THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF PSYCHOLOGY

Purpose in Life Mediates the Relationship Between Religiosity/Spirituality and Depression and Anxiety

EMILY SHANK
SPRING 2024

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Psychology
with honors in Psychology

Reviewed and approved* by the following:

Dr. Michelle Newman
Professor of Psychology
Thesis Supervisor

Dr. Sarah Myruski
Assistant Research Professor of Psychology
Honors Adviser

* Electronic approvals are on file.

ABSTRACT

Past findings have identified a significant relationship between R/S and mental health outcomes (Bonelli et al., 2012; Bonelli & Koenig, 2013; Olson et al., 2012; Rosmarin et al., 2013; Whitehead & Bergeman, 2020; Lorenz et al., 2019; Doolittle & Farrell, 2004; Peselow et al., 2014). Researchers have gone so far as to identify what mechanisms may mediate this association (Boylan et al., 2023; Krok, 2015; Steger & Frazer, 2005). However, relatively few studies have investigated the mediating effects of purpose in life on this relationship. This study aimed to examine whether purpose in life mediates the relationship between R/S and depression and anxiety. Data from the first Midlife in the United States (MIDUS 1) survey was utilized, comprising 7,108 participants (Brim et al., 1995-1996). To analyze this, the present study conducted Baron and Kenny's (1986) linear regression mediation analysis, using R/S as a predictor, purpose in life as a mediator, and depression and anxiety as outcomes. These results were then reconfirmed using Andrew Hayes' (2022) PROCESS Macro mediation analysis to find the total, direct, and indirect effects. From this, no significant correlation between R/S and either depression or anxiety was found. Baron and Kenny's method showed a significant negative association between purpose in life and both depression and anxiety when controlling for R/S. Moreover, Hayes' PROCESS Macro found a significant indirect effect of R/S on both depression and anxiety. Despite past research pointing towards a significant negative correlation between R/S and depression/anxiety, the present study found that these variables lacked such association. However, purpose in life mediated the relationship between R/S and both depression and anxiety. This outcome provides insight into how other factors, like purpose, can influence the effects of R/S on a person's psychopathology.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

Thank you to Dr. Michelle Newman, my thesis advisor, for her guidance and supervision on this project. I'm so grateful to have been given the opportunity to work in her Laboratory for Anxiety & Depression Research over the past three years. I have learned so much during my time involved in this lab, and I'm excited to see it come into fruition with this thesis.

Thank you to Irene Baik, a graduate student in Dr. Newman's Laboratory for Anxiety & Depression Research, for helping me throughout this project. She has constantly motivated and supported me while working through this thesis, pushing me to go above and beyond. This project truly wouldn't have come together if it weren't for her guidance and willingness to help me learn. Her drive has encouraged me to become a better student and researcher, and I'm excited to see all the amazing work she does in the future.

Thank you to Dr. Sarah Myruski, my honors advisor, for her support while completing this thesis. I greatly appreciate her keeping me on track and helping me reach the finish line.

Lastly, thank you to all my family and friends who pushed me to achieve my aspirations, even when I had doubts. Knowing I had the constant support of my loved ones throughout this process motivated me to keep pursuing my goals. I'm excited to make you all proud with this achievement and all my future endeavors.

Chapter 1

Introduction

Humans connect with the world around them in a variety of ways—from social relationships to nature, people find ways to bring a sense of meaning into their lives. A prime example of this is through religiosity and spirituality (R/S). According to a Gallup poll released in July 2023, 82% of U.S. residents identified as religious, spiritual, or both (Jones, 2023). Given the high percentage of people in the United States who hold spiritual beliefs, it brings into question how much religion and/or spirituality impacts other facets of people's lives. One of these notable potential factors is mental health disorders. For instance, in a 2010 Gallup poll, 15.6% of very religious U.S. residents were diagnosed with depression in their lifetime, compared to 20.4% of moderately religious and 18.7% of nonreligious (Newport et al., 2010). As such, those who are more religious or spiritual may exhibit a decreased propensity for mental health problems.

Substantial studies have shown that R/S is associated with reduced mental health problems, such as anxiety and depression. A systematic review of the relationship between R/S and depression showed that over 60% of the 444 studies on this topic found reduced depression and quicker recovery from depression among those with greater R/S involvement or in response to R/S intervention (Bonelli et al., 2012). Similarly, among 19 studies on R/S involvement and depression, 79% of them identified a negative correlation between the two constructs (Bonelli & Koenig, 2013). Moreover, positive R/S coping was associated with more significant mental health outcomes among socioeconomically disadvantaged patients (Olson et al., 2012), as well as

decreased symptoms of depression and anxiety throughout the treatment process for psychiatric

patients with psychotic symptoms (Rosmarin et al., 2013). In addition, daily religious coping

buffered the effect of daily stress on negative emotions (Whitehead & Bergeman, 2020) and

depressive symptoms (Lorenz et al., 2019). In terms of spirituality, a higher level of intrinsic

religious beliefs negatively correlated with depressive symptoms (Doolittle & Farrell, 2004)—

patients with major depressive disorder (MDD) who had high levels of spirituality were even

found to have less severe depression, both before and after MDD treatment (Peselow et al.,

2014). Altogether, these previous findings indicate a link between R/S and mental disorders,

such that R/S is associated with lower mental health problems and facilitates treatment outcomes.

