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Comparing Spirituality and Religiosity on Subjective Well-Being

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Honours Psychology Thesis

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Abstract

This study investigated the effects of spirituality and religiosity on subjective well-being. Religiosity was measured as intrinsic and extrinsic orientations using the Revised Religious Life Inventory (RLI-R) and spirituality was measured using the Spiritual Transcendence Scale (STS). Fifty-four participants were recruited from an all-female undergraduate population. Participants completed the RLI-R and STS followed by measures of subjective well-being including life satisfaction, self-esteem, positive and negative affect, and perceived stress. Participants were separated into groups using a median split based on their scores on the subscales of the RLI-R and combined STS scores. The results of the MANOVA indicated that low extrinsic religiosity mediates the relationship between high intrinsic religiosity, and low spirituality with the measures of subjective well-being, including high self-esteem, low negative affect and low perceived stress. Past research has not often separated intrinsic, extrinsic religiosity and spirituality, these findings indicate a need for such separation.

Comparing Spirituality and Religiosity on Subjective Well-Being

Religiosity and spirituality have become increasingly studied in the field of psychology (Williams & Sternthal, 2007). Positive Psychology has influenced the popularity of this research, of which the evidence shows that religiosity and spirituality are positive indicators of well-being (Abdel-Khalek, 2012; Chamberlain & Zika, 1988; Compton, 2001; Ellison, 1991). Much of the research focuses on the health outcomes, well-being, coping, life satisfaction, and personality factors of those who identify or score as religious or spiritual (Tataro, Luecken & Gunn, 2005; Greenway et al., 2007; Lawler-Row & Elliott, 2009; Unterrainer et al., 2014).

Religiosity is defined as the personal belief and involvement in the institution of religion, including leading a religious life (Ivtzan, 2013). Religiosity is a multifaceted construct with intrinsic and extrinsic orientations. Intrinsic religiosity refers to the individual who lives their religion; they seek to balance all other things within their religious beliefs and place utmost importance in their religion (Allport and Ross, 1967). Extrinsic religiosity refers to the individual who uses their religion; their religion is beneficial to them because it serves other interests such as solace, security or sociability (Allport and Ross, 1967). This dimensional view of religiosity is important in understanding how an individual interacts with their religion and the possible effects of such an interaction (Allport and Ross, 1967).

Research on religiosity has considered its relationship with depression (Eliassen, Taylor, & Lloyd, 2005), stress (Merrill, Read & LeCheminant, 2009), and personality factors (Saroglou, 2002; Unterrainer et al., 2014). Moderately religious respondents were found to have higher levels of depression than the non-religious and very-religious, which lead Eliassen et. al (2005) to propose that in times of stress those that are less religious may revert to prayer. It may be that the very-religious and the non-religious have established stronger coping skills that align with

their beliefs which can mitigate distress (Eliassen et al., 2005). A study on the influence of religiosity on stress in college students indicated that negative outcomes to stress were prevented by, and positive outcomes were promoted by higher levels of religiosity. For example, a negative outcome to stress would refer to experiencing anger at the lack of control one has in an unexpected situation, which was lowered when religiosity levels were high. A positive outcome to stress would be experiencing confidence in personal ability which was also found to be influenced by religiosity (Merrill, Read & LeCheminant, 2009).

A meta-analytic review on religiosity and personality found low psychoticism and high extraversion to be associated with religiosity. Low psychoticism is also known to be related to the factors of agreeableness and conscientiousness (Saroglou, 2002). Such qualities indicate that religious individuals tend to be outgoing and sociable, easy to get along with, and aware of others' feelings. These results indicate that religious individuals may experience more positive relationships and feelings in their lives. It is worth noting that extrinsic religiosity was also found to be associated with high neuroticism, while mature spirituality and religiosity were related to emotional stability (Saroglou, 2002).

Religiosity has demonstrated a significant positive relationship with dimensions of well-being in various studies (Abdel-Khalek, 2012; Chamberlain & Zika, 1988; Compton, 2001; Ellison, 1991). A meta-analysis by Witter, Stock, Okun and Haring (1985) found religiosity accounted for two to six percent of the variance in subjective well-being in 56 of the studies. Life satisfaction is high among religious individuals that frequently attend church and establish social networks in their congregation. Results showed that a strong religious identity is needed to establish these social networks into within-congregational friendships (Lim & Puntnam, 2010). A study by Ellison (1991) on religious involvement and well-being found that divine interaction

was positively associated with well-being, but no significant effects for religious attendance were evident. Divine interaction refers to the relationship one experiences with the divine, whether that be through personal religious practices such as prayer, or the personal classification of an experience as divine (Ellison, 1991). These results indicate that the strength of the relationship between religiosity and well-being differs among the types of religious experience or in other words, the way that religiosity is defined and measured.

