

TO BELIEVE OR NOT TO BELIEVE:
RELIGIOUS/SPIRITUAL AND SECULAR IDENTITY
GROUP DIFFERENCES IN QUALITY OF LIFE AND
PSYCHOLOGICAL DISTRESS IN COLLEGE
STUDENTS

By

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 2022

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ACKNOWLEDGEMENTS

I would like to dedicate this work, in its entirety, to my mother, Melissa K. Gutierrez (née Payne). No other person has supported my hopes and dreams with the same tenacity as you. I am continuously inspired by your strength and willpower. You instilled within me the same unbreakable persistence that helps carry you through life, and that has proved an indispensable and priceless gift. I carry your love with me always, and I have felt your encouragement through all my educational, professional, and personal pursuits. I am the person I am today because of your love and care. Thank you for being such an important part of my life. I love you.

I want to give my deepest and most sincere thanks and appreciation to my advisor and dissertation chair, Dr. Carrie Winterowd, without whom this dissertation would not exist. It was through her support of my project and dedication to my professional and academic success that pushed me to the finish line. From my very first day in our program to the very last, Dr. Winterowd was my biggest support. I would also like to express my unending gratitude to my committee members: Dr. Tom Berry, Dr. Valerie McGaha, Dr. Jam Khojasteh, and Dr. Bridget Miller. Your difficult questions and amazing ideas helped push this project to be the best that it could be. Your guidance was invaluable and deeply appreciated. This dissertation, like most research, is the result of many brains full of ideas, and I would be remiss to not give due credit to the brilliant folks of the Spirituality, Resilience, Inclusion, and Tolerance (SpiRIT) Lab at Oklahoma

State University—my home base. Thank you all for the parts you played in this dissertation.

To my fiancée, friends, and family who played significant supporting roles in the completion of this document: thank you. To my fiancée, Maggie, your unconditional support never went unnoticed. From purchases of de-stressing essential oil mists to letting me spitball hypotheses in your general direction, your love is a cornerstone to this dissertation. To my boys, Chris, Mark, Patrick, and Scotty, your friendship and camaraderie helped me push through my worst bouts of writer's block. I love you guys. To my sister, Chelsey, who was always available with an ear to listen to me complain about my most recent project snag: thank you, and I love you. You all acted as beacons of light for me during the darkest times of this dissertating process, and your support means the world to me.

To the professors who helped me navigate the graduate school process: I would not be here without your support. I want to acknowledge Dr. Karen Gunther, Dr. Bobby Horton, and Dr. Robert Royalty of Wabash College. Your guidance in psychology, religion, and critical thought did not just help me become a better student, it helped me become a better person. Wabash Always Fights. Finally, I would also like to acknowledge Dr. Mandy Morrill, Dr. Dave Hartman, and Dr. Amanda Zelechowski of Valparaiso University (formerly and currently) for being the first to teach me of the privilege and opportunity that is sitting and connecting with another human being in the therapy room. Thank you all.

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Date of Degree: JULY, 2022

Title of Study: TO BELIEVE OR NOT TO BELIEVE: RELIGIOUS/SPIRITUAL AND
SECULAR IDENTITY GROUP DIFFERENCES IN QUALITY OF LIFE
AND PSYCHOLOGICAL DISTRESS IN COLLEGE STUDENTS

Major Field: COUNSELING PSYCHOLOGY

Abstract: Religiosity and spirituality often provide core coping structures to believers. College students are regularly put into novel situations and environments in which they must rely on their coping mechanisms, including practices that stem from their potential religious/spiritual identities. However, religious identity group differences in college students is an under-researched area of the literature. The purpose of this study was to explore differences in religious, spiritual, and secular (RSS) college students' levels of psychological distress and quality of life while centering their identity and participation in meaning-making groups. College students were recruited through Facebook, email, and survey management software. A total of 607 college students participated in the online survey which included a demographics page, the Depression, Anxiety, and Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995), and the World Health Organization Quality of Life-Brief measure (WHOQOL-BREF; World Health Organization, 1999, 2012). Participants who identified as spiritual *and* religious reported a more satisfied quality of life than i) secular participants as well as ii) participants who identified as either spiritual *or* religious (but not both). Participants who attended spiritual and/or religious meaning-making groups reported less anxiety, as well as enhanced aspects of quality of life including psychological, social, and environmental well-being than participants who did not attend religious and/or spiritual groups. College student participants who attended spiritual/religious groups and college student participants who attended secular meaning-making groups did not differ in their quality of life nor psychological distress experiences. These findings contribute to the dearth of college student research literature exploring the potential protective factors of both RSS identity and RSS meaning-making group participation.

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CHAPTER I

INTRODUCTION

Spiritual, Religious and Secular Identities

Multicultural orientation and diversity have been growing in recognition and value by counseling psychologists, not only in their training and education, but also in their research efforts and their work with clients (Heesacker, 2018; Vera & Speight, 2003). However, religious, spiritual, and secular (RSS) identity is a domain of multicultural/diversity orientation that has traditionally been underrepresented in applied psychology (Oxhandler & Pargament, 2018). In fact, the spiritual/religious component of holistic multicultural orientation is so infrequently addressed that it is often considered an “afterthought” (Magaldi-Dopman, 2014). However, RSS orientation (e.g., sense of purpose or meaning, beliefs, and practices) can be an important aspect of people’s identity, impacting their sense of self in relation to the world and their general ability to cope with a myriad of issues. To ignore the RSS dimension of multicultural/diversity orientation could be potentially detrimental to clients’ well-being.

To bring RSS identities into the spotlight means untangling what each construct *is* and *means*. Colloquially, religions are organized faith groups—common religions include Christianity, Islam,

Judaism, Hinduism, Sikhism, Buddhism, Shinto, Jainism, etc. Spirituality, once synonymous with religion, is used in modern times to refer to a sense of connection with something greater than the self, often supernatural in nature (although secular spirituality exists as well; Mercandante, 2014). Secularism is defined as the indifference or rejection of religious or supernatural claims. Common secular identities may include atheist, agnostic, non-believer, or religious none.

Identity, including RSS identity, is a complex, recursive process involving individual beliefs, external messages, and the intersections thereof. Many identities, including those RSS identities, are not fixed and can change over time. Identity achievement and stability may be important constructs in untangling potential RSS group differences.

Erik Erikson, arguably one of the most celebrated identity researchers in the history of psychology, defined “identity” as “a subjective sense of an invigorating sameness and continuity” (Erikson, 1968, p. 19). Erikson continues:

“...in psychological terms, identity formation employs a process of simultaneous reflection and observation, a process taking place on all levels of mental functioning, by which the individual judges himself in the light of what he perceives to be the way in which others judge him in comparison to themselves and to a typology significant to them; while he judges their way of judging him in the light of how he perceives himself in comparison to them and to types that have become relevant to him” (pp. 22-23).

Erikson’s definition touches on the communal nature of identity formation. Identity is not formed in a vacuum but, instead, through both intrapsychic and interpersonal interactions. Sense of community has been highlighted as a core component of RSS identity that is strengthened through group participation (Hummer, 1999). One of the purposes of this dissertation project is to further elaborate on the group differences between college students who identify/participate in religious/spiritual groups and those who do not, a topic that has been under-researched.

Spiritual/Religious Orientation as a Protective Factor

Religion and spirituality have played a unique and important role in the lives of humans for millennia; evolutionary psychologists posit that religion or belief in the supernatural is an evolutionary universal, found in all humans across time, culture, and geography (Gilovich et al., 2018). There is growing evidence of the protective factors of spiritual/religious orientation, beliefs, and practices. Research has provided evidence for the protective nature of spirituality/religion in contexts such as increased levels of emotional well-being (Koenig, 2012), improved recovery from childhood trauma and neglect (Howell & Miller-Graff, 2014), lower risk of mood disorders in high-risk individuals (Kasen et al., 2012), lower risk of suicidality (Burshtein et al., 2016), and protecting against chronic health issues such as substance abuse and obesity (Dodor et al., 2018).