Then the question becomes, what external factors might affect this link?

A sense of purpose could help elucidate the mechanism by which R/S is associated with

reduced mental health problems. Purpose in life can be defined as a person's ability to have

distinct goals and the belief that this provides meaning and fulfillment (Hill & Weston, 2017;

McKnight & Kashdan, 2009; Ryff, 1989). Religion is one mechanism humans use to obtain a

sense of purpose, partly due to its ability to provide a sense of control and significance during

stressful situations (Hood et al., 2009). For example, new religious converts experienced a sharp

increase in meaning in life one week after conversion, stabilizing at a relatively high level six

months later (Paloutzian, 1981). Moreover, individuals who undoubtedly believed in the

existence of God, i.e., demonstrating strong R/S, possessed an increased sense of purpose in life

(Cranney, 2013). On the other hand, research has also shown a connection between purpose and

mental health problems. More specifically, a greater sense of purpose or meaning in life was

associated with reduced depression (Wang et al., 2007; Olesovsky, 2003; Kleftaras & Psarra,

2012) and anxiety (Ishida & Okada, 2006), even functioning as a coping mechanism by helping

alleviate the autonomic nervous system's response to emotional strain (Ishida & Okada, 2006). Additionally, a meta-analysis found that a higher sense of purpose in life was negatively correlated with anxiety and depression (Boreham & Schutte, 2023). Overall, these findings indicate a strong connection between purpose and both R/S and mental health issues separately.

Although evidence shows that purpose is associated with R/S and mental health problems, there are limited studies on the role of purpose in life as a mediator between these two variables. Instead, much of the past literature examined purpose as a mediator between R/S's relationships with other outcomes. For example, a longitudinal study using the Midlife in the United States (MIDUS) sample found that purpose significantly mediated the path through which R/S and mortality were associated (Boylan et al., 2023). Similarly, greater meaning in life was shown to mediate the relationship between R/S, specifically religious participation and religious coping, and both overall life satisfaction and psychological well-being, respectively (Krok, 2015; Steger & Frazer, 2005). These findings highlight the mediating effect purpose in life has on R/S's relationships with other variables, suggesting that people often derive meaning and fulfillment through R/S, which in turn affects their overall well-being (Krok, 2015).

To our knowledge, there is only one study that tested the mediating effect of purpose on the relationship between R/S and mental disorders. Specifically, this study examined the effect of potential mediators, such as self-forgiveness, eternal life, and meaning, on the relationship between depression/anxiety and religious involvement, which was examined via religious service attendance, activity, and prayer frequency (Sternthal et al., 2010). Among all the potential mediators tested, this study found that a sense of meaning was the most significantly associated with reduced depressive and anxiety symptoms but did not mediate the relationship between religious involvement and anxiety/depression (Sternthal et al., 2010). To expand and replicate

these findings with purpose in life as a potential mediator, this study addressed some of Sternthal et al.'s (2010) limitations. First, their sample consisted strictly of inhabitants of Chicago, Illinois, restricting their subject pool and thus compromising the generalizability of their results. Expanding the participant pool could reduce sampling bias and increase both the generalizability and real-world implications of the findings—which is especially important due to the large percentage of individuals across the U.S. who hold spiritual beliefs (Jones, 2023). Second, they included only one aspect of R/S, religious involvement, as a predictor, whereas R/S is a wide-ranging variable encompassing other facets such as spirituality and religious coping. Critical factors in the relationship between R/S and depression/anxiety may be excluded by examining single-item measures rather than the broader scope of R/S (George et al., 2002; Miller & Thoresen, 2003; Sternthal et al., 2010). Thus, including participants from more diverse geographic regions and using a broader definition of R/S creates a more comprehensive understanding of the relationship between purpose, R/S, and mental health problems.

In sum, previous literature demonstrated an apparent relationship between purpose and both R/S and mental health issues. Despite their interconnectedness, few researchers have gone so far as to examine the relationship between all three. To rectify this gap in the current literature, this study aimed to examine whether purpose in life mediates the relationship between R/S and depression/anxiety. This study expanded on previous findings by broadening the scope of participant demographics to a national scale and utilizing a more exhaustive measure of R/S. The hypotheses were as follows: 1) R/S will be negatively correlated with both depression and anxiety and 2) purpose in life will mediate the relationship between R/S and depression/anxiety, such that higher R/S will be associated with greater purpose in life, and greater purpose in life will be associated with lower depression/anxiety.

