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Five-Factor Model Personality Traits and Self-Classified Religiousness and Spirituality

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Abstract

A review of the literature investigating the relationship between religion and spirituality and broad personality traits reveals methodological limitations. The present study sought to contribute to the present literature by investigating differences on personality traits among men and women who identified as either religious only (R), spiritual only (S), both spiritual and religious (B), or neither spiritual nor religious (N). One thousand thirty-seven (1037) adults (*M* age = 36.34, SD = 12.62) participated online via Amazon's Mechanical Turk as part of a larger study and completed the IPIP-NEO-120, Spiritual Transcendence Scale, Duke University Religion Index, and demographic information. Results revealed that men were more likely to identify as R and N than women, and women were more likely to identify as B than men. Women showed more significant differences among Big Five traits than men. Compared to other women, R-women reported the lowest levels of Openness, Agreeableness, and Neuroticism, and highest levels of Extraversion. N-women reported the highest levels of Neuroticism, while S-women reported highest Openness. Among men, R-men reported the lowest Openness, and S-men reported the highest Openness. B-men reported higher Extraversion than N-men. Additionally, Big Five traits appeared to account for significantly more variance in self-reported religiousness for women than men. Implications of these findings and recommendations for future research are provided and discussed.

Keywords Big Five · Personality traits · Religion and spirituality · Psychology and religion

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Introduction

Religiousness and spirituality (R/S) have been at the center of surges in social scientific research (Hill and Pargament 2008). While historically at odds with each other, psychological literature has begun to pay greater attention to the scientific, cultural, and personal value of religion and spirituality (Hill et al. 2000; Miller and Thoresen 2003; Peterson 2002; Thouless 1971). In short, social scientists are beginning to consider that these factors uniquely and significantly contribute to the phenomenon and interpretation of human experience (Piedmont et al. 2008). While religiousness and spirituality are definitionally complex and inherently overlapping (see Harris, Howell, and Spurgeon 2018 for a content analysis of these terms), spirituality captures a "personal search for connection with a larger sacredness" (Piedmont 1999, p. 989). Religion reflects an "traditional or culturally sanctioned set of social beliefs and practices involving the Divine and sources of meaning" (Harris et al. 2018, p. 10), with personal, intrinsic religiousness defined as "the subjective importance of religion as a master motive in one's life" (Cohen et al. 2017, p. 1724).

Religion, Spirituality, and Psychological Constructs

Much work has suggested a link between increased R/S and psychological wellbeing (e.g., Bergin 1983; Koenig et al. 2012; Schreiber and Brockopp 2012). Additionally, Bonelli and Koenig's (2013) recent meta-analysis reported that increased religious and spiritual involvement resulted in significantly lower risk for developing neurodegenerative, stress-related, depressive, and substance use disorders. Moreover, several recent empirical studies have suggested that low levels of spirituality and religiousness may be related to clinically significant psychological distress and need for treatment (Lace and Handal 2017, 2018a). R/S may function as protective by promoting healthy behaviors of wellness, social fellowship, and consonant or comforting beliefs about one's existence (Idler 1987; Levin 2010; Yarhouse et al. 2016).

Meanwhile, the mental health literature has shifted from examining mental illness and psychological dysfunction as solely state-based phenomena to examining the role that enduring personality traits (such as the Big Five personality factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) play in the development and maintenance of mental disorders. Of particular interest to this study is how personality traits interact with R/S as a whole, as well as how they relate to perceptions of religious and spiritual identity.

The Big Five traits, also called the Five-Factor Model (FFM), are intra-individually stable, trait-like characteristics that influence ways in which people perceive the world, think, and behave (Cobb-Clark and Schurer 2012; DeYoung and Gray 2009). FFM traits are among the most culturally generalizable and most robustly validated psychological constructs (Goldberg 1990; John and Srivastava 1999; Kajonius and Mac Giolla 2017; McAdams and Pals 2006; Rolland 2002). Many factors interact to produce individual personalities, with recent work identifying an underlying biological basis for personality development (e.g., Dochtermann et al. 2015; Jang et al. 2002). Resultantly, it may be that religiousness, and perhaps spirituality

by extension, "can be conceptualized as a characteristic adaptation that some people in some cultural contexts adopt to 'fulfill' or express basic personality tendencies" (McCullough et al. 2003, p. 981).

Before discussing how these factors relate to R/S, a brief description of the five aforementioned traits is warranted. Neuroticism is the tendency to experience and express negative emotionality. Extraversion captures one's sociability, excitability, and tendency to be outgoing. Openness reflects an individual's imagination, curiosity, and production/acceptance of novel ideas. Agreeableness is the tendency to be friendly, compassionate, and warm to others. Finally, Conscientiousness reflects orderliness, responsibility, diligence, and achievement-striving (Barrick and Mount 1991; DeYoung et al. 2007; McCrae and Costa 1997; Soto and John 2017). In light of the important and enduring role that both personality traits and R/S play in many individuals' lives, it is not surprising that numerous studies have examined how these two domains are related.

Review of Empirical Research

Regarding religiousness, Saroglou's (2002) seminal meta-analysis reported that religiousness was significantly and positively correlated with Agreeableness ($r = .20$), Conscientiousness ($r = .17$), and Extraversion ($r = .10$) and was negatively correlated with Openness ($r = -.06$). Saroglou (2002) reported a nonsignificant correlation between religiousness and Neuroticism ($r = .00$). In a follow-up meta-analysis, Saroglou (2009) reported that religiousness was positively correlated with Agreeableness ($r = .19$) and Conscientiousness ($r = .16$), but not correlated with Openness ($r = -.04$). Interestingly, it appears that Neuroticism may also be related to religiosity, although findings on this relationship are somewhat varied. For example, Saroglou (2002) and Saroglou and Muñoz-García (2008) reported *extrinsic* religiosity (i.e., the use of religiousness to obtain sociability, security, or status) correlated positively with Neuroticism ($r = .11$). However, other research has found no correlation between Neuroticism and general religiosity ($r = .04$; Unterrainer et al. 2014) or between Neuroticism and *intrinsic* religiosity (i.e., strong dedication to one's religious values or beliefs without explicit external gain; $r = .00$; Piedmont 1999). Additionally, other work has reported negative correlations between religiosity and Neuroticism ($r = -.13$; Abdel-Khalek 2010). Thus, while it appears that religiosity is indeed significantly (and positively) correlated with Extraversion, Agreeableness, and Conscientiousness, the relationship between religiosity and both Openness and Neuroticism remains unclear.