It is important to note the literature on the negative impacts of religion. Pargament's Theory of Religious Coping argues that extrinsic religious belief may not be useful to an individual in times of stress because they have not properly integrated their beliefs or examined their faith in order for it to provide meaning (Pargament, 2002). For intrinsic religiosity, the beliefs the individual forms about their religion or God may also be unhelpful or damaging, specifically if they believe in a harsh deity that looks to punish humanity for sin (Pargament, 2002). Trenholm, Trent, and Compton (1998) observed higher scores on negative religious conflict for individuals with panic disorder. Negative religious conflict refers to when an individual has catastrophic thinking about religious beliefs that indicate negative religious consequence (Trenholm, Trent, and Compton, 1998). For example, if the individual believes that being gay is a sin but they question their own sexuality, this may cause negative religious conflict if they expect that God will punish them. Another study found religious doubt and guilt to be higher among individuals with conflicted religious beliefs, whereas spirituality was a strong predictor of life satisfaction (Murray & Ciarrocchi, 2007). These results indicate the negative experiences of religiosity but also consider the possibility that spirituality may be more positive than religion on well-being.

Spirituality refers to a subjective internal experience that accompanies the desire to understand the meaning of life transcendentally, with or without religion. “Spirituality presupposes certain qualities of mind, including compassion, gratitude, awareness of a transcendent dimension, and an appreciation for life which brings meaning and purpose to existence” (Vaughan, 1991, p. 105). Piedmont (1999) designed a measure that could assess spiritual transcendence as a quality separate from the other personality characteristics. Overlap among the spiritual qualities and the factors of personality was speculated. For example, nonjudgmentality, a proposed quality of spirituality that defines the acceptance of others and life in one’s own terms, may seem related to the personality quality of openness. It was argued that these spiritual qualities also embody the opposite poles of their personality domains, for example, extraversion may relate to spirituality but so does its opposite quality, solitude (Piedmont, 1999). This study differentiated spirituality as its own construct, separate from both personality and religiosity.

Much of the research regarding religiosity has also investigated spirituality and the two demonstrate similar results (Emmons, Cheung, Tehrani, 1998; Fry, 2000; Greenway et al., 2007; Ivtzan et al., 2013; Lawler-Row & Elliott, 2009; Zullig, Ward & Horn, 2006). A study by Greenway et al. (2007) considered religious coping strategies and spiritual transcendence. Results found that spiritual transcendence was predicted strongly by the use of positive coping strategies and the perception that God is caring, but negative coping strategies also predicted self-transcendence. This study considered spiritual transcendence and self-transcendence to mean the same thing, that is “a capacity to experience life from outside the usual limits of space and time, and to be sensitive to a unity underlying the diverse strivings of nature and human relationships” (Greenway et al., 2007, p. 327). Fewer studies have focused on spirituality without religiosity (Fabricatore, Handal, & Fenzel, 2000; Karshdan & Nezlek, 2011; MacDonald, 2000;

Wills, 2007). Personal spirituality was found to have a small significant positive relationship with life satisfaction as a measure of subjective well-being but not with affective well-being (Fabricatore et al., 2000). Karshdan and Nezlek (2011) identified a significant positive relationship between daily spirituality and meaning in life, positive affect, and self-esteem. It is evident that spirituality interacts similarly to religiosity on well-being but has slightly clearer and more consistent results which may be due to an operationalized definition.

Spirituality and religiosity are often used interchangeably in the literature (Unterrainer et al., 2014). Though they have separate definitions, little research has been done to compare these constructs. They tend to be grouped together as one variable or looked at separately without much attention to the other. For example, a study on blood pressure and cortisol responses found that higher combined religiosity and spirituality scores correlated with lower cortisol responses (Tataro, Luecken & Gunn, 2005). This particular study did not differentiate between spirituality and religiosity on stress and measured them as one construct. A review by Rew and Wong (2006) found that in at least eight of the ten studies, religiosity/spirituality had a positive effect on adolescent health attitudes or behaviours. Adolescent health attitudes refer to what adolescents think of various positive and negative health behaviours, such as drinking or smoking, and whether these attitudes will lead to behaviours (Rew & Wong, 2006).

Positive psychology has influenced the popularity of studies on well-being. Positive psychology considers the ways to better experience day to day life – our optimal functioning – rather than focusing on ways to cope with painful experiences (Hadad, 2013). Though that research is still relevant and various studies have been done on coping with stress or psychological disorders, well-being research provides a new perspective for quality and meaning in life. Subjective Well-Being (SWB) refers to the perceived experience of one's life, often

referring mostly to life satisfaction and positive emotions (Diener, 1984). SWB has been measured in various ways within the literature (Adler & Fagley, 2005; Steger, Frazier et al., 2006; Tomy & Cummins, 2010). Life satisfaction, and affect, such as positive and negative affect are widely agreed upon dimensions of SWB (Chamberlain & Zika, 1988). Other studies have also considered happiness (Abdel-Khalek, 2012; Compton, 2001; French & Joseph, 1999), self-esteem (Compton, 2001), goals (Emmons, Cheung & Tehrani, 1998) and meaning in life (Tiliouine & Belgoumidi, 2009) as dimensions of SWB.