Chapter 2

Methods

Participants

This study is a secondary analysis using the openly accessible dataset from the Midlife in the United States (MIDUS) project. Specifically, this study used data from MIDUS 1, which was collected between 1995-1996 (Brim et al., 1995-1996). The study comprised of a self-administered questionnaire (SAQ) and a phone interview. The total number of respondents who consented to and participated in the study was 7,108. Of these participants, 51.6 % were female, 90.3% identified their race as white, and 61.4% had 13 or more years of education. The average age of respondents was 46, with the total sample ranging from 24-75 years old.

Measures

Depression and Anxiety

Both major depressive episode (MDE) and generalized anxiety disorder (GAD) were assessed using the Composite International Diagnostic Interview Short Form (CIDI-SF) based on the Diagnostic and Statistical Manual of Mental Disorders 3rd Edition, Revised (DSM-III-R) (Kessler et al., 1998). MDE diagnostic criteria were met if participants experienced depressed affect or anhedonia in the past 12 months. Both CIDI-SF for depression and anxiety had substantial levels of sensitivity (89.6% and 96.6% respectively) and specificity (93.9% and 98.8% respectively; Kessler et al., 1998).

Religiosity/Spirituality

Three scales were used to examine R/S: religious/spiritual coping, spirituality, and religious identification. All these scales were evaluated based on a 4-point Likert scale, ranging from 1 (often or very) to 4 (never or not at all). Religious/spiritual coping was evaluated using two items, with an internal consistency of α = .87 (Boylan et al., 2023). An example item for R/S coping is "When you have decisions to make in your daily life, how often do you ask yourself what your religious or spiritual beliefs suggest you should do?" Spirituality included two items and had an internal consistency of α = .91 (Boylan et al., 2023). An example item from this scale is "How important is spirituality in your life?" Lastly, religious identification was evaluated using six items, with an internal consistency of α = .89 (Boylan et al., 2023). An example item for this scale is "How religious are you?" Lower scores on these scales reflected higher levels of R/S. Following the method outlined by Boylan et al. (2023), this study utilized the R/S composite score derived from all three scales. They used a principal components analysis to find that 59% of the overall variance for all three scales' items was explained by substantial loadings on a single factor (median factor loading = .78; range .66-.85; Boylan et al., 2023). The internal consistency for the composite score was α = .92 (Boylan et al., 2023). This study adopted the same approach of combining R/S scales for analysis.

Purpose in Life

MIDUS 1 examined participants' sense of purpose in life using Ryff's psychological well-being scale (Brim et al., 2009: Ryff, 1989). This scale included three items, with response options ranging from 1 (strongly agree) to 7 (strongly disagree), with higher scores representing a higher sense of purpose. The internal consistency for this scale was .36, a very low reliability

score (Boylan et al., 2023). Some of the items were reverse-coded. The three items were as follows: "Some people wander aimlessly through life, but I am not one of them," "I live life one day at a time and don't really think about the future," and "I sometimes feel as if I've done all there is to do in life."

Data Analysis

First, descriptive statistics and correlation analyses were run among all the variables. These included demographic variables—age, sex, race, education, and sexual orientation—along with depression, anxiety, R/S, and purpose in life. The correlational analysis was conducted using two-tailed Pearson correlations.

The relationship between R/S and depression/anxiety, along with the mediating effects of purpose in life on this relationship, was examined in two different ways. We ran separate mediation analysis models for each outcome measure. Age was included as a covariate for all analyses to control for its impact, as previous studies have reported that the relationship between R/S and well-being may vary by age (Ellison, 1991; Zhang, 2015). First, Baron and Kenny's (1986) three-step linear regression mediation analysis method was used. Step 1 included R/S as a predictor and depression/anxiety as an outcome. Step 2 included R/S as a predictor and purpose in life as an outcome. Step 3 included both R/S and purpose in life as predictors and depression/anxiety as an outcome. All steps included age as a covariate. Missing data (14.7%) was handled using multiple imputation and the pooled results were analyzed.

This was followed by Andrew Hayes' (2022) PROCESS Macro mediation analysis, which identified the total, direct, and indirect effects. Additionally, based on 5,000 bootstrapped samples, the 95% bootstrap confidence intervals (CI) were examined for the indirect effect of the

mediator. Missing data was handled using listwise deletion as the program could not run using multiple imputed data, resulting in the inclusion of 6,064 out of the original 7,108 participants.

All analyses, as well as multiple imputation, were conducted using SPSS 29.0. Effect sizes were calculated using Cohen's d as $2t/\sqrt{df}$ (Dunst et al., 2004), where values of 0.2, 0.5, and 0.8 were considered small, medium, and large effects, respectively. For indirect effects driven from Hayes' PROCESS Macro, the t value was calculated by dividing the indirect effect by the bootstrapped standard error to compute Cohen's d.