Regarding spirituality, MacDonald (2000) reported that one's cognitive orientation toward spirituality significantly positively correlated with Agreeableness ($r = .30$), Conscientiousness ($r = .26$), Openness ($r = .22$), and Extraversion ($r = .15$), but not Neuroticism ($r = -.06$), with similar findings reported by Saroglou's (2009) meta-analysis. MacDonald (2000) also found that the phenomenological *experience* of spirituality was positively correlated with Openness ($r = .33$) and Extraversion ($r = .14$). In a more recent study, Labbé and Fobes (2010) reported that those who self-reported high levels of spirituality reported significantly higher Agreeableness,

Extraversion, and Conscientiousness and significantly *lower* Neuroticism than those who self-reported low levels of spirituality. Womble et al. (2013) reported similar findings, in that spirituality was significantly negatively correlated with Neuroticism ($r = -.37$) and positively correlated with Conscientiousness ($r = .51$). In all, it is likely that R/S correlates positively with Agreeableness, Conscientiousness, and Extraversion, and negatively with Neuroticism. However, increased Openness may correspond to increased spirituality but *decreased* religiousness.

While most research regarding R/S and personality is correlational in nature, some work has suggested the importance of multivariate approaches to explain variance within religiousness and spirituality using FFM traits. For example, in a sample of Israeli undergraduates, Roccas et al. (2002) reported that the FFM accounted for 8% of the variance in self-reported religiosity. Follow-up studies have reported that the FFM accounted for approximately 10% of the variance in self-reported spirituality and approximately 8% of the variance in religiosity in a sample of university students (Henningsgaard and Arnau 2008). Similarly, in a sample of Spanish students, Saroglou and Muñoz-García (2008) noted that the FFM accounted for 7% of the variance in spirituality and 11% of the variance in religiosity.

Although some studies have compared FFM traits among different religious and spiritual individuals, research on this topic is relatively limited. One study investigating this topic was conducted by Taylor and MacDonald (1999), who explored the FFM in a sample of Canadian undergraduate students who identified as either Catholic, Other Christian, Other Religion (i.e., non-Christian), or No Religion. In the overall sample, the researchers noted that those reporting No Religion tended to report highest Neuroticism and lowest Extraversion, Agreeableness, and Conscientiousness. Follow-up analyses revealed that women who identified as No Religion also reported higher Neuroticism than religious women, but that men of different religious preferences did *not* differ among FFM traits. The researchers concluded that "the relation of religion to [FFM personality traits] is impacted in complex ways by sex" (p. 1255).

In a different study, Galen and Kloet (2011) investigated group differences on FFM traits among American adults. The researchers reported that religious respondents tended to report lower Openness than atheist and agnostic people, and that religious people trended toward reporting higher levels of Conscientiousness and Agreeableness. Notably, the researchers did not identify differences on FFM traits between religious participants and spiritual participants. Further, they attempted to predict whether participants were churchgoing or non-churchgoing and reported that FFM traits accounted for approximately 5% of group membership variance above and beyond demographic variables (e.g., sex, age, marital status). Specifically, the researchers stated that decreased Openness and increased Agreeableness were significantly individually predictive of churchgoers, in line with previous correlational research (e.g., Saroglou 2002, 2009).

Schnell (2012) investigated personality differences between Austrian university students who were religious and spiritual (i.e., both) or spiritual but not religious (i.e., spiritual only). In general, commensurate with previously reviewed studies, Schnell (2012) reported positive correlations between self-reported religiosity and Agreeableness ($r = .34$) and Conscientiousness ($r = .15$), negative correlations

between religiosity and Neuroticism ($r = -.27$), and positive correlations between self-reported spirituality and Extraversion ($r = .21$), Openness ($r = .32$), and Agreeableness ($r = .24$). Moreover, Schnell (2012) described that spiritual-but-not-religious individuals reported significantly higher Neuroticism and lower Agreeableness than religious-and-spiritual persons.

Streib et al. (2016) investigated FFM traits via the NEO-PI-R (Costa and McCrae 1992) among four classifications of R/S (i.e., both spiritual and religious [B], more religious than spiritual [R], more spiritual than religious [S], and neither spiritual nor religious [N]) in 1113 Americans. Compared to normative data, Streib et al. (2016) noted that each group reported significantly greater Neuroticism. Furthermore, Streib and colleagues found that when compared to normative data, B-individuals reported greater Extraversion and Openness, and lower Conscientiousness; R-individuals reported lower Agreeableness and Conscientiousness; S-individuals reported greater Extraversion and Openness, and lower Agreeableness and Conscientiousness; and N-individuals reported greater Openness, and lower Extraversion, Agreeableness, and Conscientiousness.

In general, these studies suggested that religion and spirituality and their involvement may relate to unique presentations regarding FFM traits. Certainly, Openness may be related to diminished fundamentalism and adherence to traditional values (Saroglou 2002; Trapnell 1994) and thus contribute to a separation from religious beliefs. Conscientiousness may "tap into diligence or strong values" (Galen and Kloet 2011, p. 222) and contribute to routinized religious practice (e.g., ritual attendance of religious services). Agreeableness may relate to the social structure provided by religion (Idler 1987), such that religious individuals may have greater interpersonal involvement. Similarly, Extraversion may relate to greater interpersonal contact in religious circles or capacity for positive emotionality observed in those reporting high levels of religiousness (Saroglou 2002).

Three Methodological Limitations

Although the presented studies provide interesting information on the relationship between personality and R/S, they are limited by three primary methodological limitations. The first limitation involves samples of participants. The samples recruited in the reviewed literature were not demographically equivalent, but rather varied considerably. For example, much available research related to these constructs has recruited university students (Henningsgaard and Arnau 2008; Saroglou and Muñoz-García 2008; Schnell 2012; Taylor and MacDonald 1999) while Streib et al.'s (2016) and Galen and Kloet's (2011) samples incorporated adults. Further, sample sizes in the literature reviewed reportedly ranged considerably, with samples as small as 135 (Schnell 2012) to those as large as 1113 (Streib et al. 2016). Thus, widespread generalizations made between such studies should be made with caution.

The second limitation involves the operational definitions of religion and spirituality and group comparisons employed in previous literature. While sometimes considered "overlapping circles" (Underwood 2011, p. 30), religiousness and spirituality (R/S) must be considered definitionally unique and treated as

distinct, yet related, constructs (see Harris et al. 2018). Thus, the emphasis on tradition, rituals, and institutionalized beliefs is what perhaps best distinguishes religiousness from spirituality, as the latter emphasizes *personal* connection with the sacred more than routinized ritual behavior or institutional beliefs (Piedmont 1999). As described above, the authors provided clear operational definitions for these terms for use in the present paper, and have selected appropriate measures (see below) to reflect these definitions.

Furthermore, not all who identify as religious necessarily describe themselves as spiritual (and vice versa). In fact, most Americans reported that religiousness and spirituality are different and interdependent concepts (Marler and Hadaway 2002), with complex interrelationships (Zinnbauer et al. 1997). Nonetheless, since the 1990s, researchers began identifying that some persons rejected institutionalized religion and preferred an individualized, personal search for spiritual meaning (Hill et al. 2000), while others rejected both religion and spirituality altogether (Roof et al. 1999; Zinnbauer et al. 1997). Distinguishing religion as distinct from (yet related to) spirituality has subsequently yielded the possibility for four self-classifications along these two dimensions. That is, individuals may identify as either: religious only; spiritual only; both religious and spiritual; or neither religious nor spiritual (Delaney 2016).