Religiosity (worship attendance, in particular) has been associated with physical and emotional health benefits, including quality of life (Ferriss, 2002). In one study, the frequency with which participants attended religious or spiritual services was positively correlated to both sense of harmony and reduced stress. In a census sample of U.S. adults, religious practice (i.e., attendance) was associated with better physical health outcomes (Ferraro & Albrecht-Jensen, 1991; Ferriss, 2002). Researchers have shown that people in their last year of life who were more religious fared better (i.e., less depression and fewer physical ailments) than their less religious counterparts (Idler et al., 2009). Patients with advanced cancer who were more religious reported less existential anxiety and more social support than those who were less religious (Tarakeshwar et al., 2006). Religious/spiritual community participation has been highlighted as a major driving force behind the positive adapting abilities of those of faith (Pargament et al., 1998; Pargament, 2001; Pargament, 2010; Xu, 2016). In summary, much of the research to date has focused on religiosity, or participation in faith-based practices (e.g., worship, prayer, etc.) as it relates to emotional well-being or quality of life.

Like the research on general populations, religiosity and spirituality in college students has been associated with positive aspects of life including improved college adjustment and functioning (Kneipp et al., 2009), enhanced well-being (Milevsky, 2017) and quality of life (Roming & Howard, 2019), as well as lower levels of stress (Yun et al., 2019). However, some aspects of religious beliefs and/or coping (e.g., negative religious coping and spiritual distress) can also heighten or worsen emotional experiences, such as grief, for college students (Lee et al., 2013; Parenteau et al., 2019).

Secularism as a Potential Protective Factor

While spirituality and religiosity have been shown to be protective factors with associated health benefits, the religious and spiritual landscape of the United States is changing. The religiously unaffiliated are a growing demographic in the United States (Pew Research, 2019). The number of people who identify as atheist, agnostic, or “nothing in particular” increased by 9% between 2009 and 2019 (17% to 26%). This demographic increase is mirrored in the research. A database search for “secularism,” limited to scholarly journal articles published between 1966 and 2009 returned 1,323 results. This same search for work published between 2010 and 2020 returned 3,378 results. Approximately, 40% of the articles with the aforementioned limiters were published just in the last decade. It is unclear that secularism in college students is a protective factor, but it could very well be, because no researchers to date have explored this area despite all the previous research found via database search.

One of the purposes of the current study is to further elaborate on the experiences of college students who view themselves as secular rather than religious or spiritual. Of interest, based on an EBSCO search, only four peer-reviewed studies have been published related to secularism and psychological distress in college students within the past five years compared to over 431 peer-reviewed studies on religious/spiritual orientation and psychological distress in college students within the past five years. Secular students comprise approximately 28% of college students body

populations according to the 2013 National College Student Survey (Kosmin & Keysar, 2013), yet are chronically underrepresented in the research literature on college student adjustment and functioning.

Quality of Life and Psychological Distress in College Students

Quality of life is a psychological construct referring to health, including physical and emotional well-being, socioeconomic status, interpersonal relationship quality, and wellness (including family wellness; Schuessler & Fisher, 1985). Quality of life is defined as the perception of health and well-being in certain areas, including physical, psychological, social relationships, and environmental (World Health Organization, n.d.).

There is some evidence that college students' RSS identity is associated with their quality of life (Kneipp et al., 2009; Lee et al., 2013; Parenteau et al., 2019; Roming, 2019; Wang et al., 2016; Winterowd et al., 2005; Yun et al., 2019). For example, college students higher in spirituality/religiosity tend to report better well-being and college adjustment than college students who are less spiritual/religious (Kneipp et al., 2009). While research on secularism among college students and its correlates is an understudied area, research to date has pointed to negative religious coping as a harmful factor in college student functioning (Lee et al., 2013). It could be speculated that secular college students' potential lack of religious coping could protect them in this regard.

Psychological distress refers to the overall level of psychological symptomology that may include depression, anxiety, and stress, as well as other emotions and internal experiences, depending on the measure selected and the research focus (Arvidsdotter et al., 2016). There is evidence that college students' RSS identity is associated with their overall levels of psychological distress (Milevsky, 2017; Roming, 2019; Wang et al., 2016).

Statement of the Problem and the Purpose of the Study

Given that college students can experience significant life adjustments as well as life stressors, it is important to better understand the unique aspects of college students' identities as related to their well-being and life satisfaction. One unique aspect of college student identity is their religious, spiritual, and secular identities, which may predict their overall quality of life and psychological well-being. This data was gathered with hopes of better informing college students as well as those professionals who serve them including counselors, psychologists, professors, and college student development professionals in higher education.

Subjectively, a sense of life purpose and/or connection to a community of people who share similar faith/belief structures may provide a framework of resilience for individuals to draw upon when faced with difficult stressors or emotions (Pargament et al., 1998). Given the unique experiences of college students, including the unique stressors faced by college students that are not applicable to the general populace, it is important to explore the religious, spiritual, and secular (RSS) students and their involvement in RSS groups as related to their overall emotional well-being and life-satisfaction.

Currently, little is known regarding the potential differences in well-being and life satisfaction for college students with differing RSS identities and across their participation in RSS groups. While there is extant literature that reports protective factors of religious group participation in college student samples (Milevsky, 2017; Parenteau et al., 2019; Roming, 2019), this literature exclusively compares *intragroup* differences (e.g., differences between people who are less and more religious) but does not compare *intergroup* differences (e.g., differences between people who are and are not religious). Given the unique stressors of college students, their RSS orientation may have an important impact on their adaptation to college stressors, their overall levels of psychological distress, and their life satisfaction and overall well-being, known as quality of life.

Theoretically, the importance of RSS groups in people's lives has been denoted by multiple scholars (Klaassen et al., 2006; Pargament et al., 2000; Pargament, 2003). Researchers have highlighted social relations as one of the core coping functions of religiosity and spirituality (Klaassen et al., 2006). Pargament and colleagues (2000) conducted confirmatory factor analysis on their Religious Coping Scale (RCOPE) and found that connection to others and social interaction in a religious or spiritual setting was considered one of the five methods of religious coping.

Therefore, the purpose of this current study was to explore religious, spiritual, and secular group differences in psychological distress and quality of life in a sample of college students. It was hoped that the results of this study would be of benefit for multiple reasons, both applied and otherwise. First, it was hoped that these results may be useful in their application to colleges and their mental health professionals as well as professionals in college student development in higher education who assist college students in their often-difficult transitions to college as well as their life experiences during their college years. Second, it is hoped that this research would fill a significant gap in the college student RSS identity and group participation literature on how college students with varying RSS identities may differ in their psychological functioning, including their quality of life and psychological distress.

Research Questions and Hypotheses

The research questions and hypotheses for this study are as follows:

1a) Do college students who identify as religious/spiritual differ from college students who identify as secular in terms of their overall levels of psychological distress and quality of life?

1b) Do college students who identify as religious/spiritual differ from college students who identify as secular in terms of their levels of depression, anxiety, and stress, as well as specific aspects of their quality of life including physical, psychological, environmental, and social relationships.

1c) Do college students who identify as i) secular and ii) spiritual *or* religious differ from those who identify as and spiritual *and* religious on their levels of depression, anxiety, and stress as well as their physical, psychological, environmental, and social relational aspects of quality of life?

It was hypothesized that college students who identify as religious/spiritual would report significantly less psychological distress (overall, as well as depression, anxiety, and stress, more specifically) and a significantly better quality of life compared to college students who identify as secular. While it was hypothesized that there would be no group differences regarding physical, environmental, and social relational aspects of quality of life, it was hypothesized that religious/spiritual college students would score higher on their psychological quality of life than non-secular college students. It was hypothesized that there would be significant group differences between the secular group compared to both the i) spiritual *or* religious and ii) the spiritual *and* religious groups of college students in their levels of quality of life, but there were no anticipated differences between college students who identified as either spiritual *or* religious and college student who identified as spiritual *and* religious regarding psychological distress.

2a) Do college students who participate in religious/spiritual groups differ from those who do not in terms of their psychological distress and quality of life?

2b) Do college students who participate in religious/spiritual groups differ from those who do not in terms of their depression, anxiety, and/or stress, more specifically, as well as specific aspects of their quality of life, including physical, psychological, environmental, and social relationships?

It was hypothesized that college students who participate in religious/spiritual groups will report significantly less overall psychological distress and a significantly enhanced overall quality of life than those college students who do not participate in religious/spiritual groups. It was also hypothesized that college students who participate in religious/spiritual groups will report significantly less depression, anxiety, and stress, more specifically, and more positive psychological

and social quality of life than college students who do not. It was hypothesized that there would be no group differences in the physical and environmental aspects of quality of life.