Chapter 3

Results

Descriptive and Correlation Analysis

Descriptive and correlational data on all participants is represented in Table 1. R/S did

not have significant correlations with either depression ($r = 0.008$, $p = .53$) or anxiety ($r = -$

0.009, $p = .5$), whereas purpose in life had significant negative correlations with both depression

($r = -0.13$, $p < .001$) and anxiety ($r = -0.08$, $p < .001$). Age had a significant negative correlation

with depression ($r = -0.11$, $p < .001$) and anxiety ($r = -0.05$, $p < .001$), as well as with R/S ($r = -$

0.14, $p < .001$) and purpose in life ($r = -0.14$, $p < .001$).

Mediation Analysis

Depression

As represented in Table 2, we conducted Baron and Kenny's multiple linear regression

analysis to examine the mediating effect of purpose in life on the relationship between R/S and

depression, controlling for age. In step 1, R/S was not significantly associated with depression (ß

$= -0.01$, $p = .5$). In step 2, R/S had a significant negative association with purpose in life (ß $= -$

0.06, $p < .001$). Finally, in step 3, when controlled for R/S, purpose in life was significantly and

negatively associated with depression (ß $= -0.14$, $p < .001$).

Table 1.

Descriptive Statistics and Correlations of Model Variables

Variable	Descriptive Statistics [a]	1	2	3	4	5	6	7	8
Sample Size	6,064								
1. Age, in years	46.38 (12.98)								
2. Sex (% female)	51.6%	0.003							
3. Race (% white)	90.3%	-0.10***	-0.006						
4. Education (% > high school education)	61.4%	-0.10***	-0.09***	-0.04**					
5. Sexual Orientation (% heterosexual)	97.3%	-0.04**	-0.02	0.003	0.03*				
6. Depression	0.79 (1.93)	-0.11***	0.08***	0.04***	-0.05***	0.09***			
7. Anxiety	0.17 (0.97)	-0.05***	0.06***	0.04**	-0.06***	0.04**	0.27***		
8. R/S	2.18 (0.75)	-0.14***	-0.21***	-0.04**	0.01	0.04**	0.008	-0.009	
9. Purpose in Life	16.51 (3.62)	-0.14***	-0.04**	-0.01	0.24***	-0.05***	-0.11***	-0.08***	-0.05***

Note. R/S = Religiosity and Spirituality.

[a] The data represents either Mean (Standard Deviation) or % (*n*/total participant data available per variable).

p < .05; ***p* < .01; ****p* < .001.

Table 2.

Baron and Kenny's (1986) Multiple Linear Regression Mediation Analysis, with Depression as an Outcome

| Steps	Variable	*B*	SE *B*	ß	Cohen's *d*
Step 1					
Outcome	Depression	-	-	-	-
Predictor	R/S	-0.02	0.03	-0.01	-0.02
Covariate	Age	-0.02	0.002	-0.11***	-0.22
Step 2					
Outcome	Purpose	-	-	-	-
Predictor	R/S	-0.27	0.06	-0.06***	-0.10
Covariate	Age	-0.04	0.004	-0.15***	-0.29
Step 3					
Outcome	Depression	-	-	-	-
Mediator	Purpose	-0.08	0.007	-0.14***	-0.24
Predictor	R/S	-0.04	0.03	-0.02	-0.03
Covariate	Age	-0.02	0.002	-0.13***	-0.26

Note. R/S = Religiosity or Spirituality.

*p < .05; **p < .01; ***p < .001.

The indirect effect was reaffirmed via Hayes' PROCESS Macro. The results revealed that R/S had no significant total effect (c) on depression ($B = -0.02$, $p = .51$, $d = 0.02$) and no significant direct effect (c') on depression in the presence of purpose in life ($B = -0.04$, $p = .2$, $d = -0.03$). The data presented a significant indirect effect (a*b) of R/S on depression ($B = 0.02$, 95% CI = [0.01, 0.03], $d = 0.10$), as the 95% CI did not span across 0. These results indicate that

whereas there was no direct effect of R/S on depression, purpose in life indirectly mediated the

relationship between R/S and depression, as represented in Figure 1.

Figure 1.

Andrew Hayes' (2022) PROCESS Macro Mediation Analysis, with Depression
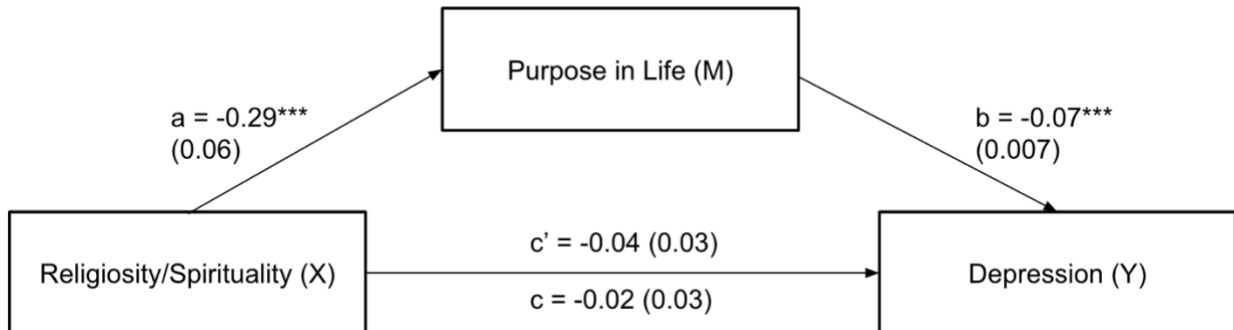
Note. The data represents *B*(SE).