Of the studies reviewed, only Streib et al. (2016) operationally defined group membership according to this understanding of religion and spirituality. Schnell (2012) investigated differences between those who were religious *and* spiritual and those who were spiritual only while neglecting to recruit and include participants who were either religious only or neither religious nor spiritual. Other research has grouped participants according to churchgoing or non-churchgoing (Galen and Kloet 2011) or recruited groups of Catholics, Protestants, other religious faiths, and those of no religious preference (Taylor and MacDonald 1999).

The third methodological limitation involves the infrequent investigation of gender differences. A notable exception to this general limitation is Taylor and MacDonald (1999), who did investigate the role of gender in their analyses. However, most other researchers have not conducted separate analyses in subsamples by gender within their sample, despite such differences being widely reported in both personality research (e.g., Feingold 1994; Kajonius and Mac Giolla 2017) and in work on spirituality and religion in psychology (e.g., Francis 1997; Maselko and Kubzansky 2006; Schnabel 2015). Broadly, women may tend to report greater levels of religiousness, spirituality, Neuroticism, Extraversion, Openness, and Agreeableness (Costa et al. 2001; Francis and Penny 2014; Underwood 2011) than men, with both biological and social mechanisms identified as possibly mediating such differences (Wood and Eagly 2002). Furthermore, religious and spiritual concerns may be of unique salience for women (Handal et al. 2017), and relate to differences in psychological factors of greater magnitude compared to men. In fact, it may be inappropriate to "assume effects are uniform for men and women" (Maselko and Kubzansky 2006, p. 2848), such that in research related to religion and spirituality it may be prudent to perform separate analyses by gender to identify differential patterns of relationships.

The Present Study

To date, no study has compared FFM personality traits and facets among religious/spiritual groups, according to the understanding that these constructs are unique yet related, in men and women. While Taylor and MacDonald (1999) investigated related questions in a sample of university students, the researchers recruited only those who identified as Catholic, Other Christian, Other Religion, or No Religion. The present study sought to expand on this body of literature between religion, spirituality, and personality factors through a cross-sectional survey-based study with an online sample of Americans. The possible implications of the present study are empirical by using multivariate approaches, theoretical by building a foundation for future speculation regarding mediating processes, and practical as differences may have clinical or otherwise applicable relevance to those in professional psychological or religious settings.

The authors had several hypotheses. First, it was predicted that women would report greater levels of religiousness, spirituality, Neuroticism, Extraversion, and Agreeableness than men. Second, it was predicted that participants self-classifying as both spiritual and religious (B) and religious only (R) would report higher levels of religiousness than spiritual only (S) and neither spiritual nor religious (N) persons; additionally, it was predicted that B- and S-participants would report significantly higher levels of spirituality than R- and N-persons. Third, for both men and women, it was predicted that R-, S-, and B-participants would report higher Agreeableness, Conscientiousness, and Extraversion and lower Neuroticism compared to N-participants. Finally, it was predicted that Big Five factors would account for more variance in spirituality and religiousness for women than in men.

Methods

Participants

Participants were recruited through Amazon's Mechanical Turk (mTurk) marketplace. Samples recruited from mTurk have been shown to better represent many demographic characteristics of the United States (compared to university-based convenience samples) and are widely used in survey-based research designs for large samples (Buhrmester et al. 2011; Casler et al. 2013; Paolacci and Chandler 2014; Sprouse 2011). See Arditte et al. (2016) and Buhrmester et al. (2018) for reviews of the platform and guidelines for contemporary use.

One thousand forty-one (1041) participants completed the survey. Three individuals identified as "Other" gender and were thus excluded from analyses due to the present study's focus. One participant did not report their age. As such, the total sample included 1037 individuals, with 332 men (32%) and 705 women (68%). Participants ranged in age from 18 to 80, with a mean age of 36.34 years (SD = 12.62). Participants reported mean level of education as 15.04 years (SD = 2.33), and a mean estimated annual income of $58,441 (SD = $52,584). Participants were predominantly Caucasian (73%), with others identifying as Asian or Asian American

(9%), Black or African American (9%), Hispanic or Latino/a (5%), Multiracial (3%), or Other (1%). Within the USA, most participants reported living in Southeastern states (30%), with others living in the Northeast (22%), Midwest (20%), West (16%), and Southwest (12%). Participants were predominantly Protestant (39%), with 15% Catholic, 14% Agnostic, 9% Atheist, 2% Jewish, 2% Buddhist, 1% Hindu, and 1% Muslim. The remaining participants (17%) reported "Other" faith identity.

Measures

IPIP-NEO-120

The IPIP-NEO-120 (Johnson 2014) is a 120-item, public domain measure of Big Five traits of personality. It was created to serve as a shorter form of the original 300-item IPIP-NEO (Goldberg 1999) while providing similarly excellent psychometric properties. IPIP-NEO-120 items are derived from set of public domain items designed to assess facets of an individual's personality that are directly related to the Big Five traits. Items are responded to on a five-point Likert scale, and reverse scored items are corrected such that greater total scores reflect higher levels of the personality trait.

The IPIP-NEO-120 has robust psychometric properties, with excellent internal consistency among the five broad personality trait scales (Johnson 2014), strong concurrent validity between its scales and analogous scales on the NEO-PI-R (mean $r = .91$; Johnson 2014) and excellent cross-cultural validity (Kajonius 2017; Kajonius and Mac Giolla 2017). The IPIP-NEO-120 is widely used in current psychological literature as a public domain analog to the NEO-PI-R (Costa and McCrae 1992), considered a "gold-standard" measure of broad, non-pathological personality traits. Overall, construct validity has been shown through excellent degree of similarity between IPIP-NEO-120 and NEO-PI-R profiles (rICC = .97; Maples et al. 2014). Internal consistencies for the traits were good-to-excellent in the present sample (Openness $\alpha = .81$; Conscientiousness $\alpha = .91$; Extraversion $\alpha = .88$; Agreeableness $\alpha = .88$; Neuroticism $\alpha = .92$). Example items of each trait are shown in Table 1.

Self-Classification of Spirituality/Religiousness

Participants were asked, "Which of the following best describes you?" and were able to classify themselves as either: religious only (R); spiritual only (S); both spiritual and religious (B); or neither religious nor spiritual (N).