3a) Do college students who participate in secular meaning-making groups and those who participate in religious/spiritual groups differ in their level of psychological distress and quality of life?

3b) Do college students who participate in secular meaning-making groups and those who participate in religious/spiritual groups differ more specifically in their levels of depression, anxiety, and stress, and/or specific aspects of their quality of life, including physical, psychological, environmental, and social.

It was hypothesized that there would be no group differences between college students who participate in religious/spiritual groups and those who participate in secular meaning-making groups on levels of psychological distress (overall and more specifically their levels of depression, anxiety, and/or stress) and levels of quality of life (overall, and more specifically, their physical, psychological, environmental, and social aspects of quality of life).

CHAPTER II

METHODOLOGY

The purposes of this dissertation were to explore the correlates of psychological distress and quality of life in samples of college students. Group differences in these variables of interest were based on college students' religious/spiritual or secular (RSS) identification and RSS group participation.

In this section, the following were addressed: 1) participant information including sample demographics, 2) the measures used and their psychometric properties, 3) procedures of the current study, and 4) the statistical analyses used to answer the research questions of this study. Data for the current work was collected over the Spring, Summer, and Fall semesters of 2020. Data collection ended in May 2021.

Participants

Complete demographic information for the current sample can be found in Table 1 (Appendix A). The participants in this study were 607 college students who averaged 23 years of age ($M_{\text{age}} = 23.54$). Participants identified their biological sex as female (66.2%), male (33.6%), and intersex (0.2%). Participants identified their gender identity as woman (65.2%), man (33.8%), genderqueer/non-binary (0.7%), and other (0.2%).

Participants identified their race(s) as: White (66.3%), Multiracial (14.7%), Black or African American (6.8%), Hispanic or Latinx (4.8%), Asian or Asian American (4.0%), American Indian/Alaskan Native/Native American/Indigenous (3.0%), Middle Eastern/Arab (0.3%), and Native Hawaiian or Pacific Islander (0.2%).

Approximately 82% of the sample identified as undergraduate students: first year (22.8%), sophomore (22.1%), junior (22.8%), and senior (14.8%). Graduate students comprised 17.7% of the current sample. Approximately 36% of the sample reported an annual family income above \$100,000 USD. Approximately 31% of the sample reported an annual family income below \$50,000 USD. The current population was largely single (78.6%) but also identified as married (10.2%), partnered/common law (8.9%), divorced (1.8%), and separated (0.5%).

To measure religious/spiritual group identity, participants were provided with questions regarding their RSS affiliation. Participants identified as: Protestant Christian (non-denominational, Baptists, Pentecostal, Methodist, non-Catholic Christian, etc.; 53.4%), Catholic (13.7%), Agnostic (10.2%), Orthodox Christian (5.3%), Atheist (5.0%), Other (3.5%), Buddhist (3.0%), Muslim (1.7%), Pagan (1.2%), Latter-Day Saint (1.0%), Hindu (1.0%), Jewish (0.7%), and Native American Church (0.3%). To measure religiosity/spirituality and secularism, participants were asked if they viewed themselves as spiritual (21.7%), religious (8.4%), both (56%), or neither (13.8%). In addition, participants were asked if they attended a religious or spiritual group (91.4%) as well as if they attended a secular meaning-making group (8.6%).

To measure secular meaning making group identity, participants were asked to complete an open-ended response listing their secular meaning-making group. Through thematic analysis, seven overarching secular meaning-making group themes emerged: Greek life (i.e., fraternities and sororities), sporting extracurriculars (e.g., wrestling, ROTC, swimming, “sports,” etc.), friend

groups (e.g., “the boys”), grounding groups (e.g., yoga, mindfulness groups, etc.), school itself (e.g., “grad school,” “school,” etc.), recovery groups (e.g., Alcoholics Anonymous, Narcotics Anonymous), and other extracurriculars (e.g., Future Farmers of America, volunteering, employment). See a table of these themes in the demographics section.

It should be noted that 68 total participants (10% of total data) were removed from the final analyses of this study due to significant incomplete data (n = 49; e.g., leaving the survey before completion), or significant outlier data (n = 18). Outlier data was determined using Box/Whisker Plots and ZResidual scores. The final reported sample size (N = 607) reflects these removals. There were no foreseeable risks in participating in this study. Oklahoma State University student participants (75% of the sample) were awarded research credit for their education and/or human sciences courses that offered extra course credit for voluntary research participation while college students from other college campuses (25% of the sample) were entered into a drawing for one of four \$25 VISA gift cards.

Measures

All participants were presented with an informed consent form (Appendix B), a demographic questionnaire (including questions about RSS identity and RSS group participation, among others), the World Health Organization Quality of Life Brief measure (WHOQOL-BREF; World Health Organization, 1998, 2012), the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995), and the Psychological Sense of Religious/Spiritual Community scale (PSRSC; Dabbs et al., in press, adapted from Lounsbury & DeNeui, 1996). It should be noted that this last measure was not used for the purposes of the current study. The measures and demographic questionnaire, and their included logic, can be found in Appendix B, *Qualtrics Online Survey*.

Demographic Questionnaire

College student participants provided information about their age, biological sex, gender/gender identity, race/ethnicity, sexual/affectual orientation, current relationship status, year in college, annual family income, spiritual identification (i.e., Do you view yourself as a non-spiritual person? Yes/No; Do you view yourself as a spiritual person? Yes/No), religious identification (i.e., Do you view yourself as a non-religious person? Yes/No; Do you view yourself as a religious person? Yes/No), perception of having a meaning in life (i.e., Do you believe you have a purpose or meaning in life? Yes/No), RSS group identification (based on their endorsement of a choice among a variety of faith or non-faith identifiers/labels mentioned earlier in the *Participants* section), religious/spiritual group participation (i.e., Do you participate in a spiritual or religious group? Yes/No), religious/spiritual group attendance (i.e., How often do you attend your spiritual and/or religious services/ceremonies/events? Responses included: I do not attend regular services/ceremonies, once a year, twice a year, once a week, 2-3 times a week, 4-6 times a week, daily, other), and non-spiritual/non-religious meaning making group participation (i.e., Do you participate in a non-spiritual/non-religious group that helps you find purpose and/or meaning in your life? Yes/No).

World Health Organization Quality of Life Brief Measure (WHOQOL-BREF)

The WHOQOL-BREF (World Health Organization, 1998, 2012) is a 28-item short form of the 100-item World Health Organization Quality of Life measure. Participants rated their level of agreement with each item on a polytomous 5-point Likert scale (1 = not at all to 5 = extremely). Examples of items include: "How much do you enjoy life?," "How would you rate your quality of life?," and "how well are you able to get around?" The overall WHOQOL-BREF score can be divided into four subscales: physical, psychological, social relationships, and environment.

The physical WHOQOL subscale measures physical ailments associated with life quality (e.g., “Do you have enough energy for everyday life?”). The psychological WHOQOL subscale measures both emotional variables and cognitive variables that may be impacted by psychological distress (e.g., “Are you able to accept your bodily appearance?” and “How well are you able to concentrate?”). The social relationships subscale measures satisfaction with interpersonal relations (e.g., “How satisfied are you with the support you get from your friends?”). Finally, the environment subscale measures socioeconomic factors (e.g., “How healthy is your physical environment?” and “How satisfied are you with your transport?”).

WHOQOL-BREF overall and unweighted composite subscale scores were used as primary outcome variables for this study. Higher scores on the overall and subscale scores indicate a better quality of life—perceptions of increased opportunity, physical and psychological health, and good social relationships. Lower scores indicate perceptions of poorer physical and psychological health, socioeconomic difficulty, and poorer social relations.

