F(3, 191) = 4.42$; $p = .005$), and Theistic Belief ($F(3, 191) = 7.68$; $p = .0005$).

Additional post hoc analyses, using Tukey post hoc tests were conducted on the outcome variables with statistically significant results. The results indicated that mean scores on the DSES were significantly higher for the Baby Boomers cohort compared to the Younger Millennial cohort. On the DSES, there was a mean increase of 19.0, 95% CI [7.1, 30.8] ($p = .0005$) from the Younger Millennial cohort ($M = 37.8$, $SD = 20.9$) to the Baby Boomers cohort ($M = 56.8$, $SD = 21.7$). On the SIBS-R, mean scores were significantly higher for the Baby Boomers cohort when compared not only to the Younger Millennial cohort, but also when compared to the Older Millennial cohort. On the SIBS-R, there was a mean increase of 19.8, 95% CI [4.8, 34.9] ($p = .004$) from the Younger Millennial cohort ($M = 85.3$, $SD = 26.1$) and a mean increase of 15.2, 95% CI [0.9, 29.4] ($p = .03$) from the Older Millennials cohort ($M = 89.9$, $SD = 30.7$) to the Baby Boomers cohort ($M = 105.1$, $SD = 25.5$). Lastly, mean scores were significantly higher for the Baby Boomers cohort compared to all other cohorts on Theistic Belief. Compared to the Baby Boomers cohort ($M = 4.7$, $SD = 1.8$) on Theistic Belief there were several significant mean increases: 1) a mean increase of 1.78, 95% CI [0.7, 2.9] ($p = .0005$) from the Younger Millennial cohort ($M = 2.9$, $SD = 1.9$) to the Baby Boomers cohort; 2) a mean increase of 1.2, 95% CI [0.2,

2.2] ($p = .013$) from the Older Millennial cohort ($M = 3.5$, $SD = 2.1$) to the Baby Boomers cohort; and 3) a mean increase of 1.6, 95% CI [0.5, 2.6] ($p = .001$) from the Generation X cohort ($M = 3.2$, $SD = 2.2$) to the Baby Boomers cohort. Overall, it can be concluded that there were significant differences on measures of religiousness and spirituality based on cohort groups. Not all measures of religiousness and spirituality included in the study demonstrated these significant differences. Moreover, significant differences between the oldest cohort and the youngest cohort were the most prominent results.

The second MANOVA examined the relationships between the four-part classification groups on the BMMRS, DSES, SEI-R, SIBS-R, and Theistic Belief scores. Prior to conducting this analysis, the RAS and RBNS groups were combined into one group to compensate for unequal cell sizes. The number of participants per group are as follows: RAS and RBNS ($n = 57$); SBNR ($n = 55$); and NRNS ($n = 83$). The MANOVA omnibus test indicated there was a statistically significant difference in scores based on a participant's classification group, $F(10, 376) = 48.33$, $p < .0005$; Wilk's $\lambda = 0.191$. The data suggest that the assumption of homogeneity of covariance was not met. Box's M test was found to be significant ($p = .0005$). Further, the Levene's test was significant for all variables ($p < .0005$) except for the SIBS-R (.91; $p = .41$). These results suggest that the error variance of the dependent variables was not equal across groups. As the results suggest some heterogeneity of variance, specific error terms were used for follow-up tests.

Due to a significant main effect, we continued analyzing using ANOVA follow up tests to examine the univariate effect of the independent variable on the specific outcome variables. A Bonferroni correction was made to the α , due to concerns of inflating the Type I error rate by running multiple ANOVA follow up tests, resulting in acceptable statistical significance at $p <$

.01. Univariate analyses indicated that classification group was statistically significant related to participants' scores on the DSES ($F(2, 192) = 141.07; p = .0005$), the SEI-R ($F(2, 192) = 13.06; p = .0005$), the SIBS-R ($F(2, 192) = 182.24; p = .0005$), the BMMRS ($F(2, 192) = 182.9; p = .0005$), and Theistic Belief ($F(2, 192) = 166.6; p = .0005$). Additional post hoc analyses, using the Games-Howell post hoc tests were conducted on all of the outcome variables because they all had statistically significant results.

Table 3
Group Means for MANOVA with Four-Part Classification

Measure	Group Means		
	Four-Part Group	<i>M</i>	<i>SD</i>
DSES	NRNS	27.5	9.8
	SBNR	54.4	18.6
	RAS/RBNS	68.5	16.3
SEI-R	NRNS	38.7	6.7
	SBNR	43.6	7.1
	RAS/RBNS	35.7	10.8
SIBS-R	NRNS	67.4	16.0
	SBNR	106.2	16.8
	RAS/RBNS	120.3	18.8
BMMRS	NRNS	22.6	7.5
	SBNR	38.0	13.1
	RAS/RBNS	61.2	15.0
Theistic Belief	NRNS	1.8	1.1
	SBNR	4.4	1.7
	RAS/RBNS	5.6	1.0

Note. NRNS = Neither Religious nor Spiritual; SBNR = Spiritual but not Religious; RAS/RBNS = Religious and Spiritual/ Religious but not Spiritual; DSES = Daily Spiritual Experiences Scale; SEI-R = Spiritual Experience Index-Revised; SIBS-R = Spiritual Involvement and Beliefs Scale –Revised; BMMRS = Brief Multidimensional Measure of Religiousness.

Table 4

Games-Howell Post Hoc Analyses Results for MANOVA with Four-Part Classification

Measure	Group Comparison	Mean Increase	95% CI	
			<i>LL</i>	<i>UL</i>
DSES	NRNS to SBNR	26.9 ***	20.3	33.4
	NRNS to RAS/RBNS	41.0 ***	35.3	46.8
	SBNR to RAS/RBNS	14.2 ***	6.3	22.0
SEI-R	NRNS to SBNR	4.8 ***	2.0	7.7
	NRNS to RAS/RBNS	3.0	0.8	6.8
	SBNR to RAS/RBNS	(-)-7.8 ***	3.8	11.9
SIBS-R	NRNS to SBNR	38.8 ***	32.0	45.6
	NRNS to RAS/RBNS	52.9 ***	45.7	60.2
	SBNR to RAS/RBNS	14.1 ***	6.1	22.1
BMMRS	NRNS to SBNR	15.4 ***	10.8	20.1
	NRNS to RAS/RBNS	38.6 ***	33.5	43.8
	SBNR to RAS/RBNS	23.2 ***	16.9	29.5
Theistic Belief	NRNS to SBNR	2.6 ***	2.0	3.2
	NRNS to RAS/RBNS	3.9 ***	3.5	4.3
	SBNR to RAS/RBNS	1.3 ***	0.7	1.9

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; NRNS = Neither Religious nor Spiritual; SBNR = Spiritual but not Religious; RAS/RBNS = Religious and Spiritual/Religious but not Spiritual; DSES = Daily Spiritual Experiences Scale; SEI-R = Spiritual Experience Index-Revised; SIBS-R = Spiritual Involvement and Beliefs Scale –Revised; BMMRS = Brief Multidimensional Measure of Religiousness.