Meaning-making is an important development of positive psychology, through which religion and spirituality are attributed (Hadad, 2013). A study by Chamberlain and Zika (1988) considered the relationship between religion and well-being while controlling for meaning in life. They found life satisfaction to be significantly correlated with religiosity, but only when the effects of life meaning were taken out did positive and negative affect also correlate with religiosity (Chamberlain & Zika, 1988). Life satisfaction, happiness, positive and negative affect, and self-esteem were found to be significantly correlated with religiosity in a study done by Compton (2001).

Spiritual well-being is a popular term in this field of research. Some distinction should be made between subjective well-being and spiritual well-being. Spiritual well-being refers to the spiritual health of the individual. It divides into two categories: religious well-being, which relates to God and transcendence; and existential well-being which refers to purpose and satisfaction in life. Unterrainer et al. (2014) aimed to further develop spiritual well-being and understand its relationship with mental health and personality. Results found that highly religious individuals were more open to experience and less aggressive (Unterrainer et al., 2014). There is some controversy about the validity of the Spiritual Well-Being Scale, specifically with ceiling

effects (Ledbetter et al., 1991). Though spiritual well-being also correlates with subjective well-being, its measurements vary vastly and provide inconsistent results.

Past research varies in the conceptualization and measurement of spirituality and religiosity. For example, Lawler-Row & Elliott (2009) researched religious activity and spirituality in the well-being of older adults. This particular study defined religiosity and spirituality separately but focused on religious involvement to measure religiosity. Spiritual well-being was also measured. The strongest predictor for health outcome was found to be existential well-being, a dimension of spiritual well-being (Lawler-Row & Elliott, 2009). Ivtzan et al. (2013) used distinct measures of spirituality and religious involvement. Results found that all measures for well-being were positively correlated with spirituality but not significantly with religious involvement (Ivtzan et al., 2013). Williams and Sternthal (2007) mentioned the need for more careful distinction in future research with these variables.

Religious involvement should not be the only measure used for religiosity, due to the possible change in an individual's religious involvement throughout the lifespan. These changes do not necessarily mean there is an absence of religiosity in one's life. Previous studies have also shown inconsistent results across the various types of religious experiences being measured and studied (Ivtzan et al., 2013; Williams and Sternthal, 2007). The use of intrinsic and extrinsic dimensions of religiosity is valid in promoting a dimensional perspective on religiosity research (Allport & Ross, 1967). Another potential problem with not defining religiosity in both intrinsic and extrinsic terms is that spirituality becomes a replacement for intrinsic religiosity rather than as its own construct. Though someone high in intrinsic religiosity may also be high in spirituality, they do not define the same thing. In order to properly compare the impact of

religiosity and spirituality on well-being it is relevant to use dimensional approaches and measurements.

Though there are problems with the operationalization of religiosity in research as indicated above, this also tends to happen for spirituality. This is because religiosity and spirituality have previously been used interchangeably and studied as one variable rather than two. From the studies that do separate these variables, there are only a few relevant to the present study that address subjective well-being (Fry, 2000; Ivtzan et al., 2013; Lawler-Row & Elliott, 2009) The measures for SWB in these studies focused specifically on growth rather than the present experience of the participants. Ivtzan et al. (2013) measured SWB by self-actualization, meaning in life, and personal growth initiative. Though these may still be worth investigating in their relationship with religiosity and spirituality, SWB should be about the current perceived experience of life.

The current study operationalized religiosity, spirituality, and subjective well-being and measured these constructs in dimensional ways. The Revised Religious Life Inventory was used as a measure of religiosity with both intrinsic and extrinsic dimensions (Hills, Francis & Robbins, 2004). The Spiritual Transcendence Scale was used to measure spirituality. It includes three subscales: universality, prayer fulfillment, and connectedness (Piedmont, 1999). Subjective well-being consisted of measurements of student life satisfaction (Seligson et al, 2003), self-esteem (Rosenberg, 1965), positive and negative affect (Watson et al., 1988), and perceived stress (Cohen et al., 1983). It was predicted that higher levels of spirituality would produce the highest levels of subjective well-being. It was also hypothesized that high intrinsic religiosity would have higher scores than extrinsic religiosity on well-being.