The WHOQOL, and its short form, the WHOQOL-BREF, were developed and validated in 15 field centers across the world (World Health Organization, n.d.). The WHOQOL is available in over 20 different languages and has maintained cross-cultural validity. Due to its long history of empirical validity across populations, the WHOQOL-BREF was the quality-of-life measure chosen for the current study. While there is some evidence that the WHOQOL-BREF may be an unreliable and invalid measure for use with college students (D’Abundo et al., 2011), there were methodological and sampling issues with these findings. For example, their findings may hold little generalizability due to the limited geographic sample, in that all 1,773 of their participants came from one southeastern U.S. university. Also, the demographics of their sample (i.e., between 19-20 years of age, female, and White) may not be representative of a changing college environment, which is becoming less White, more gender egalitarian, and older (NCES, 2019; NCES, 2020). In contrast, other researchers have demonstrated that the WHOQOL-BREF

is an effective measure of quality of life for college students at the undergraduate and graduate levels (Ilic et al., 2019; Ridner et al., 2018; Zhang et al., 2012).

A comprehensive analysis of psychometric validity and reliability of the WHOQOL was conducted using data from 15 field centers (over 10,000 participants) across the world (WHOQOL Group, 1998). This research has shown the WHOQOL to have internal consistency domain scores ranging from 0.66 (social relationships) to 0.84 (physical health). Results also indicate that the WHOQOL-BREF has a strong ability to discriminate between “ill” and “well” participants ($p < 0.001$). Test-retest reliability for domain scores was found to be generally high, ranging from 0.66 (physical health) to 0.87 (environment). Confirmatory factor analysis supported the appropriateness of a four-domain solution (physical, psychological, social relationships, and environment). The internal consistency and reliability analyses for the current sample showed the WHOQOL-BREF to have an overall consistency of 0.88, with subscale consistencies ranging from 0.61 (physical) to 0.81 (environment)—all results congruent with extant internal consistency and reliability analyses.

Depression, Anxiety, Stress Scales (DASS-21)

The DASS-21 (Lovibond & Lovibond, 1995) is a 21-item short form of the 42-item DASS-42 measure of depression, anxiety, and stress. Participants rate their level of agreement with each item, using a polytomous 4-point Likert scale (0 = did not apply to me at all, 3 = applied to me very much, or most of the time), using the previous week as an anchor/context.

The DASS-21 consists of an overall score of psychological distress and three subscale scores of depression, anxiety, and stress. Each subscale contains seven questions. Examples of items include: “I felt that I had nothing to look forward to” (depression), “I felt I was close to panic” (anxiety), and “I found myself getting agitated” (stress). The overall and unweighted composite subscale scores of the DASS-21 were used as primary outcome variables for this

study. Higher scores on the DASS-21 indicate more psychological distress. Lower scores indicate less psychological distress.

The DASS-21 was the measure of psychological distress used in this study, due to its common use with college student samples in research studies, with reported psychometric goodness-of-fit with college students, and its validation as a measure of general psychological distress (Camacho et al., 2016; Liu et al., 2019; Zanon et al., 2020).

Recent research on the DASS-21 has shown its strong psychometric properties (Coker et al., 2018), with domain internal reliability scores of 0.81 (depression), 0.89 (anxiety), and 0.78 (stress), and significant inter-item correlations within each domain. These researchers also found that the DASS-21 had significant discriminant, concurrent, and convergent validity properties. DASS-21 subscales were also shown to be correlated ($p < .001$) with other self-rated measures of depression and anxiety. Results of the internal consistency and reliability analyses for the current sample showed the DASS-21 to have an overall consistency of 0.91 with subscale consistencies of 0.85 (depression), 0.84 (anxiety), and 0.79 (stress)—all results congruent with extant internal consistency and reliability analyses.

Procedures

Human Subjects Protection

Multiple trainings were completed before collecting data to ensure the safety of all participants in the current research. The two trainings completed for the current study were administered through the Collaborative Intuitional Training Initiative (CITI). First, the training for Social, Behavioral, and Educational research was completed, which contained modules regarding history and ethics, assessing risk, informed consent procedures, privacy and confidentiality, conflicts of interest, and other relevant human subject's protection areas. Second, an Internet/Online Research Methodologies training was completed given the nature of the data

collection for the current manuscript. This training contained modules regarding consent in the 21st Century (for online participants) and internet-based research. All trainings were completed under the auspices of a university Internal Review Board.

Data Collection

Participants in the current study were solicited via two methods. First, some were invited to complete an online survey through the SONA research system at Oklahoma State University (OSU). Second, non-OSU college student participants were solicited via snowball sampling through postings on listservs, Facebook, and through direct communication with department heads. Participants were presented with informed consent before participating and were free to end participation at any time in the study.

CHAPTER III

RESULTS

Statistical Analyses for the Research Questions

All analyses were completed using SPSS statistical software (v. 26.0.0.0). General statistical assumptions (e.g., normality, linearity, etc.) were assessed for all primary analyses and appropriate post-hoc analyses were performed. Skewness and kurtosis of data were determined to be normal (with ranges between -1 and 1). To control for type 1 error, Bonferroni and Tamhane's adjustments were made when appropriate. Significance of the results are reported (at the level of $\alpha < .05$) as are the effect sizes (η^2 ; 0.01=small, 0.06=medium, 0.14=large; Draper, 2020).

Descriptive Statistics

Descriptive statistics were calculated for the main study variables using the total sample (N = 607). Means, standard deviations, actual score ranges, and possible score ranges for the main study variables are reported in Table 2. Overall, participants generally reported middle to upper ranges of quality of life. According to Lovibond and Lovibond (1995) narrative cutoff scores, participants reported "normal" levels of depression, anxiety, and stress. Correlation matrices for the main study variables and subscale study variables can be found in Tables 3 and 4, respectively.

Procedural analyses, in the form of Analyses of Variance, were conducted to navigate potential demographic connections to outcome variables in the data. Results of the procedural analyses indicate that there were no significant correlations between age and the dependent variables of psychological distress and quality of life, for the overall and subscale scores.

Of interest, relationship status showed correlation with the social subscale of the WHOQOL-BREF, $F(4,602) = 4.64, p < .01$. Partnered/common law participants scored the highest on the social quality of life subscale with separated participants scoring the lowest.

Gender identity was associated with stress, $F(3,602) = 3.43, p < .05$, psychological quality of life, $F(3,602) = 5.07, p < .01$, and environmental quality of life, $F(3,602) = 4.44, p < .01$. In the case of gender, cisgender women scored highest on the stress subscale of the DASS-21 and the environmental subscale of the WHOQOL-BREF, while cisgender men scored highest on the WHOQOL-BREF overall score and subscale of psychological quality of life.

Racial identity was associated with environmental quality of life, $F(7,598) = 2.20, p < .05$. In this case, White students ($n = 402$) scored highest on environmental quality of life ($M = 16.31$) with Indigenous students ($n = 18$) following closely ($M = 16.22$).

Annual family income was significantly related to psychological quality of life, $F(11,591) = 3.23, p < .001$, social quality of life, $F(11,591) = 2.88, p < .01$, environmental quality of life, $F(11,591) = 10.44, p < .001$, and overall quality of life, $F(11,591) = 4.81, p < .001$. The lowest of these scores were reported by students who reported annual family incomes less than \$79,999. The highest of these scores were reported by students who reported an annual family income more than \$150,000.

Finally, year in college was significantly related to overall psychological distress, $F(4,578) = 4.72, p < .01$, depression, $F(4,578) = 2.99, p < .05$, anxiety, $F(4,578) = 3.64, p < .01$, stress, $F(4,578) = 4.86, p < .01$, and physical, $F(4,578) = 6.07, p < .001$, psychological, $F(4,578)$

= 2.42, $p < .05$, and environmental aspects of quality of life, $F(4,578) = 6.03$, $p < .001$. Generally, undergraduate seniors reported highest levels of depression, anxiety, and overall psychological distress and lowest levels of physical and psychological quality of life. Graduate students reported the highest scores of stress and lowest scores of environmental quality of life in the college student sample.

Given the procedural analysis findings, the following aspects of demographic characteristics were statistically controlled for in the relevant analyses: year in college, gender, annual income level, race, and relationship status.

Research Questions

Question 1a

Do college students who identify as religious/spiritual differ from college students who identify as secular in terms of their overall levels of psychological distress and quality of life?

Psychological Distress. Analysis of covariance (ANCOVA) results indicated that there were no significant differences in scores of psychological distress, when controlling for significant covariates (year in college), $F(1,580) = .26$, $p > .05$. For a means plot see Figure 1.