*** $p < .001$

Significant differences between mean scores (Table 3) were found for almost all of the group comparisons per dependent variable except for the comparison between the RAS/RBNS and the NRNS groups on the SEI-R ($p = .15$). Results from the post hoc analyses are presented in Table 4 and illustrate a common pattern of the RAS/RBNS group having a higher mean score than that of the SBNR group, which has a higher mean score than that of the NRNS group.

However, the comparisons on the SEI-R do not reflect the same pattern of group differences. Instead, there was a mean increase of 4.8, 95% CI [2.0, 7.7] ($p = .0005$) from the NRNS group ($M = 38.7, SD = 6.7$) to the SBNR group ($M = 43.6, SD = 7.1$) and a significant mean increase of 7.8, 95% CI [3.8, 11.9] ($p = .0005$) from the RAS/RBNS group ($M = 35.7, SD = 10.8$) compared to the SBNR group. As a measure of spiritual openness, the SEI-R is the only measure included in the study in which the SBNR group has a higher mean score than the RAS/RBNS group. Overall, it can be concluded that the four-part classification grouping is associated with significant differences on all of the measures of religiousness and spirituality. These results reflect what the researchers expected and demonstrates the utility of the four-part classification system.

Qualitative

Preliminary Analyses. From the 195 sample, 40 participants' qualitative responses were chosen to be analyzed as previously described. A series of Welch's unequal variances t-tests were run on the continuous variables (i.e. BMMRS, DSES, SEI-R, SIBS-R, Theistic Belief, Age, Physical Health, PHQ-9, and GAD-7) to determine if there were any significant differences between the participants included in the qualitative analysis and the full sample. The Welch t-test was used in place of the independent samples t-test due to the unequal sample sizes. The only significant difference was found for the scores on the BMMRS, Welch's $F(1, 47.3) = 4.355, p = .042$. The participants included in the qualitative analyses had a higher mean score on the BMMRS compared to the full sample. Chi-square analyses of association were conducted on the categorical demographic variables. There were no significant differences on any of the demographics variables between the group included in the qualitative analysis and the full

sample of participants. One participants' responses were excluded from the qualitative analyses due to the responses being copied and pasted from the internet.

Same or Separate Constructs. The first qualitative research question (Do lay persons conceptualize religiousness and spirituality as distinct constructs?) was analyzed using content analysis approaches. The coding team coded the responses from the first item of the survey: "For you, are religiousness and spirituality the same? Please explain." The majority of participants, approximately 72%, indicated that they believed religiousness and spirituality to be separate constructs (n = 28). One participant stated, "I think spirituality is more of an inner peace, while religiousness is following a particular being." Another participant indicated that, "Being religious means being affiliated with and practicing a particular religion. Spirituality on the other hand, has more to do with a connection to a higher power than an affiliation with a particular group." While both participants agreed the constructs were distinct, their reasoning for these differences illustrates individual differences in definitions of these terms. Comparatively, a few participants described the constructs as being linked or overlapping (n = 4). For example, one participant expressed, "There's significant overlap between both groups, but they're not the same or even mutually inclusive." The remaining participants (n = 7) reported that religiousness and spirituality are the same construct; for example, one participant stated, "Yes. For me religiousness and spirituality are the same. I do not see the value of spirituality without religious tradition." Each cohort was evenly represented in the groups that conceptualize religiousness and spirituality as either the same or linked. In sum, explanations differed, but the majority of participants conceptualized religiousness as separate from spirituality.

Defining Religiousness versus Spirituality. To address the second qualitative research question (Does one's age/cohort influence how one conceptualizes and defines religion

compared to spirituality?), the coding team took a twofold approach. First, the coding team identified the specific codes that participants used to define religiousness and those that participants used to define spirituality. The codes, frequencies per code, and an exemplar quote per code are presented in Table 5 for Religiousness and Table 6 for Spirituality.

Table 5

Results from Content Analysis of Defining Religiousness

Code	Frequency	%	Exemplar Quote
Religiousness			
Specific/Organized/ Structured	23	59.0	“...being religious means you follow a set of structured laws, beliefs, and practices that are dictated to you through books or people.”
Belief in Higher Being/God	22	56.4	“...I feel you must place trust in a higher being.”
Practice	11	28.2	“To practice it daily and live by God's standards.”
Guides Decisions	9	23.1	“...you have something to believe in to guide your decisions.”
Negative	8	20.5	“Religion is very rigid, structured and unwavering.”
Social	7	17.9	“...being part of a group that believes the same thing. Because you are part of this group you are expected to say and do certain things with and for the other people in your group.”
Texts/Doctrine	6	15.4	“Being religious means to believe the writings of scripture and religious text without challenging it.”
Faith	5	12.8	“Religiousness for me also is my faith that has nothing to do with the church that I might choose.”
Attendance/Place of Worship	4	10.3	“I think it's as simple as saying that if you actively attend religious services, you are religious to at least some degree.”
Source of Comfort	3	7.7	“I try to pray and look to God when I need support and I find it comforting and helpful.”