*p < .05; **p < .01; ***p < .001.

Anxiety

An identical multiple linear regression analysis was conducted with anxiety as the

outcome. As demonstrated in Table 3, step 1 showed that R/S had no significant relation with

anxiety (ß = -0.02, *p* = .26). In step 2, R/S had a significant negative association with purpose in

life (ß = -0.06, *p* < .001). When controlling for R/S in step 3, purpose in life was significantly

and negatively related to anxiety (ß = -0.11, *p* < .001).

Table 3.

Baron and Kenny's (1986) Multiple Linear Regression Mediation Analysis, with Anxiety as an Outcome

| Steps	Variable	*B*	SE *B*	ß	Cohen's *d*
Step 1					
Outcome	Anxiety	-	-	-	-
Predictor	R/S	-0.02	0.02	-0.02	-0.03
Covariate	Age	-0.004	0.001	-0.06***	-0.12
Step 2					
Outcome	Purpose	-	-	-	-
Predictor	R/S	-0.27	0.06	-0.06***	-0.10
Covariate	Age	-0.04	0.004	-0.15***	-0.29
Step 3					
Outcome	Anxiety	-	-	-	-
Mediator	Purpose	-0.03	0.003	-0.11***	-0.21
Predictor	R/S	-0.03	0.02	-0.02	-0.04
Covariate	Age	-0.006	0.001	-0.08***	-0.15

Note. R/S = Religiosity and Spirituality.

*p < .05; **p < .01; ***p < .001.

The role of purpose in life as a mediator between R/S and anxiety was tested again using PROCESS Macro. The analysis showed that R/S had no significant total effect (c) on anxiety (*B* = -0.02, *p* = .2, *d* = -0.03) and no significant direct effect (c') on anxiety in the presence of purpose in life (*B* = -0.03, *p* = .09, *d* = -0.04). However, the results revealed a significant indirect

effect (a*b) of R/S on anxiety ($B = 0.007$, 95% CI = [0.003, 0.01], $d = 0.09$). Although there was

no direct effect of R/S on anxiety, the results suggest that purpose in life mediates the

relationship between R/S and anxiety, as represented in Figure 2.

Figure 2.

Andrew Hayes' (2022) PROCESS Macro Mediation Analysis, with Anxiety
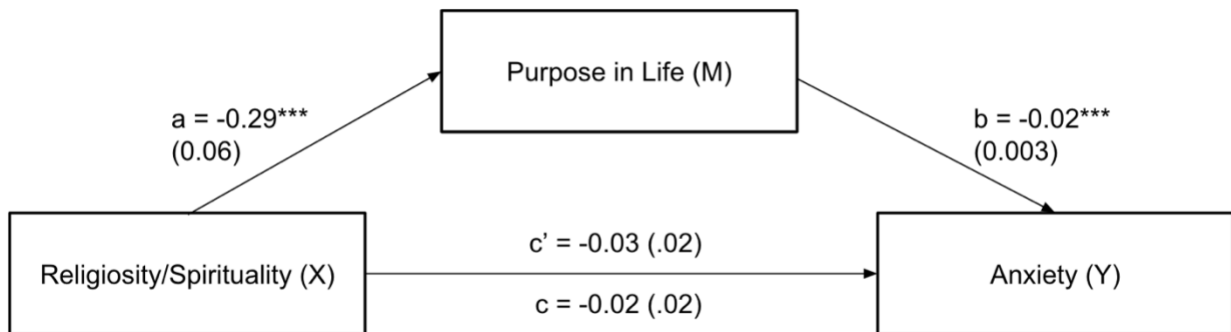
Note. The data represents *B*(SE).

*p < .05; **p < .01; ***p < .001.

Chapter 4

Discussion

This study aimed to examine whether purpose in life mediates the relationship between R/S and depression/anxiety. The correlational analysis found that R/S did not have a significant correlation with either depression or anxiety. The mediation effect was tested using two different methods. Baron and Kenny's (1986) method found no significant association between R/S and depression/anxiety in step 1. However, it showed a significant relation between R/S and purpose in life in step 2 and between purpose in life and depression/anxiety in step 3. Similarly, results using Hayes' (2022) PROCESS Macro found no significant total effect (c) or direct effect (c') between R/S and depression/anxiety. However, a significant association was found in path a (R/S and purpose in life) and path b (purpose in life and depression/anxiety), indicating a significant indirect effect (a*b) between purpose and depression/anxiety when controlling for R/S. Overall, the results show that purpose in life mediates the relationship between R/S and both depression and anxiety.