Quality of Life. ANVOCA results also indicated that there were no significant differences in scores of quality of life between those who identified as secular and those who identified as spiritual/religious when controlling for significant covariates (gender and annual income), $F(1,598) = 3.533$, $p > .05$. For a means plot, see Figure 2.

Question 1b

Do college students who identify as religious/spiritual differ from college students who identify as secular in terms of their levels of depression, anxiety, and stress, as well as specific aspects of their quality of life including physical, psychological, environmental, and social relationships?

Psychological Distress. Multivariate analysis of variance (MANOVA) showed that there were no significant differences between secular participants and spiritual/religious participants on subscale scores of psychological distress, $F(1,606) = 1.03, p > .05$.

Quality of Life. Results of MANOVA indicated significant group differences between secular and spiritual/religious participants on subscale scores of quality of life, $F(1,606) = 4.987, p < .001$. When controlling for significant covariates in univariate analyses, it was found that psychological quality of life, $F = 9.64, p < .01, \eta^2 = .02$, and environmental quality of life, $F = 9.34, p < .01, \eta^2 = .02$, were both significantly different between groups—the spiritual/religious participants showed significantly higher scores in both domains than those participants who identified as secular.

Question 1c

Do college students who identify as secular ($n = 84$), spiritual *or* religious ($n = 183$), and spiritual *and* religious ($n = 340$) differ from each other on levels of depression, anxiety, and stress as well as specific aspects of their quality of life including physical, psychological, environmental, and social relationships?

Psychological Distress. ANOVA results indicated significant group differences between i) secular, ii) spiritual *or* religious, and iii) spiritual *and* religious participants on an overall score of psychological distress, $F(2,604) = 3.56, p < .05$. However, these significant results were lost when controlling for year in college, a significant covariate. For means, see Figure 3.

MANOVA results indicated that differences between these three groups and subscale scores of psychological distress were significant, $F(3,603) = 2.105, p = .50, \eta^2 = .01$. However, the significance of the depression and stress subscales were lost after univariate testing with covariate controls (year in college, gender). The anxiety subscale differences between these groups remained after controls, $F(2,579) = 4.68, p < .01, \eta^2 = .02$. Further post-hoc testing with Tamhane's T^2 found that the significant differences were between the "spiritual *or* religious" and the "spiritual *and* religious" ($p = .01$), with the "spiritual *or* religious" scoring significantly higher on subscale anxiety.

Quality of Life. ANCOVA results indicated significant differences between i.) secular, ii.) spiritual *or* religious and iii.) spiritual *and* religious participants on an overall score of quality of life when controlling for covariate factors (gender, annual income), $F(2,569) = 3.22, p < .05, \eta^2 = .01$. The "spiritual and religious" group scored significantly higher on quality of life than either the "secular" or "spiritual or religious group." For a means plot, see Figure 4.

MANOVA indicated significant differences between these groups on subscale measures of quality of life, $F(4,602) = 4.35, p < 0.001, \eta^2 = .03$. When controlling for significant covariates in univariate analyses, it was found that psychological quality of life, $F(4,602) = 8.28, p < .05, \eta^2 = .03$, and environmental quality of life, $F = 7.57, p < .01, \eta^2 = .03$, were significantly different between groups. Post-hoc analyses show that the "spiritual and religious" group scored significantly higher than the "secular" or "spiritual or religious" group on subscale levels of psychological quality of life ($p < .05$ for both groups) and levels of environmental quality of life. Environmental quality of life comparison of i) spiritual and religious with ii) secular showed $p < .01$. Environmental quality of life comparison of i) spiritual and religious with ii) spiritual or religious showed $p < .05$.

Question 2a

Do college students who participate in religious/spiritual groups differ from those who do not in terms of their psychological distress and quality of life?

Psychological Distress. ANCOVA (controlling for college year), resulted in no significant group differences on the overall score of psychological distress between those who participated in religious/spiritual groups and those who did not, $F(1,580) = 2.81, p > .05$. See Figure 5 for means plot.

Quality of Life. ANCOVA resulted in significant group findings for overall quality of life. Those who attended religious/spiritual groups reported a better quality of life when compared to those who did not when controlling for covariates (gender, annual income), $F(1,598) = 5.53, p < .05, \eta^2 = .01$. See Figure 6 for a score means plot.

Question 2b

Do college students who participate in religious/spiritual groups differ from those who do not in terms of their depression, anxiety, and stress, as well as specific aspects of their quality of life, including physical, psychological, environmental, and social relationships?

Psychological Distress. MANOVA results indicated that there were no group differences on levels of psychological distress, $F(3,603) = 2.04, p > 0.5$. However, univariate analyses, when controlling for covariates (college year), revealed significant group differences on the anxiety subscale of psychological distress, $F(1,580) = 4.23, p < .05, \eta^2 = .01$, with spiritual/religious group participants reporting less anxiety than college students who did not attend spiritual/religious groups.

Quality of Life. MANOVA results indicated significant group differences between those who did and did not attend religious/spiritual groups on subscale levels of quality of life, F

(4,603) = 7.53, $p < .001$, $\eta^2 = .05$. Univariate testing with controls (gender, annual income) revealed group differences on psychological quality of life, $F(1,573) = 17.35$, $p < .001$, $\eta^2 = .03$, social quality of life, $F(1,599) = 5.41$, $p < .05$, $\eta^2 = .01$, and environmental quality of life, $F(1,571) = 3.89$, $p < .05$, $\eta^2 = .01$. College students who participated in a spiritual/religious group scored significantly higher on psychological, social, and environmental subscales of quality of life than those who did not participate in a spiritual/religious group.

Question 3a

Do college students who participate in secular meaning-making groups and those who participate in religious/spiritual groups differ in their level of psychological distress and quality of life?

Psychological Distress. ANCOVA results indicated no significant group differences on overall scores of psychological distress after controlling for college year.

Quality of Life. ANCOVA results indicated no significant group differences on overall scores of quality of life after controlling for gender and annual income.

Question 3b

Do college students who participate in secular meaning-making groups and those who participate in religious/spiritual groups differ in their levels of depression, anxiety, and stress, and/or specific aspects of their quality of life, including physical, psychological, environmental, and social?

Psychological Distress. MANOVA results indicated no group differences on subscale facets of psychological distress after controlling for college year (depression, anxiety, stress) and gender (stress).

Quality of Life. MANOVA results indicated no group differences on subscale facets of quality of life after controlling for college year (physical), gender (psychological, environmental), annual income (psychological, environmental), race (environmental), and relationship status (social).

CHAPTER IV

DISCUSSION

Main Findings

The main findings in this study of a sample of U.S. college students can be broken into three main components: a) quality of life and psychological distress group differences between i) spiritual and/or religious and ii) secular college students, b) quality of life and psychological distress differences between college students who attend spiritual/religious meaning making groups and those who don't, and c) quality of life and psychological distress differences between college students who attend spiritual/religious meaning making groups and those who attend secular meaning making groups.

First, college students who identified as “spiritual *and* religious” reported higher quality of life than students who identified as secular and students who identified as “spiritual *or* religious.” Together, spiritual/religious college students reported having more environmental and psychological quality of life than secular students, with the “spiritual and religious” students scoring significantly higher in those aspects of quality of life than the other two groups (i.e., “spiritual or religious” or “secular”).

Second, college student participants who attended religious/spiritual groups reported having an overall better quality of life when compared to college students who reported not

attending religious/spiritual groups. Of interest, more specifically, spiritual/religious group participants reported lower levels of anxiety, higher levels of psychological quality of life, higher levels of social quality of life, and higher levels of environmental quality of life than participants who did not attend religious/spiritual groups.

Finally, there were no substantial group differences between college students who attended spiritual/religious groups and those who attended secular meaning-making groups on their overall or subscale levels of psychological distress and quality of life.

Identity

As discussed previously, identity may play a core component in some of the results found in the current study. Erik Erikson outlined the complex, recursive process of identity development early in his identity research. Erikson writes at length about “identity crisis,” which has been colloquially used to suggest a psychologically and emotionally tumultuous time of personal confusion and discomfort. However, this colloquial usage does not mirror Erikson’s definition of identity crisis: “a necessary turning point, a crucial moment, when development must move one way or another, marshaling resources of growth, recovery, and further differentiation (Erikson, 1968, p. 16). Perhaps the results of the current study may be shedding some light on the “identity crises” of those who are i) spiritual, but not religious and ii) religious, but not spiritual.