Table 6
Results from Content Analysis of Defining Spirituality

Code	Frequency	%	Exemplar Quote
<hr/> Spirituality <hr/>			
Relationship with Higher Power	19	48.7	“Spirituality to me means the belief in a higher power, or some type of guiding entity...”
Personal/Internal	16	41.0	“Spirituality to me is the body and soul within. To have inner harmony.”
Connection	12	30.8	“...you are in connection with some type of ethereal force in the world.”
Something More	9	23.1	“To believe and experience a positive force greater than oneself without regard to religious traditions or practices.”
Interconnectedness	9	23.1	“Feeling a connection to something that is greater than myself or the physical things around me.”
Guides	7	17.9	“It means that I can be guided by things that are out of my control or my understanding.”
Hard to Define	6	15.4	“I don't even really know what the concept of being "spiritual" is. Religion is real, spirituality is just a feeling.”
General/Broad	5	12.8	“Spirituality is a more general term...less fixed rules.”
Overlaps with Religiousness	5	12.8	“My spirit connects through my religion.”
Practice	4	10.3	“It is something that you exercise, like a muscle and strengthen every single day.”
Non-denominational	4	10.3	“Unrelated to the practice of a particular religion or denomination thereof.”
Belief in Force	4	10.3	“I don't think of God as an entity or being but as a positive force but one that is always present for comfort and reference.”
Negative	4	10.3	“I feel it is a spurious term that weak people use to take the easy way out of expressing their faith. ”

Second, the coding team examined the frequency of the codes per cohort to address the part of the research question focused on the influence of age on conceptualization. By organizing the results by cohort, the team could explore the patterns behind defining the terms and more adequately summarize the qualitative results (Sandelowski, 2000). Due to the small proportion of data analyzed, only codes with a frequency of 7 participants or more were included. For the following codes there was seemingly even representation per cohort: Religiousness defined as Guiding Decisions, Religiousness defined as Negative, Spirituality defined as Relationship with Higher Power, Spirituality defined as Something More, and Spirituality defined as Interconnectedness. For the following codes there were minimal differences by cohort: more Baby Boomers defined Religiousness as related to Practices, more Older Millennials defined Religiousness as Belief in Higher Being, and more Older Millennials defined Spirituality as Connection. Lastly, for the following codes there were notable differences in code frequency by cohort: more Baby Boomers defined Religiousness as Specific/Organized, more Baby Boomers defined Religiousness as Social, more Older Millennials defined Spirituality as Guiding, and more Older Millennials and Generation X participants defined Spirituality as Personal. Based on the small sample included in these analyses, these results should be interpreted cautiously. Yet, it appears that age/cohort does have some influence on the way people define religiousness compared to spirituality.

Survey Influence on Responses. The third qualitative research question (Does exposure to the survey items in this study influence participants' conceptualizations of religiousness and spirituality as the same construct?) was analyzed using content analysis approaches. At the end of the survey, participants were presented with their original response to the item, "For you, are religiousness and spirituality the same? Please explain." They were then asked, "Has

participating in this survey influenced how you would now respond to this question? Please explain.” Nearly the entire qualitative sample indicated that the survey had no effect on their definitions of religiousness and spirituality (n = 34). The common experience was noted by one participant by saying, “I’m 100% confident that I would answer it in exactly the same manner.” Similarly, another participant highlighted that “I have felt this way for some time now and a survey isn’t going to have influence on that.” The other participants reported that the survey confirmed their response (n = 1), implied religiousness and spirituality are the same constructs (n = 2), encouraged openness to a variety of definitions (n = 1), and the survey failed to clearly define spirituality for the participant (n = 1). Notably, one participant expressed that the survey “would influence me a little in response because these questions seemed to make me think that maybe spirituality and religiousness could be the same in some situations.” Overall, the results of the qualitative analyses found that participants’ conceptualizations of religiousness and spirituality were not impacted by the structure of or the exposure to the survey.

Mixed

Lastly, the final research question, “Do the quantitative results converge with or diverge from the qualitative responses?”, was addressed by comparing the quantitative results to the qualitative results. A side-by-side comparison (see Table 7) aided the process of identifying the patterns across methods. One pattern that emerged was the convergence between the format of the survey (i.e. treating religiousness and spirituality as separate constructs) and the majority of respondents qualitatively describing religiousness and spirituality as separate constructs. One point of possible divergence appears to be the Baby Boomers endorsing stronger theistic belief in the quantitative results while the Older Millennial cohort stands out from the open-ended responses in defining religiousness based on a belief in a higher being. These are only

preliminary patterns. As indicated previously, additional data points from more qualitative coding are needed to further elucidate the mixed methods results. Moreover, member checking with community dwelling adults will be utilized in future implementations of the study to increase the validity of the qualitative results. The results for the final research question offer some indications for points of convergence and divergence; however, given the current status of qualitative data analysis and integration of mixed methods results, it would be premature to assert strong conclusions regarding the results of the mixed methods approach.

Table 7
Summary of Results Per Method of Data Collection

Method	
Quantitative	Qualitative
<p>Research Question (RQ) Results</p> <hr/> <p>RQ 1: Do differences exist across cohorts between or among religiousness, theistic beliefs, spirituality, spiritual openness, and spiritual involvement?</p> <p>Quant measures developed as separate</p> <hr/> <p>SEI-R & BMMRS = Not statistically significant different per cohort</p> <p>On DSES: Baby Boomers were significantly higher than Younger Millennials</p> <p>On SIBS-R: Baby Boomers were significantly higher than Younger Millennials and Older Millennials</p> <p>On Theistic: Baby Boomers were significantly higher than ALL other cohorts</p>	<p>Research Question (RQ) Results</p> <hr/> <p>RQ 3. Do lay persons conceptualize religiousness and spirituality as distinct constructs?</p> <p>Majority view R & S as Separate constructs</p> <hr/> <p>RQ 4: Does one's age influence how one conceptualizes and defines religion compared to spirituality?</p> <p>R defined as Specific/Organized: More Baby Boomers (<i>notable</i>)</p> <p>R defined as Social: More Baby Boomers (<i>notable</i>)</p> <p>S defined as Guiding: More Older Millennials (<i>notable</i>)</p>

S defined as Personal: More Older Millennials & Generation X (*notable*)
R defined as Belief in Higher Being: More Older Millennials (*minimal*)

R defined as Practice: More Baby Boomers (*minimal*)

S defined as Connection: More Older Millennials (*minimal*)

More endorsements per code for R compared to S

RQ 2: How much predictive power do scores from religiousness, theistic beliefs, spirituality, spiritual openness, and spiritual involvement measures have on grouping participants into the four-part classification system?

RAS/RBNS group was higher than ALL other groups on DSES, SIBS-R, BMMRS, and Theistic Belief

SBNR group was higher than the other groups on the SEI-R

Unable to explore qualitative differences per four-part grouping ^a

RQ 5: Does exposure to the survey items in this study influence participants' conceptualizations of religiousness and spirituality as the same construct?