Method

Participants

Participants were recruited from the Brescia University College Psychology 1000 course using the online SONA system. Fifty-four participants were recruited and tested but the final analysis consisted of 48 female participants. A male participant was omitted because the study was intended to have an all-female population. Ages ranged from 17 to 28, with a mean age of 19. Participants received one credit for their participation. The demographic questionnaire indicated that only eight participants listed no religion, with the majority Catholic or Roman Catholic ($n = 21$) and Christian ($n = 12$), as well as three Buddhist, one Hindu and one Muslim participant. The RLI-R measurement of church attendance had a mean score of 2.85 and personal prayer had a mean score of 3.31 out of 5 as most frequent, indicating moderate church attendance and personal prayer among participants.

Materials

A 5-item demographic questionnaire was created to assess participants' age, gender, year of study, living arrangements, and religious affiliation (See Appendix A). The Revised Religious Life Inventory (RLI-R) assesses the extrinsic, intrinsic and quest orientations of religiosity. It is made up of 24 items answered with a 9-point Likert Scale (Hills et al., 2005). The Spiritual Transcendence Scale (STS) was designed to measure spirituality as an individual quality outside of the Five Factor Model of personality (Piedmont, 1999). It is a 24-item measure consisting of three subscales: Universality, Prayer Fulfillment, and Connectedness. It was modified to a 9-point Likert scale to match the RLI-R. The Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS) is a 5-item measure that assess student's satisfaction with their environment, school experience, family life, friends, and themselves using a 7-point Likert scale (Seligson et al, 2003). The Rosenberg Self Esteem Scale (RSE) is a widely used and reliable measure of self-

esteem including 10 items on a 5-point Likert scale. (Rosenberg, 1965). An item was added to the end of the scale but analyzed separately regarding participant happiness: "Overall, I am a very happy person". The Positive and Negative Affect Scale (PANAS) includes 10 descriptor items for positive affect and 10 descriptor items for negative affect (Watson et al., 1988). These are measured by a 5-point Likert scale. The Perceived Stress Scale (PSS) was designed to measure the degree events are appraised as stressful in one's life (Cohen et al., 1983). It consists of 14 items measured by a 5-point Likert Scale.

Procedure

Participants chose a seat in a classroom and were given the letter of information and consent form. The material package was then handed out with instructions listed on the front page. Participants were tested in groups of five to eight and had 30 minutes to complete the questionnaires. Upon completion, they were given a debriefing form, as well as contact information if they had any additional questions.

Results

Groups were created based on participants' scores on the RLI-R and the STS. A median split was done on the extrinsic religiosity and intrinsic religiosity subscale scores from the RLI-R, and on the combined STS scores. Table 1 demonstrates the eight groups created by using low and high extrinsic religiosity, low and high intrinsic religiosity, and low and high spirituality.

Five participants were left out of the analysis, two were unable to complete the questionnaire within the 30-minute time limit, and three were outliers with scores of at least three standard deviations from the mean. A 2 x 2 x 2 factor between multivariate analysis of variance (MANOVA) was conducted to analyze group differences on student life satisfaction, self-esteem, positive and negative affect, and perceived stress. Individual group comparisons were

done using Tukey's HSD.

Table 1

A median split on Intrinsic and Extrinsic subscale scores for the Revised Religious Life Inventory (RLI-R) and the combined subscale scores for the Spiritual Transcendence Scale (STS) was used to create groups. Group size is shown in parentheses.

		RLI-E	
		Low	High
RLI-I	Low	Low Spirituality (13)	Low Spirituality (5)
		High Spirituality (7)	High Spirituality (4)
	High	Low Spirituality (3)	Low Spirituality (4)
		High Spirituality (5)	High Spirituality (10)

Pillai's Trace was used to begin analyzing the MANOVA, and a significant effect of religiosity on the composite dependent variable for subjective well-being was identified, $V = 0.26$, $F(5, 36) = 1.58$, $p < .05$, $\eta^2 = 0.26$. There was also a significant interaction of extrinsic religiosity and spirituality on the composite dependent variable, $V = 0.28$, $F(5, 36) = 2.79$, $p < .05$, $\eta^2 = 0.28$.

There was a significant interaction between extrinsic religiosity and spirituality on self-esteem, $F(1, 40) = 7.37$, $p = .01$, $\eta^2 = 0.16$. As shown in Figure 1, the low extrinsic, low spirituality group scored higher in self-esteem than the high extrinsic, low spirituality group, $p < .05$.

A significant interaction was found between intrinsic religiosity and extrinsic religiosity on negative affect, $F(1, 40) = 3.94$, $p = .05$, $\eta^2 = 0.09$ (see Figure 2). The low extrinsic, high intrinsic group had the lowest mean negative affect score and differed significantly from the high extrinsic, high intrinsic group, which had the highest mean score, $p < .05$.