Duke University Religion Index

The Duke University Religion Index (DUREL; Koenig et al. 1997) is a five-item measure that assesses three dimensions of religiousness: organized religious activity; nonorganized religious activity; and intrinsic religiosity. It is widely used throughout social scientific literature on religious and spiritual topics and has well validated psychometric properties in various samples (Koenig and Büssing 2010; Lace and

Table 1 Example items from each included measure

Openness	"Believe in the importance of art," "Love to daydream"
Conscientiousness	"Am always prepared," "Like to tidy up"
Extraversion	"Love large parties," "Radiate joy"
Agreeableness	"Am concerned about others," "Trust what people say"
Neuroticism	"Worry about things," "Get irritated easily"
DUREL-IR	"I try hard to carry my religion over into all other dealings in life"
STS	
Prayer fulfillment	"I find inner strength/peace from my prayers/meditations"
Universality	"There is a higher plane of consciousness or spirituality that binds all people"
Connectedness	"I still have strong emotional ties with someone who has died"

See Johnson (2014) for IPIP-NEO-120 items, Koenig and Büssing (2010) for DUREL-IR items, and Piedmont (1999) for STS items

Handal 2018b; Plante et al. 2002; Storch et al. 2004). The three-item intrinsic religiosity subscale (DUREL-IR) was chosen to represent religiousness, and its internal consistency ($\alpha = .91$) was excellent in the present sample. An example item is shown in Table 1.

Spiritual Transcendence Scale

The Spiritual Transcendence Scale (STS; Piedmont 1999) is a multidimensional measure of spirituality that contains 24 items answered from (1) Strongly Disagree to (5) Strongly Agree. It assesses three facets of spirituality: Prayer Fulfillment ($\alpha = .89$), Universality ($\alpha = .90$), and Connectedness ($\alpha = .68$). The STS is used widely and has shown robust cross-cultural stability in ethnically and religiously diverse populations (Piedmont 2007; Piedmont and Leach 2002; Rican et al. 2010). Internal consistencies for the STS' three facets were acceptable to excellent (αs ranged from .68 to .90), and the total STS was excellently internally consistent ($\alpha = .93$). Example items are shown in Table 1.

Demographic Questionnaire

Participants completed a brief demographic questionnaire that gathered information regarding participants' age, gender, ethnic identity, geographic region (e.g., Midwestern, Southeastern USA), approximate annual income, faith identify, and self-classification of religious/spiritual belief.

Procedure

The participating university's institutional review board approved the study before data collection began. Data were collected online via Amazon mTurk and individuals participated as part of a larger study. The study's rationale and general outline were provided to participants via mTurk, and voluntary election to participate in and

complete the survey served as satisfactory provision of informed consent. Participants were presented with measures in the following order: demographic questionnaire, IPIP-NEO-120, STS, and DUREL-IR. Data validity checks were embedded throughout the survey, and only those responding with valid data were retained in the present sample.

The protocol was completed in approximately 15 min per participant. Financial compensation in the amount of $0.10 was provided to each participant via electronic transfer after participation. The amount of $0.10 was deemed appropriate for the present study and was noted to be relatively higher than a commonly distributed financial reward of $0.05 (Difallah et al. 2015).

Statistical Analyses

All analyses were performed with SPSS 25.0. Whenever possible, all analyses involving group differences and regression models were performed controlling for participant age. Although some personality experts have argued that age need not always be considered in personality research and assessment (McCrae et al. 2005), age was chosen as a covariate due to the standard set by previous research that has done so (e.g., Streib et al. 2016).

First, Chi-square tests were performed to determine whether differences existed between men and women regarding the proportion belonging to each self-classified R/S group. Next, a multivariate analysis of covariance (MANCOVA) was performed, with gender as the independent variable, religiousness, spirituality, and FFM traits as dependent variables, and participants' age as the control variable. Results revealed significant differences on raw scores of FFM traits between men and women ($F(7, 1028) = 23.45$, $p < .001$, Wilks' $\Lambda = .86$, partial $\eta^2 = .14$.), as women tended to report greater levels of religiousness, spirituality, Openness, Conscientiousness, Agreeableness, and Neuroticism ($ps < .01$). Because of this finding, the sample was separated by gender.

Next, a series of MANCOVAs, controlling for participant age, were performed to determine whether differences existed among R/S groups on the DUREL-IR, STS, and IPIP-NEO-120 traits. Each MANCOVA was followed up with Bonferroni-corrected pairwise comparisons. To increase parsimonious presentation of results and ease of interpretation, participants' raw scores on each of the IPIP-NEO-120 traits were converted to *T*-scores ($M = 50$, $SD = 10$) according to the mean and standard deviation of the appropriate sample (i.e., men or women). Of note, NEO-PI-R scores can be expressed in *T*-scores based on respondents' gender (Costa and McCrae 1992).

Following these MANCOVAs, a series of hierarchical multiple regressions were performed in order to determine the amount of variance in spirituality (measured by STS total score) and religiousness (measured by DUREL-IR intrinsic religiosity score) that could be accounted for by FFM traits after controlling for participant age. *R* values pertaining to each hierarchical regression analysis were statistically compared via Fisher *r*-to-z transformations (Lenhard and Lenhard 2014).

Results

Differences among Self-Classified Religious/Spiritual Groups

Chi-square tests revealed significant differences between men and women regarding proportion of self-classified religious/spiritual groups, χ^2 (3, $N = 1037$) = 30.17, $p < .001$. Men (22.9%) and women (25.1%) did not differ on proportion identifying as S. Women (44.3%) were more likely than men (29.8%) to identify as B. Men (28.9%) were more likely than women (19.7%) to identify as N and R (men = 18.4%, women = 10.9%). Notably, although men were more likely to identify as R than women, a follow-up ANCOVA (controlling for age) revealed that women reported higher levels of religiousness than men on DUREL-IR total scores, $F(1, 1034) = 12.93$, $p < .001$, partial $\eta^2 = .01$.

Correlations Among Religiousness, Spirituality, and Personality Traits

Bivariate correlation coefficients were calculated between each pair of variables in the present study. Correlation coefficients are shown in Tables 2 (combined sample) and 3 (subsamples separated by gender). In the combined sample, all correlations between the DUREL-IR and personality traits were significant (though low in magnitude; Mukaka 2012) ranged from −.28 to .22. All correlations between the STS and personality traits were significant and low-to-moderate in magnitude and ranged from −.26 to .42. Both the STS and DUREL-IR correlated positively with Conscientiousness, Extraversion, and Agreeableness and negatively with Neuroticism. Openness correlated positively with the STS and negatively with the DUREL-IR. The pattern of correlation coefficients was similar in the samples of men and women, as well; however, the correlation between Openness and DUREL-IR was *insignificant* ($p > .05$) for men.