Majority indicated the survey had no influence on R & S beliefs

Note. For RQ4, there were no identifiable differences for the following: Guides Decisions (R), Relationship with Higher Power (S), Something More (S), and Interconnectedness (S). R = Religiousness; S = Spirituality; DSES = Daily Spiritual Experiences Scale; SEI-R = Spiritual Experience Index-Revised; SIBS-R = Spiritual Involvement and Beliefs Scale –Revised; BMMRS = Brief Multidimensional Measure of Religiousness. SBNR = Spiritual but not Religious; RAS/RBNS = Religious and Spiritual/ Religious but not Spiritual.

^a Due to selection criteria used for inclusion in the qualitative analyses, differences per four-part groups were not analyzed.

DISCUSSION

This mixed methods study adds to the literature by: 1) collecting data on the religiousness and spirituality of participants on Amazon's MTurk platform; 2) analyzing points of convergence and divergence between the qualitative coding results and the variety of quantitative measures included; and 3) encouraging future studies to utilize mixed methods for exploring differences in cohorts and lay persons' conceptualizations of religiousness and spirituality.

The present study tested the hypothesis, from the first quantitative research question, that there would be significant differences between the cohorts on the quantitative measures. The quantitative results indicate moderate support for this hypothesis as scores on three out of the five quantitative measures differed significantly by cohort. In particular, it was hypothesized that the younger millennial cohort would have higher scores on the spirituality measures based on the rising number of younger adults identifying as SBNR (Ammerman, 2013; Gay & Lynxwiler, 2013; Pew Research Center, 2010). However, the results of the present study do not support this hypothesis as the Baby Boomers' scores were significantly higher than that of the Younger Millennials (DSES and SIBS-R) and Older Millennials (SIBS-R) on the scales included to measure spirituality; these results largely coincide with prior research on cohort differences found on quantitative measures. Prior studies have identified the Baby Boomers cohort as more religious and spiritual than other cohorts (Ammerman, 2013; Brown et al., 2013; Marler & Hadaway, 2002). Notably, Baby Boomers also have been demonstrated to endorse stronger theistic beliefs, which was also found in this study (Ammerman, 2013).

Additionally, the quantitative results based on the four-part classification demonstrate a mostly straightforward pattern of the participants in the RAS/RBNS group scoring higher. These results, along with prior studies (Ammerman, 2013; Gaulden, 2012; Gay & Lynxwiler, 2013; Gay, Lynxwiler, & Smith, 2015; Jang & Franzen, 2013), illustrate the utility of grouping participants into these categories to predict their scores on the quantitative measures. As a relatively new procedure in the field, these results encourage the continued use of the four-part classification in future studies. It is interesting to note that the scores on the measure of spiritual openness diverted from the pattern of the four-part groups on the other quantitative measures with the SBNR scoring significantly higher than the other groups. This suggests that openness related to spirituality may be an important factor for future studies on the SBNR group. As the field continues to focus more attention on exploring the SBNR group, all contributions to describing them will add to the growing foundation of research. Moreover, the construct of spiritual openness could prove to be an important mechanism for informing clinical practice.

For the qualitative results, the present study gathered evidence to address three main research questions. First, the results of the content analyses indicate that the majority of participants view religiousness and spirituality as distinct constructs. The results reflect previous findings that, despite a few exceptions (i.e. participants who conceptualize them as the same construct or overlapping constructs), the majority of people view religiousness as separate from spirituality (Baumsteiger & Chenneville, 2015; Hyman & Handal, 2006; Marler & Hadaway, 2002; Schlehofer et al., 2008; Zinnbauer et al., 1997). Also, these results parallel the more prominent viewpoint of researchers who conceptualize them as separate constructs (Flannelly et al., 2014; Hill et al., 2000).

Moreover, many of the codes identified in this study have been highlighted as the most common responses in prior research on participants defining religiousness compared to spirituality. For defining religiousness, the most responses in this study included: “specific/organized/structured,” “belief in higher being/God,” “practice,” “guides decisions,” “negative,” and “social.” Across studies, there is a lack of consistency in the order of these codes based on frequency, but the codes are highlighted as frequent definitions of religiousness (Baumsteiger & Chenneville, 2015; Hyman & Handal, 2006; Hodge, 2007; Zinnbauer et al., 1997). For example, belief in God was identified as the second most frequent code by Baumsteiger and Chenneville (2015), but Zinnbauer and colleagues (1997) identified it as the most frequent code for defining religiousness. For defining spirituality, the most common responses in this study included: “relationship with higher power,” “personal/internal,” “connection,” “something more,” “interconnectedness,” “guides,” and “hard to define.” Similar to the religiousness codes, prior studies have identified the same frequent responses for defining spirituality, but the ordering differs per study (Ammerman, 2013; Baumsteiger & Chenneville, 2015; Hyman & Handal, 2006; Hodge, 2007; Zinnbauer et al., 1997). Interestingly, Baumsteiger and Chenneville (2015) only found negatively loaded terms in response to defining religiousness, but the present study coded negative responses for both religiousness and spirituality. For example, when describing spirituality one participant stated, “I feel it[spirituality] is a spurious term that weak people use to take the easy way out of expressing their faith.” Similarly, one participant negatively described religiousness as, “I believe religion is a means of controlling people.” Overall, the results from the qualitative content analyses seem to replicate similar results from research studies focused on participants’ definitions of religiousness and spirituality.

In regard to the third research question, the qualitative data suggest that exposure to the present study's survey items had little to no effect on participants' conceptualizations of religiousness and spirituality. Moreover, in response to this qualitative item many participants strongly expressed their resolve that a survey would not change their beliefs. The common reaction to this item may be indicative of how one's beliefs of religiousness and spirituality are deeply held values. Given the well documented importance of religion and spirituality, simply asking this question about survey influence could serve as an example of how psychologists' conceptualizations differ from lay person's conceptualizations. For instance, to hypothesize a survey could have an impact on conceptualizations comes from a lens of objectivity and the lack of focus on the developmental path many people have experienced to reach the viewpoints and values they hold (Barton & Miller, 2015; Bengtson et al., 2015; Kimball et al., 2016; Paloutzian, 2017; Wachelder et al., 2016).