A main effect of extrinsic religiosity on perceived stress was found, $F(1, 40) = 6.76$, $p = .013$, $\eta^2 = 0.145$. The low extrinsic group ($M = 41.66$, $SEM = 1.39$) had lower perceived stress scores than the high extrinsic group ($M = 44.39$, $SEM = 1.47$). Intrinsic and extrinsic religiosity had an interaction effect on perceived stress, $F(1, 40) = 10.29$, $p = .003$, $\eta^2 = 0.21$. Evident in Figure 3, the group with the lowest perceived stress scores was the low extrinsic, high intrinsic group which differed significantly from the high extrinsic, high intrinsic group which scored the highest in perceived stress, $p < .05$.

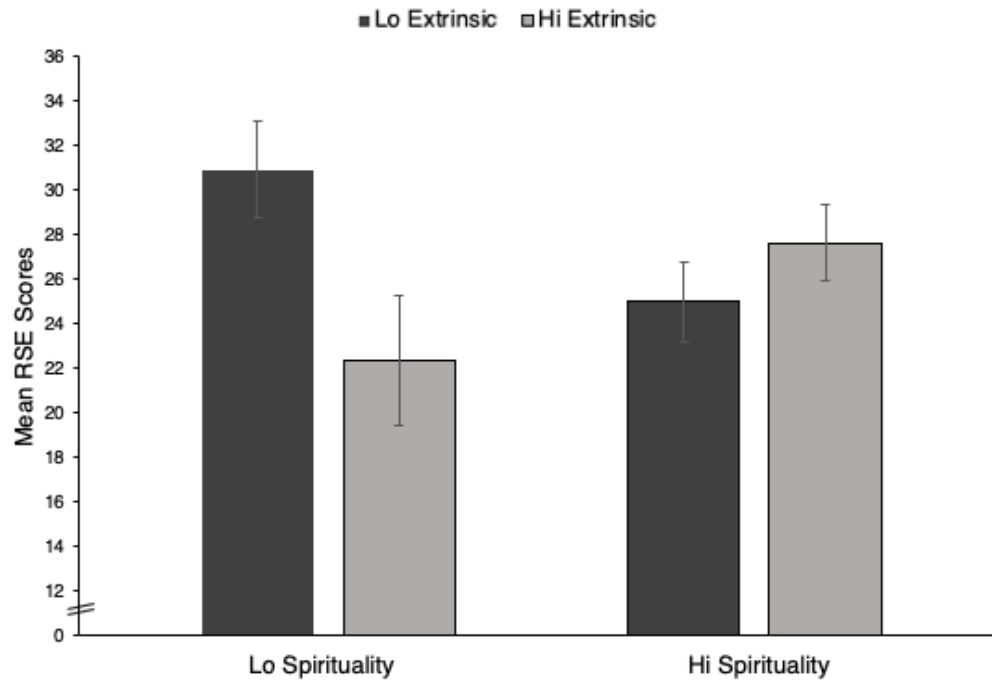


Figure 1. The significant interaction between extrinsic religiosity and spirituality on Rosenberg Self Esteem (RSE) scores. High mean RSE scores indicate high self-esteem. A significant difference between low extrinsic, low spirituality and high extrinsic, low spirituality was found, $p < .05$.