Table 2 Correlation coefficients for dependent variables in the combined sample

Variable	1	2	3	4	5	6	7
1 Openness	–						
2 Conscientiousness	.03	–					
3 Extraversion	.19	.36	–				
4 Agreeableness	.29	.46	.10	–			
5 Neuroticism	.02	−.59	−.52	−.28	–		
6 STS	.17	.23	.42	.19	−.26	–	
7 DUREL-IR	−.15	.20	.22	.12	−.28	.58	–
8 Age	−.13	.25	<.01	.25	−.32	.16	.21

$N = 1037$

Correlation coefficients ≥ .06 are significant at $p < .05$. Coefficients ≥ .08 significant at $p < .01$. Coefficients ≥ .10 significant at $p < .001$

Table 3 Correlation coefficients for dependent variables in the separated samples of men (above the diagonal) and women (below the diagonal)

Variable	1	2	3	4	5	6	7	8
1 Openness	–	.09	.28	.26	−.03	.25	−.02	−.16
2 Conscientiousness	<.01	–	.28	.44	−.58	.17	.12	.24
3 Extraversion	.15	.40	–	.04	−.47	.51	.21	−.08
4 Agreeableness	.31	.46	.12	–	−.30	.11	.12	.19
5 Neuroticism	.05	−.60	−.55	−.28	–	−.14	−.16	−.20
6 STS	.13	.27	.37	.24	−.32	–	.57	.01
7 Religiosity	−.22	.23	.23	.12	−.34	.57	–	.06
8 Age	−.12	.25	.04	.28	−.37	.23	.27	–

Men $n = 332$. Women $n = 705$

For men, correlation coefficients ≥ .11 are significant at $p < .05$. Coefficients ≥ .14 significant at $p < .01$. Coefficients ≥ .18 significant at $p < .001$. For women, correlation coefficients ≥ .07 are significant at $p < .05$. Coefficients ≥ .10 significant at $p < .01$. Coefficients ≥ .12 significant at $p < .001$

Differences on Religiousness and Spirituality

To determine whether self-classified R/S groups differed on levels of religiousness and spirituality, two multivariate analyses of covariance (MANCOVAs) were conducted. Self-classified R/S group was the independent variable, and the DUREL-IR and STS were the dependent variables. Age was entered as the covariate. Results are displayed in Table 4. For men, the MANCOVA was significant, $F(6, 652) = 55.39$, $p < .001$, Wilks' $\Lambda = .44$, partial $\eta^2 = .34$. For women, the MANCOVA was also

Table 4 Differences among religiousness and spirituality among self-described religious/spiritual men and women controlling for participant age

Trait	R ($n = 61$) EMM[a]	S ($n = 76$) EMM	B ($n = 99$) EMM	N ($n = 96$) EMM	Sig. differences*
Men					
DUREL-IR	10.54	7.26	11.17	4.27	N < S < R, B
STS	75.16	78.00	86.88	60.12	N < S, R < B
Trait	R ($n = 77$) EMM	S ($n = 177$) EMM	B ($n = 312$) EMM	N ($n = 139$) EMM	Sig. differences*
Women					
DUREL-IR	11.05	7.81	11.55	4.62	N < S < R, B
STS	80.54	82.02	85.71	63.92	N < S, R < B

$N = 1037$. R = Religious only. S = Spiritual only. B = Both spiritual and religious. N = Neither spiritual nor religious. Standard deviations cannot be calculated for estimated marginal means. n.s. = no significant differences

*$p < .05$. *Bonferroni corrected $p < .05$

[a]EMM = Estimated marginal mean with covariate of age evaluated at 35.49 for men and 36.74 for women

significant, $F(6, 1398) = 101.29$, $p < .001$, Wilks' $\Lambda = .49$, partial $\eta^2 = .34$. The same pattern of results was observed in both men and women. B- and R-participants reported significantly higher DUREL-IR scores than both S- and N-participants. S-participants reported higher DUREL-IR scores than N-participants. Additionally, B-participants reported higher STS scores than all other groups, and S- and R-participants reported higher STS scores than N-participants (all $ps < .05$). Notably, S- and R-participants did *not* significantly differ on their STS scores ($ps > .05$).

Differences on Personality Traits

Two additional MANCOVAs were conducted. Self-classified R/S group was the independent variable, and FFM traits were dependent variables. Age was entered as the covariate. Results for men and women are displayed in Table 5 and presented visually in Figs. 1 and 2. For men, the MANCOVA was significant, $F(15, 892) = 5.38$, $p < .001$, Wilks' $\Lambda = .83$, partial $\eta^2 = .06$. Of the FFM traits, only Openness and Extraversion showed significant differences per univariate follow-up results. S-men tended to report highest levels of Openness, while R-men tended to report lowest Openness. B-men tended to report highest levels of Extraversion. For women, the MANCOVA was also significant $F(15, 1922) = 12.41$, $p < .001$, Wilks'

Table 5 Differences among FFM traits among self-described religious/spiritual men and women controlling for participant age

Trait	R ($n = 61$) EMM[a]	S ($n = 76$) EMM	B ($n = 99$) *EMM*	N ($n = 96$) *EMM*	Sig. differences*
Men					
Openness	45.70	54.68	49.93	49.11	R < B, N < S
Conscientiousness	48.50	50.22	52.01	48.67	–
Extraversion	49.06	49.97	52.95	47.51	N < B
Agreeableness	48.95	48.80	51.73	49.80	–
Neuroticism	50.35	51.14	48.34	50.58	–
Trait	R ($n = 77$) EMM	S ($n = 177$) EMM	B ($n = 312$) EMM	N ($n = 139$) EMM	Sig. differences*
Women					
Openness	44.93	54.17	48.29	51.34	R < B < N, S
Conscientiousness	51.53	49.41	50.68	48.38	–
Extraversion	52.02	50.36	51.31	45.48	N < S, B, R
Agreeableness	47.50	50.05	50.81	49.51	R < B
Neuroticism	48.26	50.01	48.80	53.65	R, B, S < N

$N = 1037$. R = Religious only. S = Spiritual only. B = Both spiritual and religious. N = Neither spiritual nor religious. Standard deviations cannot be calculated for estimated marginal means. . n.s. = no significant differences

*$p < .05$. *Bonferroni corrected $p < .05$

[a]EMM = Estimated marginal mean with covariate of age evaluated at 35.49 for men and 36.74 for women

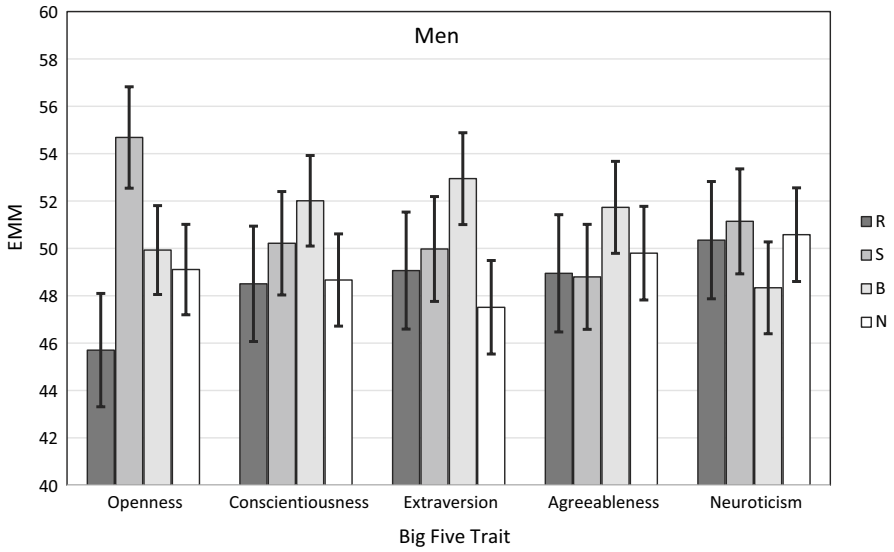

Fig. 1 Differences among FFM traits for male participants who self-classify as religious only (R), spiritual only (S), both religious and spiritual (B), or neither religious nor spiritual (N). *Note*: EMM = estimated marginal means of the FFM *T*-scores with covariate of age evaluated at 35.49. Error bars represent the upper and lower bounds of the 95% confidence interval for the EMM