Lastly, for the mixed results it was hypothesized that there would be points of convergence and divergence between the qualitative and quantitative data. Preliminary results highlight convergence on viewing religiousness and spirituality as separate constructs, which confirms the results of mixed method studies on this topic (Hyman & Handal, 2006; Kimball et al., 2016; Zinnbauer et al., 1997). The data suggest a potential point of divergence for how cohorts differ based on theistic belief; yet, this needs additional evidence from the ongoing manifest content analyses to confirm. Further, preliminary latent content analyses point to the potential convergence with the qualitative data supporting the finding that spiritual openness does not differ per cohort. Moreover, this study lends support for the use of MTurk for exploring cohort differences and for collecting open ended responses.

In summary, the results of this mixed methods study largely indicate that the quantitative measures included in this study coincide with lay persons' conceptualizations of religiousness and spirituality. It appears the nuances in understanding gained from qualitative data collection are accounted for by the battery of measures included, age/cohort grouping, and four-part classification. Conclusions are subject to change as results from additional qualitative data analyses of latent themes and content analyses may further elucidate the aims of this study. Thus, this mixed methods study offers needed contributions to the field of research on religiousness and spirituality.

Limitations

As with any research, there are several limitations with this study. First, the entire sample was recruited through Amazon's Mechanical Turk platform, which has some influence on the generalizability of the results. A previous study using MTurk noted their sample was more socioeconomically and ethnically diverse than samples recruited from other sources like undergraduate subject pools (Casler, Bickel, & Hackett, 2013). The sample in the present study is representative for many of the demographic variables with a wide range of ages, SES, regions in the US, and more. However, the sample lacks representativeness regarding race and ethnicity, which reflects a consistent problem of using MTurk (Behrend, Sharek, Meade, & Wiebe, 2011; Fowler, Willis, Moser, Ferrer, & Berrigan, 2015). Research studies have found significant differences between racial and ethnic groups regarding their perspectives on religiousness and spirituality (Armstrong & Crowther, 2002; Hill & Pargament, 2008; Koenig, 2012; Mattis, 2000). Thus, this limitation to the generalizability of results should not be overlooked and future studies need to make all efforts to recruit more racially and ethnically diverse samples. Particularly for researchers of religiousness and spirituality, the MTurk sample included a

surprisingly large proportion of participants who identified as agnostic, atheist, or no religious affiliation. While this identification is on the rise, MTurk samples may be over representing the NRNS group and researchers interested in recruiting a highly religious or spiritual sample may find this recruitment source limiting. Additionally, it is likely that this sample over represents older adults who are more technologically savvy than the typical sample of community dwelling older adults. Yet, this also serves as a strength of the study as being technologically savvy is a similarity across the sample. Therefore, researchers who are considering using MTurk to recruit participants should contemplate the lack of racial diversity, the large representation of the NRNS group, and tech savvy characteristic for participants of all ages.

By electronically collecting qualitative data through open ended response format items, there are inherent limitations to the depth of information gathered and increased risk of unusable responses due to no opportunities to ask clarifying questions as one would do in a semi-structured qualitative interview. Consequently, one participant's responses were removed from the qualitative analyses after determining the responses were pulled from a Google search on defining religiousness and spirituality. There is no way to ensure that other participants' responses are absolutely free from the influences of looking up definitions on the internet. Thus, this is a problematic limitation on the results from the qualitative data. Relatedly, the electronic response format for the qualitative questions necessitates typing one's response, which may have increased the level of impression management in which the participants engaged. It is expected that part of the impression management influence on responses has already been accounted for in prior research during the development of the quantitative measures as the measures were shown to have acceptable levels of divergent validity from social desirability scales. Further, compared to an in-person qualitative interview, the electronic response format has increased anonymity to

counteract the potential effects of social desirability on being religious and spiritual that have been noted in other studies (Booth-Kewley, Larson, & Miyoshi, 2007; Jones & Elliott, 2017; Sedikides & Gebauer, 2010).

Ethics

For this study, there were three main considerations made regarding ethics: 1) obtained approval from the Institutional Review Board (IRB); 2) provided all participants with information on mental health treatment resources; and 3) discussed the implications of the study for clinical practice and competency. In order to ensure this study was conducted ethically, the research team received IRB approval prior to beginning data collection (American Psychological Association[APA], 2017). Also, in an effort to minimize any risk to participants, who found answering the items about religiousness and spirituality to be difficult, all participants were presented with a list of national resources for treatment of mental health symptoms. Due to the factors associated with conducting this study on MTurk, collecting contact information for follow ups based on the results of the mental health measures was not feasible. Lastly, this study suggests implications for how research on religiousness and spirituality conceptualizations can inform clinical practice. Thus, this study is directly related to cultural competency for professionals and is rooted in the recognition that your religious and spiritual beliefs may differ from that of your clients even at the most fundamental aspect (i.e. are religiousness and spirituality the same).

CONCLUSION

For decades, researchers interested in religion's and spirituality's effect on health outcomes have been "plagued by the problem of how to best define and operationalize religion or spirituality" (Hyman & Handal, 2006, p. 265). This challenge is accentuated by how the public perception of being religious compared to spiritual is changing and more adults in the U.S. are identifying as religiously unaffiliated. Thus, this study endeavored to evaluate whether quantitative measures reflect these nuanced changes in conceptualization of these terms via mixed method analyses. If more support for the identified points of convergence and divergence could be demonstrated, the results have the potential to facilitate edits to the existing measures. Due to the multitude of measures already developed to assess spirituality and religion, the methodology of this study could serve as a model for re-evaluating the utility of measures that were developed decades ago. As Hill and Pargament (2008) have noted, there are measures that could be edited to be more culturally sensitive and more studies like this could clarify how to make these edits.

Also, the results of this study have potential clinical implications for mental health professionals when integrating religiousness and spirituality into their treatment approaches. Compared to the general public, psychologists are less likely to identify as religious (Hyman & Handal, 2006). A recent study found that, of the APA member psychologists in clinical practice that participated in the study, 39% identified as agnostic, atheist, or no religious preference (Harris et al., 2016). While psychologists may be less likely to personally identify as highly

religious or highly spiritual, one still needs to engage in treatment in a way that respects the client's cultural and personal values.