In contrast with the first hypothesis, this study found no significant correlational relationship between R/S and depression/anxiety. These results are unexpected as R/S has been repeatedly found to be associated with lower depression and anxiety symptoms along with improved mental health outcomes in various populations. (Bonelli et al, 2012; Bonelli & Koenig, 2013; Doolittle & Farrell, 2004; Lorenz et al., 2019; Olson et al., 2012; Peselow et al., 2014; Rosmarin et al., 2013). Several factors might account for such discrepancies in the results of this study. First, this study composited three scales, R/S coping, religious identification, and spirituality, to create one R/S variable. Despite the interconnected nature of religion and

spirituality, 47% of people in the U.S. identified as religious and 33% as spiritual, with only 2% identifying as both (Jones, 2023). There is a possibility that spirituality and religious identification have different associations with anxiety/depression, which using a composite score would have failed to capture. This distinction is present in King et al.'s (2018) study, where they found spiritual individuals to have slightly more mental health problems when compared to religious and neither religious nor spiritual individuals. The relationship between religion and spirituality is still ambiguous in the field of psychology, and thus, future researchers should make sure to differentiate and define their applications of these variables explicitly (Bonelli & Koenig, 2013), as many people identify with them separately (Jones, 2023). Another aspect that could explain the discrepancy in findings is external factors that may have moderated the results. Strawbridge et al. (1998) reported that the buffering effects of R/S involvement on depression directly depended on the type of stressor; while R/S buffered financial and health problems, family problems were instead exacerbated by it. As such, the relationship between R/S and mental health problems may alter based on the kind of stressors a person experiences. Although this study provided generalizability by using a large national scope, it did not incorporate potential moderators that may explain the variations in results, such as types of stressors and demographic groups. Therefore, future studies could explore this further to understand why the present study found no correlational relationship between R/S and depression/anxiety.

In line with the second hypothesis, this study found that purpose in life mediated the relationship between R/S and depression/anxiety. Past studies have shown that R/S is associated with reduced mental health symptoms and facilitation in treatment (Bonelli et al., 2012; Bonelli & Koenig, 2013; Lorenz et al., 2019; Olson et al., 2012; Rosmarin et al., 2013; Whitehead & Bergeman, 2020). The results of this study suggest that this association may occur via increased

purpose in life. This finding aligns with past literature that has shown purpose in life to be a common mediating factor in a multitude of R/S's relationships with other variables, such as positive well-being and lower mortality (Boylan et al., 2023; Krok, 2015; Steger & Frazer, 2005), further corroborating the role of purpose in life as an important indicator of psychological and mental health. However, when Sternthal et al. (2010) conducted a similar mediation analysis with comparable variables (religious involvement, meaning, and depression/anxiety symptoms), they did not find purpose to be a significant mediator. The discrepancy between these results may be due to Sternthal et al. (2010) examining religion separately from spirituality—instead testing spirituality as a potential mediator. Moreover, they strictly used religious involvement as the predictor variable. In contrast, this study used a more extensive measure of R/S that included spirituality and examined a wider geographic range of people. Nonetheless, the results from this study suggest that R/S is associated with increased purpose in life, which in turn decreases depression and anxiety symptoms.

Several clinical implications resulted from this study. The findings imply that within religious individuals, having a sense of purpose in life may serve as a mechanism to reduce levels of anxiety and depressive symptoms. Thus, therapeutic approaches that focus on helping individuals explore and cultivate their sense of purpose within the framework of their religious beliefs and practices may offer effective strategies for reducing symptoms of anxiety and depression. Of note, a meta-analysis found that when treating individuals with psychological or somatic diagnoses, interventions that focus on a sense of purpose, such as mindfulness intervention and individual psychotherapy, had better treatment outcomes with moderate to large effect sizes when compared to controls (Manco & Hamby, 2021). Future research should continue to examine purpose in life as an intervention target for mental health treatment,

especially for religious and/or spiritual clients. Additionally, clinicians could consider assessing and addressing purpose in life as part of the treatment process for religious and spiritual clients experiencing mental health challenges.

Nonetheless, there were several limitations to this study. First, an important constraint to consider is the homogeneity of the subject pool. The participants were primarily white, heterosexual, and pursued some form of higher education—failing to represent large subsets of the U.S. population. Second, the initial MIDUS 1 National Survey was conducted from 1995-1996, approximately 28 years ago, and thus may not be as representative of the current U.S. population. With these two limitations in mind, the generalizability of the results to current U.S. residents and minority groups could be a shortcoming. Third, the survey responses for R/S were composited for a more efficient and less repetitive comparison. However, this narrows the scope of the findings. Further studies could examine each R/S scale separately to determine whether different aspects of religion and spirituality are differentially related to depression/anxiety. Fourth, the low internal consistency for the purpose in life scale implies that the three items may not capture the same construct. Thus, it is unclear if the items were representative of the purpose variable. Finally, the cross-sectional nature of this study prevents the results from speaking to the causality of the findings. In the future, longitudinally examining these variables may provide insight into the underlying causal mechanisms of the relationship between R/S, purpose, and depression/anxiety.