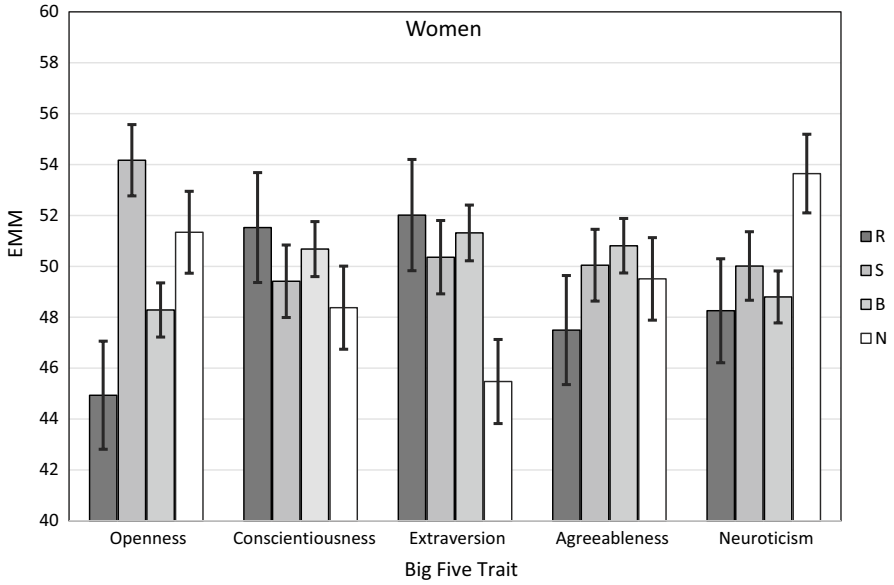

Fig. 2 Differences among FFM traits for female participants who self-classify as religious only (R), spiritual only (S), both religious and spiritual (B), or neither religious nor spiritual (N). *Note*: EMM = estimated marginal means of the FFM *T*-scores with covariate of age evaluated at 36.74. Error bars represent the upper and lower bounds of the 95% confidence interval for the EMM

$\Lambda = .83$, partial $\eta^2 = .06$. Univariate follow-ups revealed significant differences on four of the Big Five traits for women. R-women tended to report the lowest levels of Openness, Agreeableness, and Neuroticism, and the highest levels of Extraversion. S-women tended to report highest Openness, while N-women reported highest levels of Neuroticism and B-women tended to report the highest levels of Agreeableness. No differences emerged on Conscientiousness.

Accounting for Variance in Spirituality and Religiousness with Personality Traits

A series of hierarchical multiple regression analyses (Tables 2, 3) were performed with the STS and DUREL-IR scores as the outcome variables, age as a control variable (Step 1), and FFM traits as predictor variables (Step 2). Regarding religiousness, for men, FFM traits accounted for 9% of variance of DUREL-IR scores after controlling for age (0% variance), with decreased Openness, increased Extraversion, and increased Agreeableness significantly predicting men's religiousness. For women, FFM traits accounted for 12% variance of DUREL-IR scores after controlling for age (7% variance). Specifically, decreased Openness and Neuroticism and increased Extraversion and Agreeableness significantly predicted women's DUREL-IR scores. Statistical comparison of each model's R values (Table 4) revealed that the final model accounting for variance of DUREL-IR scores for women was significantly more predictive than the model for men ($p = .01$).

Regarding spirituality for men, FFM traits accounted for 30% of variance in STS scores after controlling for age (0% variance). Men's spirituality was significantly predicted by increased Extraversion and Neuroticism. For women, 16% of the variance was accounted for by FFM traits after controlling for age (5% variance), with increased Openness, Extraversion, and Agreeableness emerging as significant individual predictors. Comparison of each model's R values revealed that the final model accounting for variance of STS scores for men was nearly statistically significantly different than the model for women ($p = .07$). Furthermore, for men, the final model accounting for variance in STS scores was significantly greater than that accounting for variance in DUREL-IR scores ($p < .01$). However, for women, the models accounting for STS scores and DUREL-IR scores were not statistically significantly different ($p = .64$) (Tables 6, 7, 8).

Discussion

The present study sought to contribute to the literature by understanding differences on broad personality traits (i.e., Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) among people of differently self-classified religiousness and spirituality with care taken to address methodological limitations seen in previous literature. Results revealed several primary findings. First, gender differences emerged among self-described religiousness/spirituality. Men and women were equally likely to identify as spiritual only (S). However, men were significantly more likely than women to identify as neither religious nor spiritual (N), while women

Table 6 Regression models of personality traits predicting spirituality (STS) for men and women

	B (SE)	β	t	sp^2	R^2
Men					
(Step 1) Age	.01 (.09)	.01	.12	.00	
Constant	74.55 (3.43)	–	21.75*	–	.00
(Step 2) Age	.12 (.08)	.07	1.48	.01	
Openness	.14 (.10)	.07	1.38	.01	
Conscientiousness	.13 (.12)	.07	1.10	.00	
Extraversion	1.14 (.11)	.58	10.07*	.24	
Agreeableness	.18 (.11)	.09	1.61	.01	
Neuroticism	.43 (.13)	.22	3.38*	.03	
Constant	− 30.53 (13.85)	–	− 2.20*	–	Total = .30
Women					
(Step 1) Age	.30 (.05)	.01	6.22*	.05	
Constant	68.77 (1.90)	–		–	.05
(Step 2) Age	.23 (.05)	.17	4.44*	.03	
Openness	.14 (.07)	.08	2.11*	.01	
Conscientiousness	.03 (.08)	.02	.42	.00	
Extraversion	.51 (.07)	.30	7.01*	.07	
Agreeableness	.18 (.07)	.10	2.43*	.01	
Neuroticism	− .11 (.09)	− .06	− 1.25	.00	
Constant	34.07 (9.10)	–	3.74*	–	Total = .21