The current study suggests that one method to demonstrate this respect is to remove the assumption that you know what being religious or spiritual means to a given individual. Instead, when a client expresses interest in talking about their beliefs, one could attempt to match the client's terminology by first exploring their personal conceptualizations of religiousness and spirituality. This effort may be an important component related to establishing and maintaining therapeutic humility (Chochinov et al., 2013). Moreover, psychologists need to have insight into their own beliefs as studies have shown that psychotherapists' personal belief systems may interfere with their therapeutic effectiveness (Blair, 2015; Harris et al., 2016; Saunders, Petrik, & Miller, 2014; Torskenaes, Kalfoss, & Saeteren, 2015). Lastly, continued efforts to improve the generalizability of research on religiousness and spirituality could help to further translate research into treatment approaches (e.g. Acceptance and Commitment Therapy, Existential Psychotherapy, etc.) and assessment procedures. Religiousness and spirituality have been noted as important belief systems related to coping abilities, decision-making skills, social support networks, physical health outcomes, and mental health outcomes (Barton & Miller, 2015; Cummings et al., 2015; Hill & Pargament, 2008; Koenig, 2012). Thus, the results of studies like the present study have wide ranging implications for clinical practice.

Religion and spirituality have been found to be associated with physical and mental health outcomes. However, there is a lack of consistency from study to study regarding how these constructs are defined, operationalized, and interpreted, which subsequently affects the generalizability of results. The present mixed methods study was conducted to explore how these differences in defining religiousness and spirituality are illustrated based on birth cohort. There

are some concerns related to generalizability due to recruiting the sample from Amazon's Mechanical Turk platform and collecting qualitative data electronically. Further, differences in these terms between researchers and lay audiences were explored by comparing results from quantitative measures, which were developed by researchers, to results from open ended responses provided by lay persons. Results from the quantitative data and results from the qualitative data largely reflected findings from previous research studies. The results of the mixed methods approach indicated some points of convergence and divergence between the two forms of data. While further analyses are needed, the study concludes that the quantitative measures included adequately represent the cohort and lay person conceptualizations of religiousness and spirituality. Overall, the results of this study encourage practitioners to be aware of individual and cohort differences in defining these terms when integrating religiousness and spirituality into clinical practice. Future studies should be conducted to continue clarifying the utility of our quantitative measures to better inform assessment and treatment approaches.

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APPENDIX

Appendix A

Institutional Review Board Certification



September 19, 2017

Deanna Dragan
Dept. of Psychology
College of Arts & Sciences
Box 870348

Re: IRB#: 17-OR-314 "Religion and Spirituality Conceptualizations across the lifespan: A Mixed-Methods Approach"

Dear Ms. Dragan:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on September 18, 2018. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent form/information sheet to provide to your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

Stuart Usdan, PhD
Chair, Non-Medical Institutional Review Board

358 Rose Administration Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

Appendix B

Flow Participant Inclusion in Study

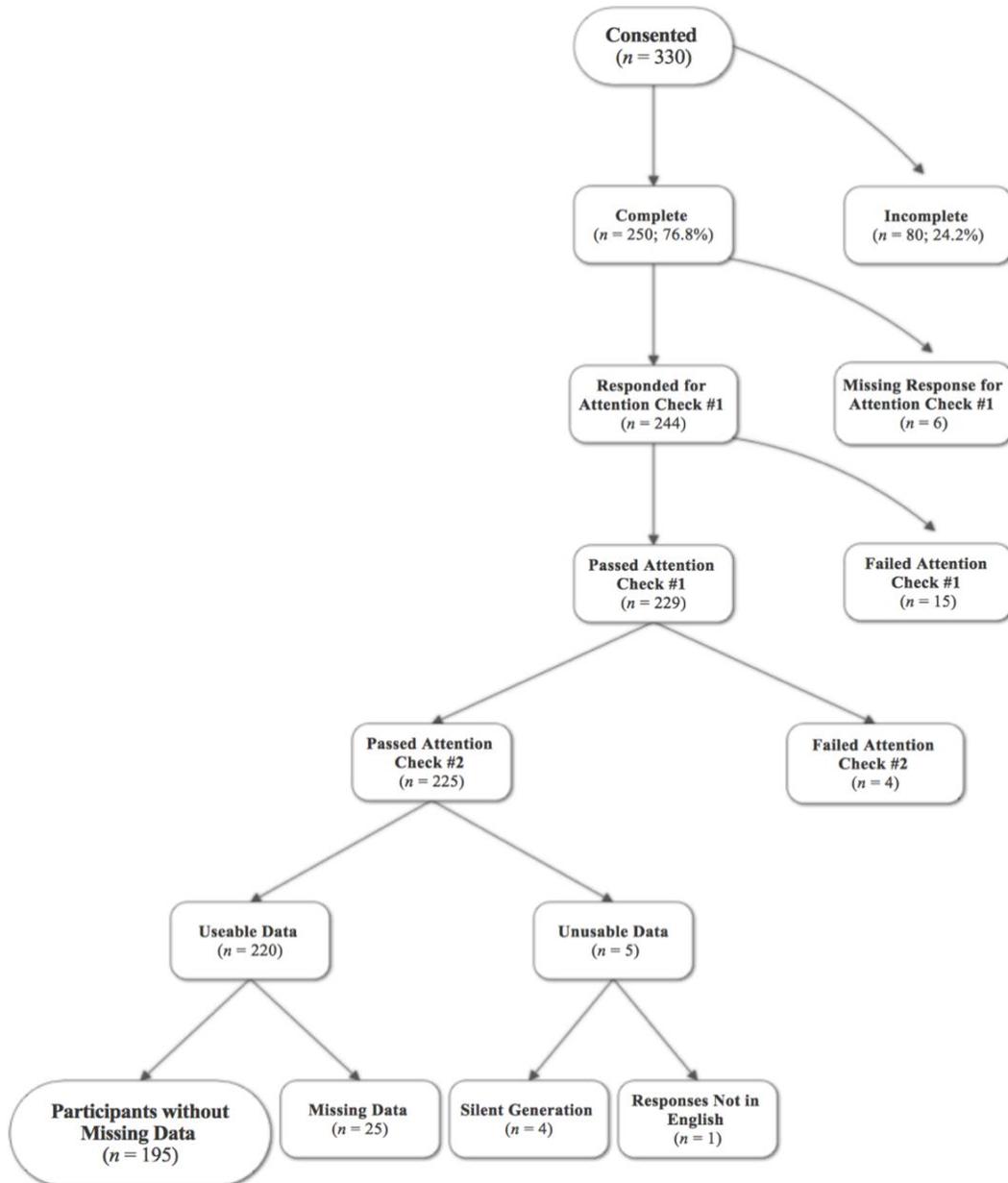


Figure B1. Flow of participants included in study based on completion of attention checks and missing data.