In conclusion, this study aimed to determine if the mechanism of purpose in life impacted the relationship between R/S and depression/anxiety. From this, it was found that purpose did mediate this relationship. These findings reaffirm past research pointing toward an association between these three variables. More specifically, the results shed light on the link between

purpose and R/S. A greater sense of purpose can help maximize the benefits of R/S on mental

health outcomes, like depression and anxiety—a connection that should be continuously

explored in the future.

REFERENCES

Baron, R. M, & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51(*6), 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173

Bonelli, R., Dew, R. E., Koenig, H. G., Rosmarin, D. H., & Vasegh, S. (2012). Religious and spiritual factors in depression: Review and integration of the research. *Depression Research and Treatment, 2012*(7), 962860. https://doi.org/10.1155/2012/962860

Bonelli, R. M, & Koenig, H. G. (2013). Mental disorders, religion and spirituality 1990 to 2010: A systematic evidence-based review. *Journal of Religion & Health, 52*, 657-673. https://doi.org/10.1007/s10943-013-9691-4

Boreham, I. D., & Schutte, N. S. (2023). The relationship between purpose in life and depression and anxiety: A meta-analysis. *Journal of Clinical Psychology, 79*(12), 2736-2767. https://doi.org/10.1002/jclp.23576

Boylan, J. M., Biggane, C., Shaffer, J.A., Wilson, C. L, Vagnini, K. M., & Masters, K. S. (2023). Do purpose in life and social support mediate the association between religiousness/spirituality and mortality? Evidence from the MIDUS national sample. *International Journal of Environmental Research and Public Health, 20*(12), 6112. https://doi.org/10.3390/ijerph20126112

Brim, O. G., Baltes, P. B., Bumpass, L. L., Cleary, P. D., Featherman, D. L., Hazzard, W. R., Kessler, R. C., Lachman, M. E., Markus, H. R., Marmot, M. G., Rossi, A. S., Ryff, C. D.,

& Shweder, R. A. (1995-1996). Midlife in the United States (MIDUS 1). *Inter-university Consortium for Political and Social Research.* https://doi.org/10.3886/ICPSR02760.v19

Brim, O. G., Baltes, P. B., Bumpass, L. L., Cleary, P. D., Featherman, D. L., Hazzard, W. R., & Shweder, R. A. (2009). Documentation of scales and constructed variables in MIDUS 1. *Institute of Aging.*

Cranney, S. (2013). Do people who believe in God report more meaning in their lives? The existential effects of belief. *Journal for the Scientific Study of Religion, 52*(3), 638-646. https://doi.org/10.1111/jssr.12046

Doolittle, B. R., & Farrell, M. (2004). The association between spirituality and depression in an urban clinic. *The Primary Care Companion to the Journal of Clinical Psychiatry, 6*(3), 114-118. https://doi.org/ 10.4088/pcc.v06n0302

Dunst, C., Hamby, D. W., & Trivette, C. (2004). Guidelines for calculating effect sizes for practice-based research syntheses. *Journal of Intellectual & Developmental Disability, 37*(2), 89-99. https://doi.org/10.3109/13668250.2012.673575

Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior, 32*(1), 80-99. https://doi.org/10.2307/2136801

George, L. K., Ellison, C. G., & Larson, D B. (2002). Explaining the relationship between religious involvement and health. *Psychological Inquiry, 13*(3), 190-200. https://doi.org/10.1207/S15327965PLI1303_04

Hill, P. L., & Weston, S. J. (2017). Evaluating eight-year trajectories for sense of purpose in the health and retirement study. *Aging & Mental Health, 23*(2), 233-237. https://doi.org/10.1080/13607863.2017.1399344

Hood, R. W., Jr., Hill, P. C., & Spilka, B. (2009). *The Psychology of Religion: An empirical approach (4ᵗʰ Edition).* The Guilford Press.

Ishida, R., & Okada, M. (2006). Effects of a firm purpose in life on anxiety and sympathetic nervous activity caused by emotional stress: Assessment by psycho-physiological method. *Stress and Health, 22*(4), 275–281. https://doi.org/10.1002/smi.1095

Jones, J. M. (2023, September 22). *In U.S., 47% identify as religious, 33% as spiritual.* Gallup. https://news.gallup.com/poll/511133/identify-religious-spiritual.aspx

Kessler, R. C., Andrews, G., Mroczek, D., Ustun, B., Wittchen, H.-U. (1998). The World Health Organization Composite International Diagnostic Interview short-form (CIDI-SF). *International Journal of Methods in Psychiatric Research, 7*(4), 163-209. https://doi.org/10.1002/mpr.47

King, M., Marston, L., McManus, S., Brugha, T., Meltzer, H., & Bebbington, P. (2018). Religion, spirituality and mental health: Results from a national study of English households. *British Journal of Psychiatry, 202*(1), 68-73. https://doi.org/ 10.1192/bjp.bp.112.112003

Kleftaras, G., & Psarra, E. (2012). Meaning in life, psychological well-being and depressive symptomatology: A comparative study. *Psychology, 3*(4), 337-345. https://doi.org/10.4236/psych.2012.34048.