James Marcia, a psychological contemporary of Erik Erikson, suggested four stages of identity (1963). Most importantly for the current work is the stage of “identity diffusion,” first coined by Erik Erikson (1963). Identity diffusion takes place when people struggle to create concrete meaning of nebulous components of their identity; the antithesis of identity diffusion is identity achievement. Previous researchers have shown that university students with higher levels of identity diffusion have more difficulty adjusting to life challenges and more difficulty with identity distress (Sica et al., 2014). It is possible that college students with “secular” identities and

“spiritual *and* religious” identities may be experiencing less identity diffusion and distress than college students who identified as “spiritual *or* religious,” but not both. That is, perhaps we are seeing the realization of a religious, spiritual, and secular identity spectrum: those with firm secular identities at one extreme (“secular” in this sample), those with firm spiritual and religious identities at the other extreme (“spiritual *and* religious” in this sample), and those with *less* firm identities and beliefs comprising the middle of the spectrum (“spiritual *or* religious, in this sample). This spectrum could explain the increased quality of life in those who identified as “spiritual *and* religious” and the increased psychological distress in those who identified as “spiritual *or* religious.”

Community

College student participants in the current study who attended spiritual/religious groups reported less psychological distress and higher quality of life than college student participants who did not participate in religious/spiritual groups. These results are consistent with extant literature that suggests religious/spiritual group participation may increase quality of life outcomes and lower psychological distress (Hummer et al., 1999; Koenig, 2012; Kneipp et al., 2009; Milevsky, 2017; Roming & Howard, 2019; Yun et al., 2019). Similar research has shown that both public and private spiritual and religious participation has a persistent positive effect on life satisfaction and psychological well-being (Ellison et al., 1989).

However, of interest in the current study, there were no significant group differences between college students who attended spiritual/religious groups and those who attended secular meaning-making groups in terms of their psychological distress and quality of life. These results may replicate extant findings on psychological sense of community—a perception of, acknowledgement towards, and willingness to participate in an interdependent, give-and-take relationship with others as part of a larger community (Sarason, 1974, p. 157). While there is

evidence that collegiate psychological sense of community is associated with greater psychological well-being in college students (McNally et al., 2020), more research is needed to explore how, more specifically, participation in these types of meaning-making groups may be related to aspects of well-being and/or identity development.

This *insignificance* of group differences between those college students who participated in spiritual/religious versus secular meaning-making groups is significant in that there has been a strong focus in the literature on the potential benefits of religious/spiritual group participation for college student mental and physical health, including psychological distress and quality of life. However, little research has focused on the comparative protective factors of secular meaning-making group participation for college students. These results tentatively support the idea that the benefits of psychological connection transcend theistic labels and identities. Secular students may find the same psychological and communal comfort in non-religious, non-spiritual groups that spiritual/religious students find in their faith-based groups.

Implications for College Students and Administration

College student personnel may directly benefit from this research and its results in the continued quest for the improvement of college student mental and physical well-being and quality of life. The results of this study encourage the availability of a diversity of meaning-making groups, both theistic and secular, to fully engage and integrate students into their college experiences. At the level of administration, these results could be used to justify the expansion of available student programs—e.g., gaming clubs, intramural sports, and other hobbyist activities. College and university counselors and psychologists could consider these results to inform their recommendation for programs of which their college students/clients may benefit. College students, themselves, may find meaning in these results as the final push needed to become

involved in an organization that may bring them a sense of identity and/or community, without the pressure of the community needing to fit a common mold (e.g., religious/spiritual groups).

Strengths and Limitations of the Study

The primary strength of the current study is the inclusion of secular college students who may be overlooked when exploring the intersections of well-being, quality of life, spiritual/religious identities, and coping. Many researchers who focus on “religiosity” as a construct of identity often end their investigations with those who believe. However, an increasing number of people in the United States (including college students) are beginning to disaffiliate with religious organizations and, more generally, religion and spirituality as a whole—this change can be seen reflected in nationwide samples of the U.S. religious landscape (Jones, 2019; Pew Research, 2019). To ignore the changing RSS identity landscape, and those who might not believe in gods or a higher power, is a disservice to those for whom such research may benefit. While the results of the current study should be interpreted with some degree of caution, the findings may have helped to close the gap on the dearth of research on secular college student experiences in relation to spiritual/religious college student experiences.

There has been much criticism levied against convenience sampling, one of the sampling methodologies used in the current work (Peterson & Merukna, 2014). Some have argued that convenience sampling is one of the main culprits of the “replication crisis” that exists within many sciences, including psychological sciences (Open Science Collaboration, 2015). For instance, the sample of the current work—primarily collected on the campus of a large, predominantly White institution—skews White (66.3%), female (66.2%), and cisgender (99.1%). However, there are a myriad of reasons to use convenience sampling, some of which include undergraduate student exposure to research methods and interest in a particular sample (e.g., in this study, with an interest in a collegiate population). To mitigate these potential limitations,

targeted sampling of other colleges/universities took place to increase the generalizability of results. Given potential issues and concerns related to convenience sampling, further research is needed to confirm or refute the findings of the current study.

Perhaps the most relevant limitation for the current research concerns how “spiritual,” “religious,” and “secular” groups were differentiated, which was through self-reporting. However, the issue with identification may be less of a self-imposed limitation and more of a limitation with the current identity literature and how RSS identities are operationalized, quantified, and measured. For instance, one common measure of religiosity is worship service attendance. This approach has been extensively criticized as constructurally invalid (Ferriss, 2002). To carefully circumvent comparison effects by avoiding questions such as “how religious/spiritual are you compared to your friends/family/etc.,” it was decided to offer a choice (yes/no) to identify the religiosity and spirituality of the participants (e.g., “do you view yourself as a spiritual person?” and “do you view yourself as a religious person?”). While this approach may not be perfect, it does evade both potential self-enhancement effects and the current RSS identity operationalization issue in the literature.

Future Directions in Research

Directions for future research in this field are many. First, it would behoove future researchers to increase the sample size of secular participants in studies for the purposes of statistical power. While the sample of secular participants in this study ($n = 84$) was robust enough for the analyses—including an over-sampling of the general population (~9% of the U.S. population identifies as secular, while 14% of the current sample was secular)—an increased number of secular participants may give a more realistic picture of their characteristics and experiences in future research studies.

Second, future researchers may want to include more nuanced identity categories for religious, spiritual, and secular participants. While much research centers on major world religious and secular identities (e.g., Christian, Muslim, atheist, agnostic, etc.), there are large populations of other theistic and secular identities that better encapsulate the complexity of RSS identity, including religious nones, spiritual nones, unaffiliated theist, spiritual but not religious, etc. There may be unique characteristics of these identities that are being unidentified or missed through the oversimplification of categorization.

Third, future researchers may want to compare the results of the current study to other time periods, such as post-COVID-19. All of the information collected for this study occurred during the COVID-19 pandemic, from March 25th, 2020 to May 3rd, 2021. It is possible that some of the results of the current study might not hold significance outside of the reality of a once-in-a-lifetime global pandemic, which could have potential effects on certain variables (e.g., meaning-making group participation in wake of organizational closures, quarantining and isolation, psychological distress, and quality of life). Post-hoc comparisons of participants who have similar demographics may shed some light on findings of the current study which were captured during a unique snapshot of time in our history.

Conversations of religion, spirituality, and secularism seem to be regularly reduced to “to believe or not to believe?” The results of the current study indicate that this may be an overly simplified answer to a complex question. At the root of this question may not be belief itself but, rather, connection to meaning-making community and/or aspects of college student identity. It is hoped that the results of this study may effectively guide college administrators, counselors, professors, directors, college student development specialists, and all the parties who are invested in college student well-being and the betterment of college student life everywhere.