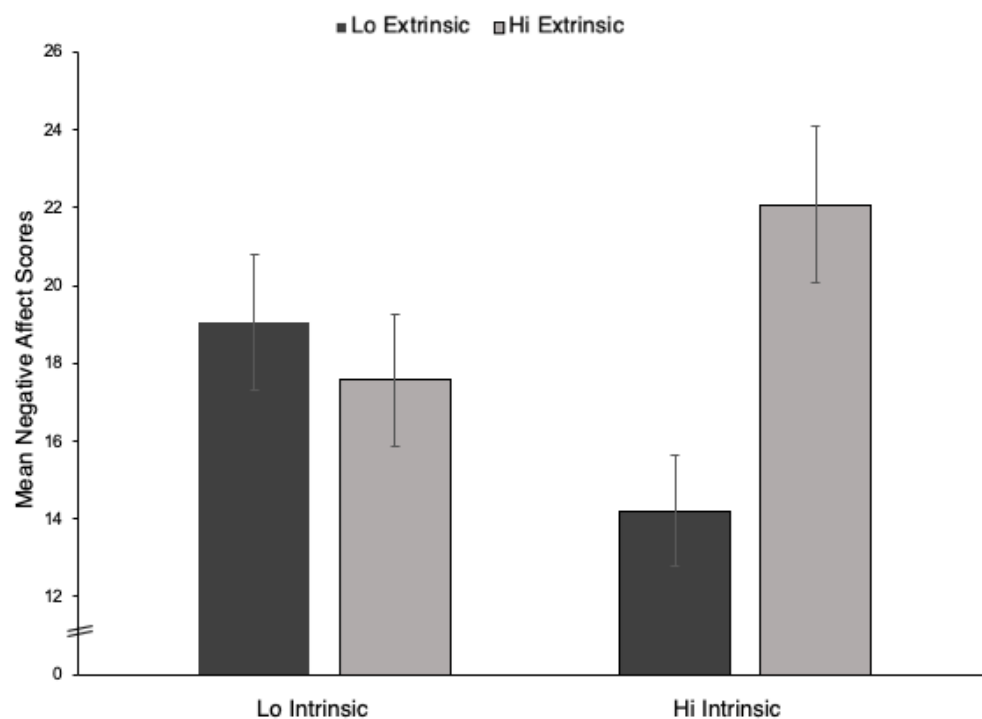


Figure 2. An interaction between extrinsic religiosity and intrinsic religiosity on negative affect scores from the PANAS. There is a significant interaction between the low extrinsic, high intrinsic, and high extrinsic, high intrinsic groups, $p < .05$.

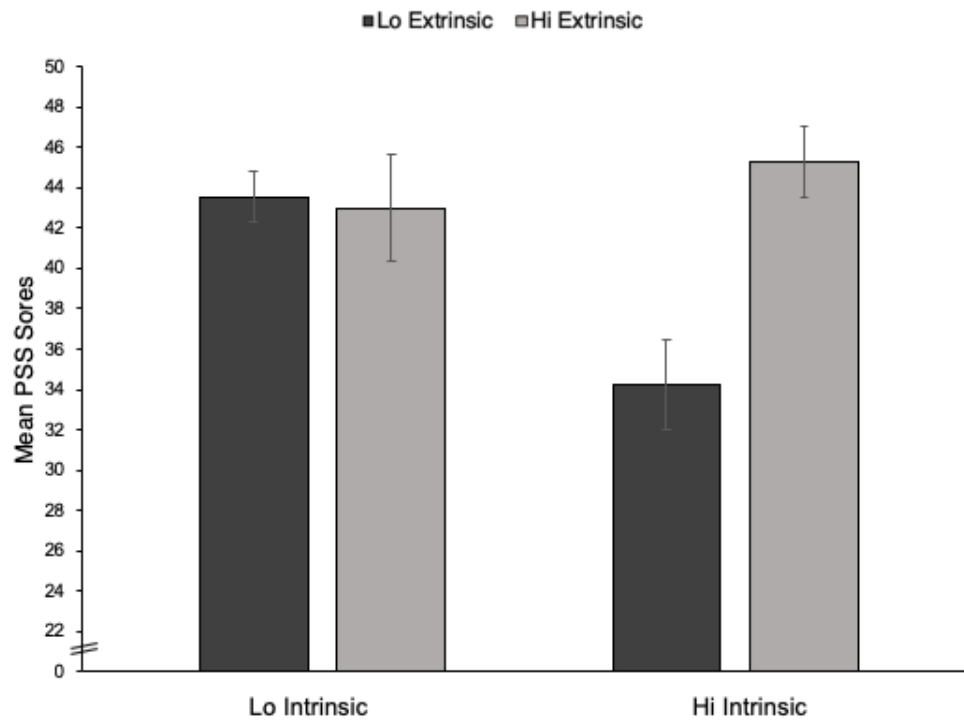


Figure 3. The interaction between intrinsic and extrinsic religiosity on the Perceived Stress Scale (PSS) scores. There was a significant difference between the two high intrinsic religiosity groups, $p < .05$.

There was another interaction effect between extrinsic religiosity and spirituality on perceived stress, $F(1, 40) = 7.09, p = .01, \eta^2 = 0.15$. The relationship with perceived stress differed the most, again, between the low extrinsic, low spirituality group with the lowest stress (see Figure 4). The high extrinsic, low spirituality group had the highest perceived stress scores, once again following the pattern of extrinsic religiosity mediating the differences in perceived stress, $p < .05$.

Student life satisfaction approached a significant interaction between intrinsic and extrinsic religiosity groups, $F(1, 40) = 3.43, p = .072, \eta^2 = .079$. Positive affect was the only measure of subjective well-being to lack any statistically significant effects, p 's $> .05$.

Discussion

The purpose of this study was to examine the relationship between spirituality, religiosity and subjective well-being. The study measured spirituality and religiosity as two separate variables, this was done by measuring religiosity as intrinsic and extrinsic orientations using the RLI-R and measuring spirituality using the STS. It was hypothesized that participants scoring high in spirituality would have the highest subjective well-being scores. There were no significant results to support this hypothesis, low and high spirituality groups did not differ on any measure. One of the interactions found that the low extrinsic, low spirituality group scored highest in self-esteem. Another interaction found the high extrinsic, low spirituality group had the highest perceived stress. From these interactions, it appears that high extrinsic religiosity mediates the relationship between spirituality and measures of subjective well-being including self-esteem and perceived stress.