Krok, D. (2015) The role of meaning in life within the relations of religious coping and psychological well-being. *Journal of Religion and Health, 54*(6), 2292–2308. https://doi.org/10.1007/s10943-014-9983-3

Lorenz, L., Doherty, A., & Casey, P. (2019). The role of religion in buffering the impact of stressful life events on depressive symptoms in patients with depressive episodes or

adjustment disorder. *International Journal of Environmental Research and Public Health, 16*(7), 1238. https://doi.org/10.3390/ijerph16071238

Manco, N., & Hamby, S. (2021). A meta-analytic review of interventions that promote meaning in life. *American Journal of Health Promotion, 35*(6), 866-873. https://doi.org/10.1177/0890117121995736

McKnight, P. E., & Kashdan, T. B. (2009). Purpose in life as a system that creates and sustains health and well-being: An integrative, testable theory. *Review of General Psychology, 13*(3), 242-251. https://doi.org/10.1037/a0017152

Miller, W. R., & Thoresen, C. E. (2003). Spirituality, religion, and health: An emerging research field. *American Psychologist, 58*(1), 24-35. https://doi.org/10.1037/0003-066X.58.1.24

Newport, F., Agrawal, S., & Witters, D. (2010, December 1). *Very religious Americans report less depression, worry.* Gallup. https://news.gallup.com/poll/144980/religious-americans-report-less-depression-worry.aspx

Olesovsky, P. (2003). Meaning in life, and depression: A comparative study of the relation between them across the life span. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64*(2-B), 972. https://psycnet.apa.org/record/2003-95016-164

Olson, M. M., Trevino, D. B., Geske, J. A., & Vanderpool, H. (2012). Religious coping and mental health outcomes: An exploratory study of socioeconomically disadvantaged patients. *EXPLORE (NY), 8*(3), 172-176. https://doi.org/10.1016/j.explore.2012.02.005

Paloutzian, R. F. (1981). Purpose in life and value changes following conversion. *Journal of Personality and Social Psychology, 41*(6), 1153-1160. https://doi.org/10.1037/0022-3514.41.6.1153

Peselow, E., Pi, S., Lopez, E., Besada, A., & IsHak, W. W. (2014). The impact of spirituality
before and after treatment of major depressive disorder. *Innovations in Clinical
Neuroscience, 11*(3-4), 17-23. https://pubmed.ncbi.nlm.nih.gov/24800129/

Rosmarin, D. H., Bigda-Peyton, J. S., Öngur, D., Pargament, K. I., & Björgvinsson, T. (2013).
Religious coping among psychotic patients: Relevance to suicidality and treatment
outcomes. *Psychiatry Research, 210*(1),182-187.
https://doi.org/10.1016/j.psychres.2013.03.023

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of
psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-
1081. https://doi.org/10.1037/0022-3514.57.6.1069

Steger, M. F., & Frazier, P. (2005). Meaning in life: One link in the chain from religiousness to
well-being. *Journal of Counseling Psychology, 52*(4), 574-582.
https://doi.org/10.1037/0022-0167.52.4.574

Sternthal, M. J., Williams, D. R., Musick, M. A., & Buck, A. C. (2010). Depression, anxiety, and
religious life: A search for mediators. *Journal of Health and Social Behaviors, 51*(3),
343-359. https://doi.org/10.1177/0022146510378237

Strawbridge, W. J., Shema, S. J., Cohen, R. D., Roberts, R. E., & Kaplan, G. A. (1998).
Religiosity buffers effects of some stressors on depression but exacerbates others. *The
Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 53*(3),
118-126. https://doi.org/10.1093/geronb/53b.3.s118

Wang, M.-C., Lightsey, O. R., Pietruszka, T., Uruk, A. C., & Wells, A. G. (2007). Purpose in life
and reasons for living as mediators of the relationship between stress, coping, and

suicidal behavior. *The Journal of Positive Psychology, 2*(3), 195-204.

https://doi.org/10.1080/17439760701228920

Whitehead, B. R., & Bergeman, C. S. (2020). Daily religious coping buffers the stress-affect

relationship and benefits overall metabolic health in older adults. *Psychology of Religion*

and Spirituality, 12(4), 393–399. https://doi.org/10.1037/rel0000251

Zhang, L. (2015). How does age matter in the linkage between religious involvement and adult

self-related health? *Advances in Applied Sociology, 5*(4), 146-160. https://doi.org/

10.4236/aasoci.2015.54014