CHAPTER V

TABLES AND FIGURES

Table 1

Demographics of the Sample

Age (n = 404)	<i>M</i> = 23.54	<i>SD</i> = 7.54
	n	% of sample
18	38	9.4
19	78	19.3
20	80	19.8
21	51	12.6
22	30	7.4
23	17	4.2
24	10	2.5
25	7	1.7
26	12	3.0
27	11	2.7
28	11	2.7
29	5	1.2
30	5	1.2
31	2	0.5

32	3	0.7
33	3	0.7
34	5	1.2
35	2	0.5
36	5	1.2
37	6	1.5
38	4	1.0
40	2	0.5
42	2	0.5
43	1	0.2
46	2	0.5
47	2	0.5
48	1	0.2
49	3	0.7
50	1	0.2
53	1	0.2
54	1	0.2
56	2	0.5
57	1	0.2
68	1	0.2

Note: While all participants had to confirm they were over 18 years of age to participate, true age was not a forced response.

Demographics of the Sample (cont.)

RSS Identity (n = 599)	n	% of sample
Protestant (non-denominational, Baptist, Pentecostal, Methodist, non-Catholic Christian, etc.)	320	53.4
Catholic	82	13.7
Agnostic	61	10.2
Orthodox Christian	32	5.3
Atheist	30	5.0
Other	21	3.5
Buddhist	18	3.0
Muslim	10	1.7
Pagan	7	1.2
Hindu	6	1.0
Latter-Day Saint	6	1.0
Jewish	4	0.7
Native American Church	2	0.3

Demographics of the Sample (cont.)

Secular group participation themes	Description of the theme
Greek life (n = 20)	Various fraternity and sorority identities
Sporting extracurriculars (n = 15)	Various sports, sporting, and athletic teams: wrestling, tennis, golf, swimming, soccer, ROTC, dance.
Friend groups (n = 13)	Indication of a general group of confidantes.
Grounding groups (n = 5)	Indication of mindfulness or similar concepts (yoga, meditation, etc.).
School (n = 3)	Indication of student status (school, grad school, college, etc.)
Recovery groups (n = 3)	Indication of a 12-step or other peer-recovery group (e.g., Alcoholics Anonymous, Narcotics Anonymous, etc.).
Volunteering (n = 3)	An indication of volunteer work.
Other extracurriculars (n = 20)	Indication of some other extracurricular activity not listed in previous groups (employment, mentorship program, book club, community organizations, etc.)

Note: some participants wrote in “N/A” (not applicable) as a response. This could have confused the numbers for the “Recovery groups” theme given that “NA” is a common abbreviation for Narcotics Anonymous. Only one person wrote the phrase “narcotics anonymous,” and they are the only participant in this category included in the theme to prevent overestimation.

Demographics of the Sample (cont.)

Gender (n = 606)	n	% of sample
Woman	396	65.3
Man	205	33.8
Genderqueer/non-binary	4	0.7
Other	1	0.2

Sex (n = 606)	n	% of sample
Female	401	66.2
Male	204	33.7
Intersex	1	0.2

Sexual/Affectional Orientation (n = 607)	n	% of sample
Heterosexual	520	85.7
Bisexual	51	8.4
Other	14	2.3
Gay	11	1.8
Questioning	11	1.8
Asexual	10	1.6
Lesbian	4	0.7
Queer	4	0.7

Demographics of the Sample (cont.)

Race (n = 606)	n	% of sample
White	402	66.3
Multiracial	89	14.7
Black or African American	41	6.8
Hispanic or Latinx	29	4.8
Asian or Asian American	24	4.0
American Indian/Alaskan Native/Native American/Indigenous	18	3.0
Middle Eastern or Arab	2	0.3
Native Hawaiian or Pacific Islander	1	0.2

Note: “Middle Eastern” and “Arab” were not originally included as racial categories, however two participants wrote these responses in to an open response selection regarding race and those responses have been included here. “Multiracial” includes any participants who selected two or more racial identifier categories—these individuals could be biracial, triracial, etc.

Demographics of the Sample (cont.)

Current Relationship Status (n = 607)	n	% of sample
Single	477	78.6
Married	62	10.2
Partnered/Common Law	54	8.9
Divorced	11	1.8
Separated	3	0.5

Year in College (n = 583)	n	% of sample
First-year	133	22.8
Sophomore	129	22.1
Junior	132	22.6
Senior	86	14.8
Graduate	103	17.7

Demographics of the Sample (cont.)

Annual Family Income (n=603)	n	% of sample
Less than 10,000	38	6.3
10,000-19,999	27	4.5
20,000-29,999	45	7.5
30,000-39,999	25	4.1
40,000-49,999	50	8.3
50,000-59,999	37	4.1
60,000-69,999	43	7.1
70,000-79,999	36	6.0
80,000-89,999	40	6.6
90,000-99,999	47	7.8
100,000-149,999	110	18.2
More than 150,000	105	17.4

Note: Income was denoted as USD (\$)

Table 2

Means, Standard Deviations, and Score Ranges for the Main Study Variables

Measure	M	SD	Range (Possible)	Range (Actual)
WHOQOL-BREF	59.90	8.18	16-80	27-80
Physical	14.63	2.53	4-20	8-20
Psychological	14.26	2.34	4-20	7-20
Social	14.89	3.23	4-20	4-20
Environment	16.12	2.35	4-20	8-20
DASS-21	11.88	9.57	0-63	0-56
Depression	3.46	3.53	0-21	0-20
Anxiety	3.04	3.38	0-21	0-16
Stress	5.37	4.07	0-21	0-20

Note. N = 607.

WHOQOL-BREF = World Health Organization Quality of Life-Brief Measure.

DASS-21 = Depression, Anxiety, and Stress Scale-21

Table 3

Correlation Matrix of the Overall Psychological Distress and Quality of Life Scores

	WHOQOL-BREF	DASS-21
WHOQOL-BREF	1.0	-.49**
DASS-21	-.49**	1.0

Note. N=607. ** $p < .01$

WHOQOL-BREF = World Health Organization Quality of Life-Brief Measure.

DASS-21 = Depression, Anxiety, and Stress Scale-21

Table 4*Correlation Matrix of the Psychological Distress and Quality of Life Subscale Scores*

	Depression ¹	Anxiety ¹	Stress ¹	Physical ²	Psychological ²	Social ²	Environmental ²
Depression ¹	1.0	.59**	.64**	-.35**	-.53**	-.38**	-.38**
Anxiety ¹		1.0	.68**	-.31**	-.35**	-.25**	-.30**
Stress ¹			1.0	-.29**	-.40**	-.26**	-.32**
Physical ²				1.0	.53**	.36**	.47**
Psychological ²					1.0	.52**	.58**
Social ²						1.0	.47**
Environmental ²							1.0

Note. N = 607. ** $p < .01$

¹WHOQOL-BREF = World Health Organization Quality of Life-Brief Measure subscales

²DASS-21 = Depression, Anxiety, and Stress Scale-21 subscales

Figure 1

Mean Psychological Distress Scores for Secular and Spiritual/Religious Participants