Appendix C

Participant Demographics and Characteristics

Table C1
Participants' Characteristics (N = 195)

	Continuous Variable		<i>SD</i>
	Range	<i>M</i>	
Age (years)	19 - 71	40.9	14.1
Categorical Variables			
	Levels	Percentage of the Sample	
Gender	Male	44.6	
	Female	53.3	
	Other	2.1	
Race	White/Caucasian	85.6	
	Black/African American	8.2	
	Asian	3.6	
	Other	2.6	
Ethnicity	Hispanic or Latino/a	4.6	
Marital Status	Married	47.7	
	Single	28.7	
	Member of an Unmarried Couple	11.8	
	Divorced	8.7	
	Separated	1.5	
	Widowed	1.5	
Education	High school Diploma / GED	11.8	
	Technical school /vocational training after high school	3.6	
	Some College/ Associate's Degree	30.3	
	College Graduate (4 or 5 year program)	41.0	
	Master's degree (or other post-graduate training)	10.8	
	Doctoral degree (Ph.D., M.D., J.D., EdD., etc.)	2.6	

	Full-time	65.6
	Part-time	14.4
Employment	Retired	6.7
	Unemployed	9.7
	Disabled and not able to work	2.1
	Never employed outside of the home	1.5
	Less than \$10,000	4.1
	\$10,001 - 20,000	10.8
	\$20,001 - 30,000	17.9
SES	\$30,001 - 40,000	9.2
	\$40,001 - 50,000	12.8
	\$50,001 - 70,000	21.0
	\$70,000 - \$100,000	13.3
	\$100,001 or above	10.8
	Not Difficult at All	30.3
Income Adequacy	Not Very Difficult	35.9
	Somewhat Difficult	27.2
	Very Difficult	6.2
	Northeast	25.6
Region of the United States	Southeast	23.6
	Southwest	9.2
	Midwest	20.0
	West	21.5
	<i>Rural/Urban: Subjective</i>	
	Rural	14.9
Raised	Small town (< 25,000)	25.1
	Medium-sized town (25,001-100,000)	32.8
	Urban/City	27.2
	Rural	12.8
Currently	Small town (< 25,000)	19.0
	Medium-sized town (25,001-100,000)	40
	Urban/City	28.2
Rural/Urban: Objective ^a	Mostly Urban	91.3
	Mostly Rural	8.2
	Completely Rural	0.5

Note. ^aCensus data from 2010 (U.S. Census Bureau, 2016) was used to categorize current residence based on zip codes provided by participants.

Table C2

Physical and Mental Health Characteristics of Sample (N = 195)

		Physical Health			
		Response	Percentage of Sample		
Subjective	Overall	Excellent	22.1		
		Good	57.9		
		Fair	18.5		
		Poor	1.5		
	Compared to Most People Your Age	Better	31.3		
		About the Same	57.4		
		Worse	11.3		
	Compared to a Year Ago	Better	21		
		About the Same	66.7		
		Worse	12.3		
	Objective	Number of conditions	Range	<i>M</i>	<i>SD</i>
			0 - 4	.58	.93
		Mental Health			
		Range	<i>M</i>	<i>SD</i>	
PHQ-9		0 - 27	3.9	5.2	
GAD-7		0 - 21	3.3	4.8	
		Response	Percentage of Sample		
Diagnosis	Yes	15.9			
	No	84.1			
Medication	Yes	11.3			
	No	88.2			
Seeing a Professional	Yes	8.2			
	No	91.3			

Note. PHQ-9 = Patient Health Questionnaire- 9; GAD-7 = Generalized Anxiety Disorder-7.

Table C3

Sample Characteristics Based on Independent Variables and Religious Preferences (N = 195)

Independent Variable	Group		Percentage of Sample			
Cohort						
	Younger Millennial (1990-1999)		43 (22.1%)			
	Older Millennial (1981-1989)		53 (27.2%)			
	Generation X (1965-1980)		47 (24.1%)			
	Baby Boomers (1946-1964)		52 (26.7%)			
Four-Part Classification						
	Religious and Spiritual (RAS) & Religious but not Spiritual (RBNS)		57 (29.2%)			
	Spiritual but not Religious (SBNR)		55 (28.2%)			
	Neither Religious nor Spiritual (NRNS)		83 (42.6%)			
Religious Preferences						
	Religiously Unaffiliated: None, Atheist, Agnostic		Religiously Affiliated: Christian, Catholic, Judaism, etc.		Spiritual	
Baby Boomers (n = 52)	18	34.6%	31	59.6%	3	5.8%
Generation X (n = 47)	23	48.9%	23	48.9%	1	2.1%
Older Millennial (n = 53)	25	47.2%	27	50.9%	1	1.9%
Younger Millennial (n = 43)	25	58.1%	15	34.9%	3	7.0%
TOTAL (N = 195):	91	46.7%	96	49.2%	8	4.1%

Appendix D

Quantitative Measures

Daily Spiritual Experiences Scale (DSES) (Underwood & Teresi, 2002)

Instructions: The list that follows includes items you may or may not experience. Please consider how often you directly have this experience, and try to disregard whether you feel you should or should not have these experiences. A number of items use the word ‘God.’ If this word is not a comfortable one for you, please substitute another word that calls to mind the divine or holy for you.

1. I feel God’s presence.
2. I experience a connection to all of life.
3. During worship, or at other times when connecting with God, I feel joy which lifts me out of my daily concerns.
4. I find strength in my religion or spirituality.
5. I find comfort in my religion or spirituality.
6. I feel deep inner peace or harmony.
7. I ask for God’s help in the midst of daily activities.
8. I feel guided by God in the midst of daily activities.
9. I feel God’s love for me, directly.
10. I feel God’s love for me, through others.
11. I am spiritually touched by the beauty of creation.
12. I feel thankful for my blessings.
13. I feel a selfless caring for others.
14. I accept others even when they do things I think are wrong.