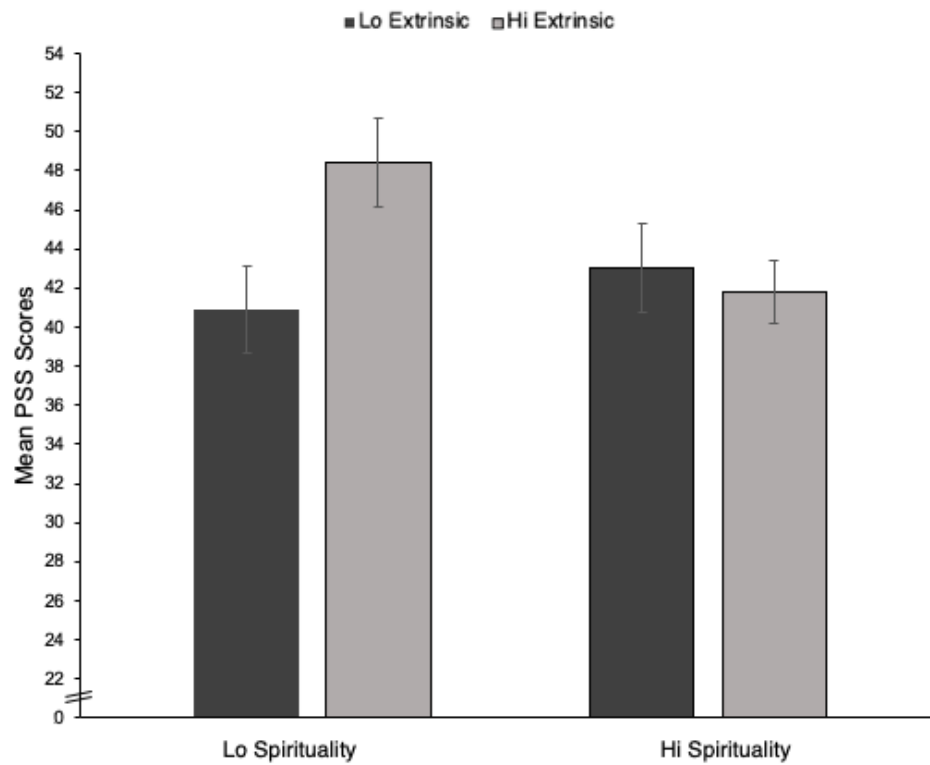


Figure 4. Perceived stress mediated by the interaction of extrinsic religiosity and spirituality. The low spirituality groups differed significantly, $p < .05$.

It was also predicted that those who score high in intrinsic religiosity would have higher scores than those high in extrinsic religiosity on measures of subjective well-being. The study results were inconsistent with this hypothesis. The low extrinsic, high intrinsic group had the lowest mean negative affect score, but the high extrinsic, high intrinsic group had the highest mean negative affect. A similar pattern happened again with perceived stress; the low extrinsic, high intrinsic group had the lowest perceived stress. High intrinsic religiosity varied significantly in its interaction with extrinsic religiosity, meaning intrinsic religiosity alone did not impact subjective well-being significantly. Based on these findings, it seems that extrinsic religiosity rather than intrinsic religiosity interacts significantly with subjective well-being. To be more specific, low extrinsic religiosity impacts subjective well-being positively, especially when interacting with high intrinsic religiosity on negative affect and perceived stress.

The overall results of this study do not support the hypotheses. In all of the significant interactions, low extrinsic religiosity contributed to the highest subjective well-being scores, including high self-esteem, low negative affect and low perceived stress. These results do however, support the aim of the study in identifying independent effects among intrinsic and extrinsic religiosity and spirituality. The results suggest that extrinsic and intrinsic religiosity differ from each other as well as from spirituality, especially in their interaction with subjective well-being measures.

The results of this study are difficult to compare with previous research findings. This may be due to the differences in the definition and measurement of these variables across studies. The current study shows some inconsistent results with prior findings. A study on religious coping and its impacts on positive and negative outcomes of stress on college students found that religiosity prevented negative outcomes to stress and promoted positive ones (Merrill, Read &

LeCheminant, 2009). The current study found that perceived stress scores were highest when there was an interaction with high extrinsic religiosity and high intrinsic religiosity, which would indicate high scores of religiosity overall. It can, however, be misleading to study religiosity as a single variable as was done by Merrill et al. (2009), which is why these results may not be directly comparable to the present study.