*$p < .05$

were more likely to identify as both religious and spiritual (B). Further, follow-up results revealed that women reported greater levels of religiousness than men. This is in line with extensive previous literature suggesting that women tend to identify more strongly with religion and spirituality than men (e.g., Francis 1997; Maselko and Kubzansky 2006; Schnabel 2015). However, a somewhat surprising finding was that men were more likely to identify as religious only (R) than women. This may be because that while men tend to report lower levels of religiousness when using rating scales, they may be more inclined to self-identify as religious when given alternative options. Other work has identified a similar phenomenon, such that, "despite their unchurched status, however, most [Americans] claim to be strongly religious on a personal level" (Fuller et al. 2001, p. 1). Perhaps men are likely to identify with institutionalized religion due to its relative emphasis on doctrine and teachings compared to spirituality's emphasis on *relational* aspects. Similarly, women who identify as religious may more naturally also identify as spiritual, possibly in part to sociocultural aspects and relational differences between men and women (de Vaus and McAllister 1987). Further, perhaps those who identify as religious only are more traditional and conservative (as noted by R-men reported lower Openness), and these individuals may more likely be men. However, these possibilities remain speculative, and future research is needed to determine the possible mediating and moderating aspects of these relationships.

Table 7 Regression models of personality traits predicting religiousness (DUREL-IR) for men and women

	B (SE)	β	t	sp^2	R^2
Men					
(Step 1) Age	.02 (.02)	.06	1.15	.00	
Constant	7.42 (.69)	–	10.79*	–	.00
(Step 2) Age	.01 (.02)	.04	.66	.00	
Openness	− .04 (.02)	− .11	− 1.93	.01	
Conscientiousness	− .01 (.02)	− .02	− .25	.00	
Extraversion	.07 (.02)	.24	3.59*	.04	
Agreeableness	.04 (.02)	.14	2.19*	.01	
Neuroticism	− .01 (.02)	− .02	− .24	.00	
Constant	3.22 (3.23)	–	.99	–	Total = .07
Women					
(Step 1) Age	.08 (.01)	.27	7.37*	.07	–
Constant	6.11 (.44)	–	13.82*	–	.07
(Step 2) Age	.05 (.01)	.15	3.89*	.02	
Openness	− .08 (.01)	− .24	− 6.40*	.05	
Conscientiousness	.00 (.01)	− .01	− .15	.00	
Extraversion	.05 (.01)	.17	3.87*	.02	
Agreeableness	.03 (.01)	.09	2.19*	.01	
Neuroticism	− .04 (.01)	− .16	− 3.10*	.01	
Constant	10.28 (2.21)	–	4.66*	–	Total = .19

*$p < .05$

Table 8 Hierarchical regression model comparisons

Model	R_1 (% var.)	R_2 (% var.)	p
DUREL-IR men–STS men	.27 (7)	**.55** (30)	< .01
DUREL-IR women–STS women	.44 (19)	.46 (21)	.64
DUREL-IR men–DUREL-IR women	.27 (7)	**.44** (19)	.01
STS men–STS women	.55 (30)	.46 (21)	.07

Values presented in boldface are significantly greater than their comparison value

Additionally, bivariate correlations among the variable of interest were broadly commensurate with those observed in previous research. In general, religiousness and spirituality demonstrated low-to-moderate strength correlations with personality traits. Religiousness and spirituality generally correlated positively with Conscientiousness, Extraversion, and Agreeableness and negatively with Neuroticism. Openness, however, demonstrated a different pattern: it correlated positively with spirituality, but negatively with religiousness (in the combined and women-only sample). The correlation between Openness and spirituality was nonsignificant for men only. It may be that this relationship is stronger for women than men, although the authors are unfamiliar with any extant research specifically discussing sex and

gender differences related to these two constructs. As such, the general pattern of correlations between personality traits and R/S was broadly in line with that of previous work (e.g., Abdel-Khalek 2010; Labbé and Fobes 2010; MacDonald 2000; Saroglou 2002; Saroglou 2009; Womble et al. 2013), with the hope that future work can further expound aspects of these bivariate relationships.

A second finding involves the pattern of differences among R/S self-classifications on ratings of religiousness and spirituality. For both men and women, B- and R-participants tended to greater levels of religiousness than N- and S-participants. However, contrary to the hypotheses, B-participants reported greater levels of spirituality than *both* R- and, more notably, S-participants (in addition to N-participants). It may be that individuals who integrate religiousness *and* spirituality engage in more frequent spiritual practices and feel greater spiritual conviction; in turn, they may rate themselves as more spiritual than those who identify as spiritual without the dimension of religiousness (i.e., S-participants). This finding yields acceptable support for the construct validity of these self-classifications. Notably, S- and R-participants did *not* differ in levels of spirituality. That is, those who identify as "religious only" tended to report similar levels of spirituality as those who identify as "spiritual only," likely suggesting some definitional overlap between these constructs (see Harris et al. 2018). Nonetheless, future research should seek to examine ways in which such self-classifications may vary among individuals and propose appropriate methodological guidelines for the use of this classification in continued scholarship.

Another primary finding is that women tended to demonstrate more differences on FFM traits across R/S groups than did men. That is, women who differed on their self-identification of R/S exhibited significant differences among Openness, Extraversion, Agreeableness, and Neuroticism, while men exhibited differences among only Openness and Extraversion. However, two similarities between men and women did emerge. R-participants tended to report lowest levels of Openness, and N-participants tended to report the lowest levels of Extraversion. It may be that these patterns are equivalent across genders, such that religion, in the absence of spirituality, relates to decreased Openness, while lack of any religious or spiritual involvement relates to diminished Extraversion. This may be because those who are religious only may adhere more strongly to traditional religious values, sociocultural norms, and otherwise conservative viewpoints. They may also be less prone than those who report other religious/spiritual identification to challenge strongly held convictions, to adopt novel or avant-garde ideas, and to search for and consider believing in unique or nontraditional opinions.

In contrast, S-participants may be most likely to take an opposite stance and prefer considering new ideas and nontraditional values, due to the higher levels of personal growth initiative that are found in more spiritual individuals regardless of their religiosity (Ivtzan et al. 2013). Further, regarding Extraversion, those who are removed from religious and spiritual circles may have less social interaction or contact or be less outgoing and energetic compared to those who have at least some religious or spiritual social support. These findings are broadly consistent with previous correlational research suggesting bivariate relationships among these constructs as described (e.g., Saroglou 2002).