15. I desire to be closer to God or in union with the divine.

16. In general, how close do you feel to God?

Items 1-15 are administered on a 6-point Likert scale.

Many times a day

Every day

Most days

Some days

Once in a while

Never

Item 16 is administered on a 4-point Likert scale.

Not at all

Somewhat close

Very close

As close as possible

Spiritual Experience Index (SEI-R) (Genia, 1997)

Please indicate to what extent you agree or disagree with the following statements.

1= Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 = Agree,
6 = Strongly Agree

Spiritual Openness Subscale of SEI-R

1. I believe that there is only one true faith.
2. Ideas from faiths different from my own may increase my understanding of spiritual truth.
3. One should not marry someone of a different faith.
4. I believe that the world is basically good.
5. Learning about different faiths is an important part of my spiritual development.
6. I feel a strong spiritual bond with all of humankind.
7. I never challenge the teachings of my faith.
8. My spiritual beliefs change as I encounter new ideas and experiences.
9. Persons of different faiths share a common spiritual bond.
10. I believe that the world is basically evil.

Spiritual Involvement and Beliefs Scale –Revised (SIBS-R) (Hatch, Burg, Naberhaus, & Hellmich, 2001)

How strongly do you agree with the following statements? Please circle your response.

(7 = strongly agree; 6 = agree; 5 = mildly agree; 4 = neutral; 3 = mildly disagree; 2 = disagree; 1 = strongly disagree).

1. I set aside time for meditation and/or self-reflection.
2. I can find meaning in times of hardship.
3. A person can be fulfilled without pursuing an active spiritual life.
4. I find serenity by accepting things as they are.
5. I have a relationship with someone I can turn to for spiritual guidance.
6. Prayers do not really change what happens.
7. In times of despair, I can find little reason to hope.
8. I have a personal relationship with a power greater than myself.
9. I have had a spiritual experience that greatly changed my life.
10. When I help others, I expect nothing in return.
11. I don't take time to appreciate nature.
12. I have joy in my life because of my spirituality.
13. My relationship to a higher power helps me love others more completely.
14. Spiritual writings enrich my life.
15. I have experienced healing after prayer.
16. My spiritual understanding continues to grow.

17. I focus on what needs to be changed in me, not what needs to be changed in others.
18. In difficult times, I am still grateful.
19. I have been through a time of suffering that led to spiritual growth.
20. I solve my problems without using spiritual resources.
21. I examine my actions to see if they reflect my values.

22. How spiritual a person do you consider yourself? (with “7” being the most spiritual)

1-7

4-part Classification System

To what extent are you a religious person?

not at all (0), slightly (1), moderately (2), and very religious/spiritual (3)

To what extent are you a spiritual person?

not at all (0), slightly (1), moderately (2), and very religious/spiritual (3)

Brief Multidimensional Measure of Religiousness and Spirituality [BMMRS] (Fetzer Institute / NIA Working Group, 1999)

Meaning

Scale (7-8): Strongly agree, Agree, Disagree, Strongly disagree

7. The events in my life unfold according to a divine or greater plan.
8. I have a sense of mission or calling in my own life.

Private Religious Practices

Scale (14-18): More than once a day, Once a day, A few times a week, Once a week, A few times a month, Once a month, Less than once a month, Never

14. How often do you pray privately in places other than a church or synagogue?
15. Within your religious or spiritual tradition, how often do you meditate?
16. How often do you watch or listen to religious programs on TV or radio?
17. How often do you read the Bible or other religious literature?
18. How often are prayers or grace said before or after meals in your home?

Religious or Spiritual Coping

Think about how you try to understand and deal with major problems in your life. To what extent is each of the following involved in the way you cope?

Scale (19-25): A great deal, Quite a bit, Somewhat, Not at all

19. I think about how my life is part of a large spiritual force.
20. I work together with God as partners.
21. I look to God for strength, support and guidance.
22. I feel God is punishing me for my sins or lack of spirituality.
23. I wonder whether God has abandoned me.
24. I try to make sense of the situation and decide what to do without relying on God.
25. To what extent is your religion involved in understanding or dealing with stressful situations in any way?

Organizational Religiousness

Scale (29-30): More than once a week, Every week or more often, Once or twice a month, Every month or so, Once or twice a year, Never

29. How often do you go to religious services?

30. Besides religious services, how often do you take part in other activities at a place of worship?

Religious Preference

31. What is your current religious preference?

Religious Support

These questions are designed to find out how much help the people in your congregation would provide if you need it in the future.

Scale (32-33): A great deal, Some, A little, None

32. If you were ill, how much would the people in your congregation help you out?

33. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation give you?

Sometimes the contact we have with others is not always pleasant.

Scale (34-35): Very often, Fairly often, Once in a while, Never

34. How often do the people in your congregation make too many demands on you?

35. How often are the people in your congregation critical of you and the things you do?

Theistic Belief (Gay & Lynxwiler, 2013)

Which statement below comes closest to expressing what you believe about God?

“I don’t believe in God”;

“I don’t know whether there is a God, and I don’t believe any way to find out”;

“I don’t believe in a personal God, but I do believe in a Higher Power of some kind”;

“I find myself believing in God some of the time, but not at others”;

“While I have doubts, I feel that I do believe in God”;

“I know God really exists and I have no doubts about it.”

Appendix E

Qualitative Items

1. For you, what does it mean to be spiritual?
2. Looking back at the questions you just responded to in this section, did any of these questions particularly fit your idea of what it means to be spiritual? If yes, please explain.
3. Looking back at the questions you just responded to in this section, did you find any of these questions challenging or difficult to answer? If yes, please explain.
4. How did this question fit or not fit the way you think about spirituality?
 - a. *"I feel guided by God in the midst of daily activities."*
5. How did this question fit or not fit the way you think about spirituality?
 - a. *"I can find meaning in times of hardship."*
6. How do your current religious/spiritual beliefs match or differ from those that you experienced as a child?
7. For you, what does it mean to be religious?
8. Looking back at the questions you just responded to in this section, did any of these questions particularly fit your idea of what it means to be religious? If yes, please explain.
9. How did this question fit or not fit the way **you** think about religion?
 - a. *"To what extent is your religion involved in understanding or dealing with stressful situations in any way?"*