Some previous research aligns with the current finding of the possible benefit of high intrinsic religiosity with low extrinsic religiosity. Ellison (1991) studied religious involvement and well-being and identified divine interaction to be positively associated with well-being, while religious attendance was not significantly associated with well-being. If high divine interaction could be considered to be related to high intrinsic religiosity, these prior findings could be comparable to the results of this study. The current study did not find a main effect of intrinsic religiosity on measures of subjective well-being. However, when intrinsic religiosity was high and extrinsic religiosity was low scores of subjective well-being were better than when both intrinsic and extrinsic religiosity were high. This could support the previous findings that the closer the relationship with one's religion and the divine, the better one's subjective well-being. Though it does seem that the benefit of high intrinsic religiosity is influenced by the level of extrinsic religiosity, having low extrinsic religiosity is important in making this relationship positive.

It has been argued that extrinsic religious belief may not be useful to an individual in times of stress because they have not properly integrated their beliefs or examined their faith in order for it to provide meaning (Pargament, 2002). The findings of the present study may support this theory. Low extrinsic religiosity has been shown to contribute to the highest subjective well-being scores, specifically the interaction of high intrinsic, low extrinsic religiosity had the lowest

negative affect and perceived stress. It does appear that extrinsic religiosity is a negative influence on subjective well-being (i.e., producing the highest perceived stress and negative affect scores) when both intrinsic religiosity and extrinsic religiosity are high. A meta-analytic review found extrinsic religiosity to be associated with high neuroticism, which may also relate to the current findings, as perceived stress and negative affect may be considered qualities of neuroticism (Saroglou, 2002). This relationship is worth investigating further.

Karshdan and Nezlek (2011) found a significant positive relationship between daily spirituality and meaning in life, positive affect, and self-esteem. The present study did not have any significant effects of spirituality and positive affect, but the low spirituality, low extrinsic religiosity group had the highest self-esteem. Therefore, these results do not replicate this previous finding. Murray and Ciarrocchi (2007) identified high religious doubt and guilt among individuals with conflicted religious beliefs, while spirituality was a strong predictor of life satisfaction. The current study did not find high spirituality to be associated with life satisfaction or subjective well-being, rather the interaction of low spirituality and low extrinsic religiosity was associated with the lowest perceived stress. There may be indication of conflicted religious beliefs among this population though, and this could be a consideration for future research.

Few studies have examined spirituality and religiosity as separate variables, and even fewer studies investigate their relationship with subjective well-being. This makes it hard to properly compare the present findings to prior research. A study by Ivtzan et al. (2013) measured religious involvement and spirituality on subjective well-being measures including self-actualization, meaning in life, and personal growth initiative. They divided participants into four groups consisting of high and low religious involvement and high and low spirituality. They found that participants in the high religious involvement and high spirituality group, and the low

religious involvement and high spirituality group had the highest scores on all three subjective well-being measures (Ivtzan et al., 2013). This study is similar in design to the present study, but comparing the findings is inconclusive.

A possible limitation to the current study would be the small sample size. With only 48 participants in this study divided into eight groups, this meant that the group sizes were not even, some of which were small. This may be why the results of this study seem inconsistent, more participants could have added greater statistical power. Another limitation to note would be the Western religious context of the RLI-R. This scale was created to measure a Christian population's religious beliefs. Though there have been modifications of the RLI-R scale done to relate to other religious populations, there is not a universal religious scale (Hills et al., 2005). This scale was used on a mainly Catholic and Christian population, but it could still have impacted the other participants' responses. This limitation caused one participant to drop out of the study, as she felt her Muslim religious experience was not relatable to the questionnaire. For the other non-Christian participants that completed the study, this may have impacted their interpretation of the questions.

Although this study had limitations, it was worthwhile in investigating religiosity in a more dimensional way and as separate from spirituality. Future research should continue to study intrinsic and extrinsic orientations of religiosity. More research is needed to understand the interaction between high and low intrinsic and extrinsic religiosity, and high and low spirituality and extrinsic religiosity with measures of subjective well-being. This study did find that there is some benefit to intrinsic religiosity on subjective well-being but that this benefit is lost if there is concomitant high extrinsic religiosity. It may also be worthwhile to further study conflicted religious beliefs in a similar population, as it may have been a confounding variable in the

inconsistent results of this study. Lastly, the implications of high extrinsic religiosity acting as a mediator on the other variables in this study, and negatively impacting well-being is a relationship worth investigating.

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Appendix A

Age: _____

Gender: M ☐ F ☐ Choose not to identify ☐

Year of study: 1st ☐ 2nd ☐ 3rd ☐ 4th ☐ 5th ☐

Living arrangements: Residence ☐ Off-campus at home ☐ Off-campus not at home ☐

Religious Affiliation: _____