A third major finding is that R-women tended to report the lowest levels of both Agreeableness *and* Neuroticism. B-women tended to report higher levels of Agreeableness, while R-women reported the lowest levels of Agreeableness, and the latter finding was contrary to what was hypothesized. This finding is notable due to its contrast with previous research (and bivariate correlations in the present study) suggesting that religiousness and Agreeableness positively correlate (e.g., Saroglou 2002, 2009) One possible explanation for the current finding is that certain strongly fundamental religions may provide recommended or prescribed limits on types of social interactions that others outside religious circles may view as compassionate or warm, such as those of the Jewish faith who are "shomer negiah" and refrain from any physical contact with members of the opposite sex (aside from their spouses and immediate family members). Additionally, N-women reported highest levels of Neuroticism. It may be that any religious or spiritual belief or involvement, whether in isolation or combined, contributes to reduction in negative emotionality, raises one's distress tolerance, or facilitates adaptive self-monitoring, self-regulation, and healthy coping (McCullough and Willoughby 2009), and that this effect may be especially salient for women. This finding is consistent with recent research suggesting that women of low religiousness and spirituality tend to report elevated levels of psychological dysfunction, while these differences may not always emerge in men (Lace and Handal 2017; Lace et al. 2018).

It is worth noting that the differences described amount in small-to-medium effect sizes. That is, absolute differences on FFM traits among R/S groups varied notably. For example, R-women reported a mean Agreeableness *T* score of 47.50 and B-women reported a mean of 50.81, suggesting an absolute difference of approximately one-third of a standard deviation. However, other differences were larger, with the largest absolute differences seen among R/S groups on Openness, with R-participants reporting nearly a standard deviation lower than S-persons for both men and women. Thus, rather than highlighting massive differences between individuals of different religious/spiritual identities, the results of the present study are meant to identify and describe small-to-medium, yet meaningful, differences and trends among R/S groups.

Another noteworthy finding was that FFM traits accounted for significant amounts of variance in religiousness commensurate with levels reported in previous literature and spirituality generally beyond levels reported previously in the literature. Regarding religiousness, FFM traits have reportedly accounted for approximately 8% of variance in prior studies (Henningsgaard and Arnau 2008; Roccas et al. 2002). In the present study, FFM traits accounted for 9% of religiousness variance for men and 12% for women. More importantly, regarding spirituality, Saroglou and Muñoz-García (2008) reported that FFM traits accounted for 7% variance in spirituality and Henningsgaard and Arnau (2008) reported that FFM traits accounted for 10%. In the present study, FFM traits accounted for 30% of spirituality variance for men and 16% for women above and beyond age. These results suggested that, overall, spirituality may be more closely linked with FFM traits than religiousness. Perhaps spirituality is akin to a "sixth factor of personality" (Piedmont 1999, p. 985), such that greater variance is accounted for by its other dimensions (i.e., personality traits). In

fact, some factor analytic research supports this claim (Piedmont 1999, 2001; Rican et al. 2010), although more research is certainly needed (McCrae 2010).

A final major finding is that the amount of variance that the FFM trait accounts for differs between genders and between religion and spirituality. In men, FFM traits accounted for significantly more variance in spirituality when compared to religiosity. One potential explanation for this finding is that men might focus on the ritual and traditional side of religion, which may be less strongly related to personality features associated with more relational and personal growth emphasis associated with spirituality. This is supported by this study's findings that S-men had significantly higher levels of Openness when compared to those R- and N-men. However, further research investigating whether men and women differ in the aspects of religion that they most identify with (such as traditions or religious teachings) would provide more clarity on this topic.

In women, no significant differences were found between religiosity and spirituality in terms of the variance accounted for by FFM traits. This may be because women are more likely to identify as B, indicating that spirituality and religiosity may be equally related to personality among women because both domains are of roughly equal importance. Future studies could investigate this possibility more in-depth by asking both genders about the relative importance of religiosity and spirituality in their lives.

When comparing genders, the FFM traits accounted for a significantly higher amount of variance in religiosity in men than in women, while no significant differences were found in the amount of spirituality variance that the FFM traits accounted for. This finding makes sense in terms of religion given the proposed explanations that men may relate more strongly to the tradition aspects of religion (which may be less to personality features), while women may identify more closely with the beliefs and teachings of religion (which may be more related to personality features). However, these explanations remain speculative at this time and further research into this topic is needed. The finding that there were no significant differences between genders in the amount of variance in spirituality that FFM traits explain is consistent with this study's findings that FFM traits explain more variance in spirituality than religiosity regardless of gender. It is worth noting that the difference between men and women in terms of the amount of spirituality variance that FFM traits predict approached significance ($p = .07$), indicating that it may be worthwhile for future studies to re-explore whether how well FFM traits predict spirituality is different for men and women.

While the findings of this study are informative, it is important to understand that they may be impacted by four notable limitations of the current study. First, the use of a public domain measure of personality, while eliminating exorbitant costs associated with conducting research on copyrighted measures, may not generalize to "gold-standard" measures of FFM traits (e.g., NEO-PI-R or NEO-PI-3; Costa and McCrae 1992). Future studies, as funding may allow, can seek to incorporate published measures; otherwise, the continued psychometric validation of publicly available measures is recommended.

Second, the present study only investigated group differences between men and women and did not investigate those who reported other gender identities. This

methodological approach was deemed appropriate, however, as only three of 1041 individuals recruited for participation identified as "Other" gender, thus making inclusion of these three individuals as a group of interest inappropriate. Neither did the researchers seek to report these individuals' data singly, due to potential loss of anonymity. Future research may seek to recruit and include samples of individuals reporting other gender identities to understand the relationships among the constructs of interest as it pertains to such specific samples.

Third, while the use of self-classified R/S is considered appropriate due to the separate (yet overlapping) dimensions of religiousness and spirituality, it does pose a methodological limitation. Although social scientists have become better at articulating clearly operationalized definitions for each construct (see Harris et al. 2018), there may be substantial individual variability regarding the ways in which these terms are defined for lay people and research participants. That is, one person's self-classified religiousness may differ from another's, leading to possible introduction of measurement error. Nonetheless, for the sake of the present study, the authors believe the use of this variable to be appropriate.

Finally, the present study was limited by the proportion of women respondents, such that the power needed to detect smaller differences among R/S groups for men may have been insufficient. Future research will seek to recruit even larger samples to reduce the likelihood of Type II statistical error.

Conclusion

FFM personality traits are not only related to religiosity and spirituality, but also explain a significant portion of variance in both religiosity and spirituality across both genders. Some aspects of the relationships between FFM traits and religiosity/spirituality differ across genders (i.e., the amount of variance in religiosity that FFM traits account for), whereas other components remain constant (such as those who identified as Spiritual only having the highest levels of reported Openness across both genders). While the current findings reinforce the notion that personality and religiosity/spirituality are inter-related, more research is needed to determine why exactly these differences and similarities occur.

In conclusion, the findings of this study highlight how integral one's spiritual and religious beliefs are to one's identity. This in turn emphasizes the importance of considering a client's gender experiences and religious and spiritual beliefs when attempting to determine what methods of treatment and/or assessment best align with an individual's unique psychosocial framework.

Compliance with Ethical Standards

Conflict of interest All authors declare they have no conflicts of interest.

Ethical Approval This article does not contain any studies with animals performed by any of the authors. All procedures performed in studies involving human participants were in accordance with the ethical

standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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