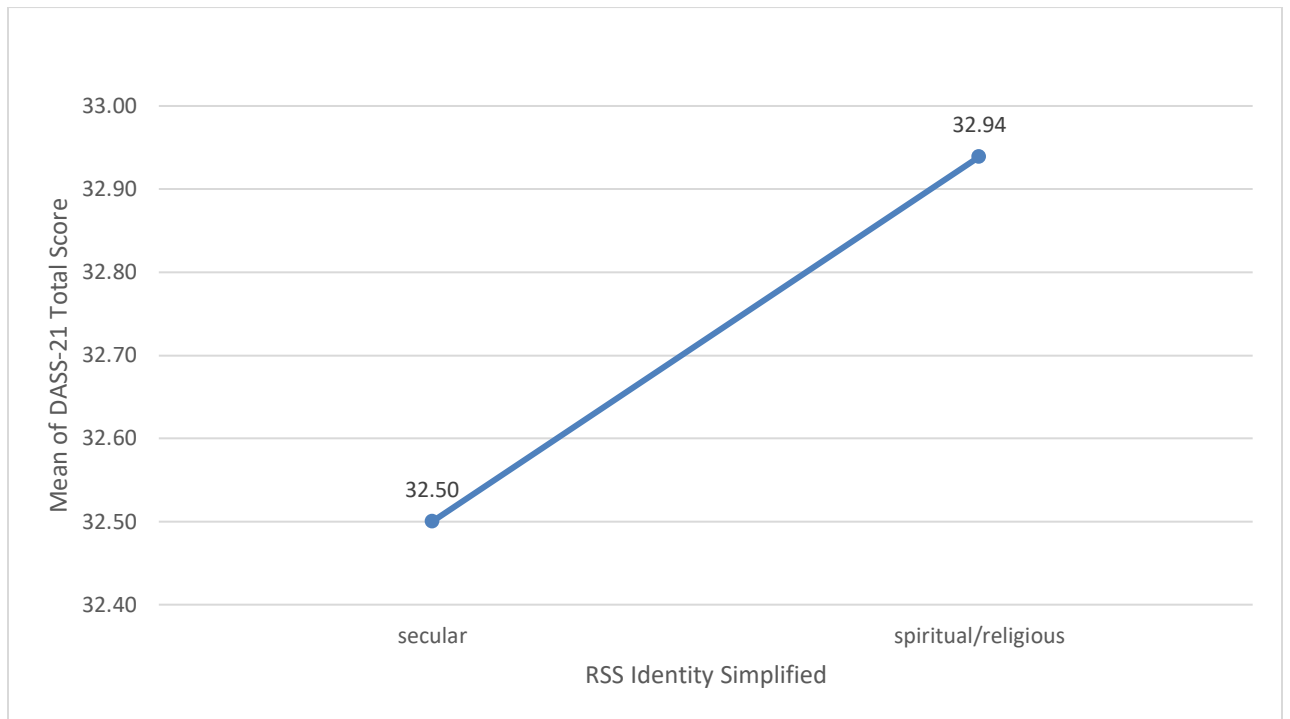


Figure 2

Mean Quality of Life Scores for Secular and Spiritual/Religious Participants

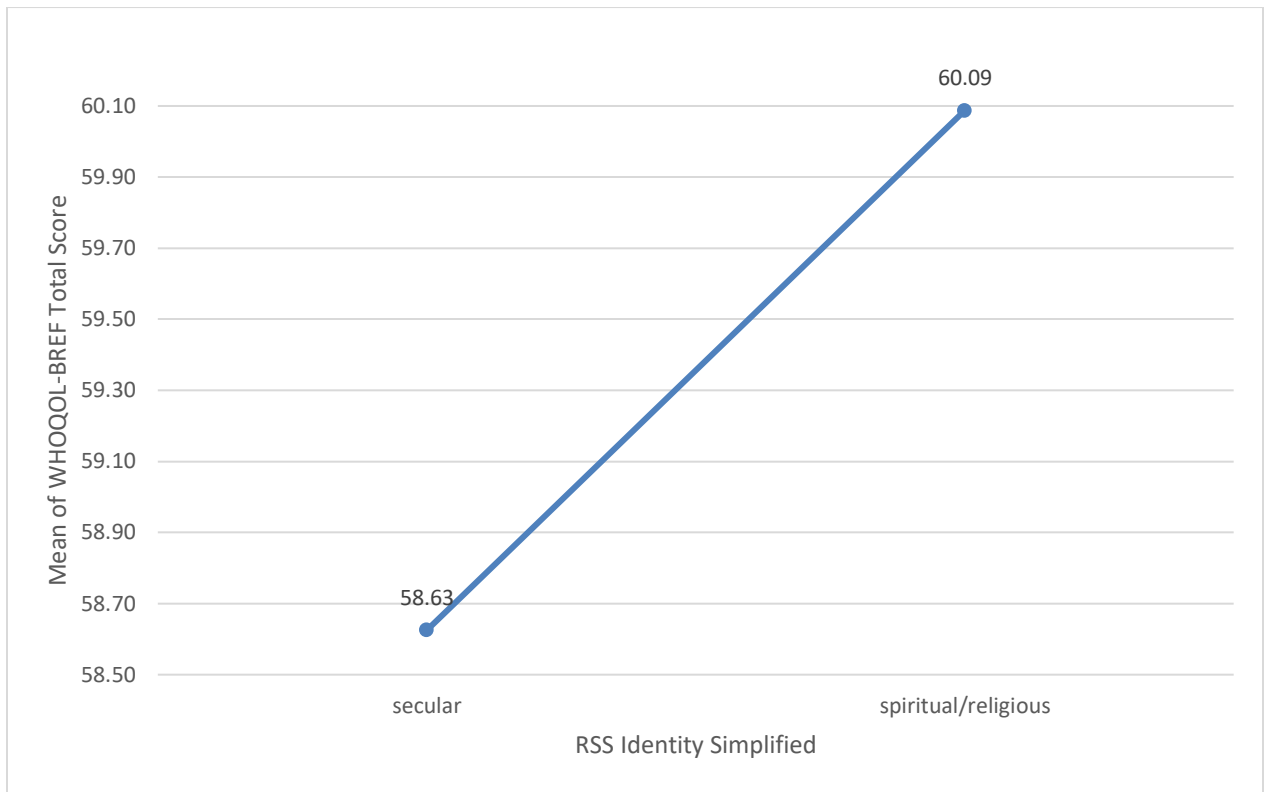


Figure 3

Mean Psychological Distress Scores for Secular, Spiritual or Religious, and Spiritual and Religious Participants

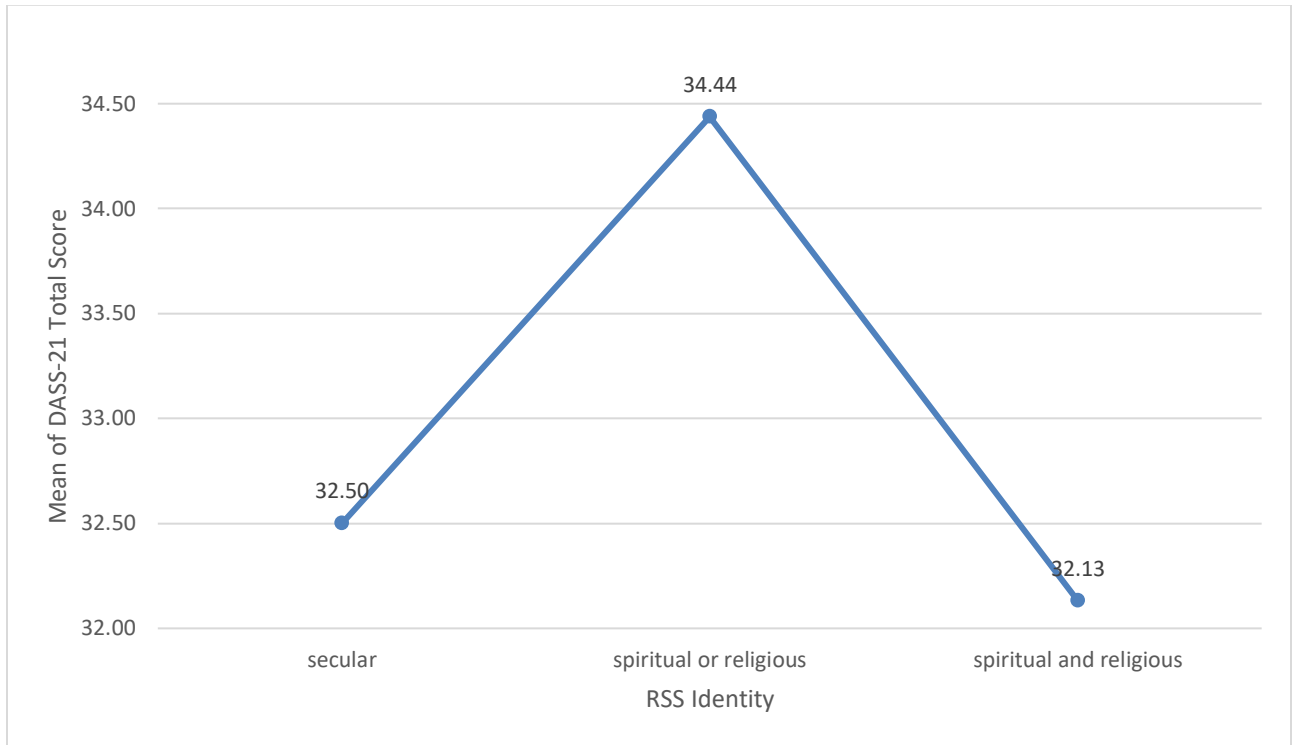


Figure 4

Mean Quality of Life Scores for Secular, Spiritual or Religious, and Spiritual and Religious Participants

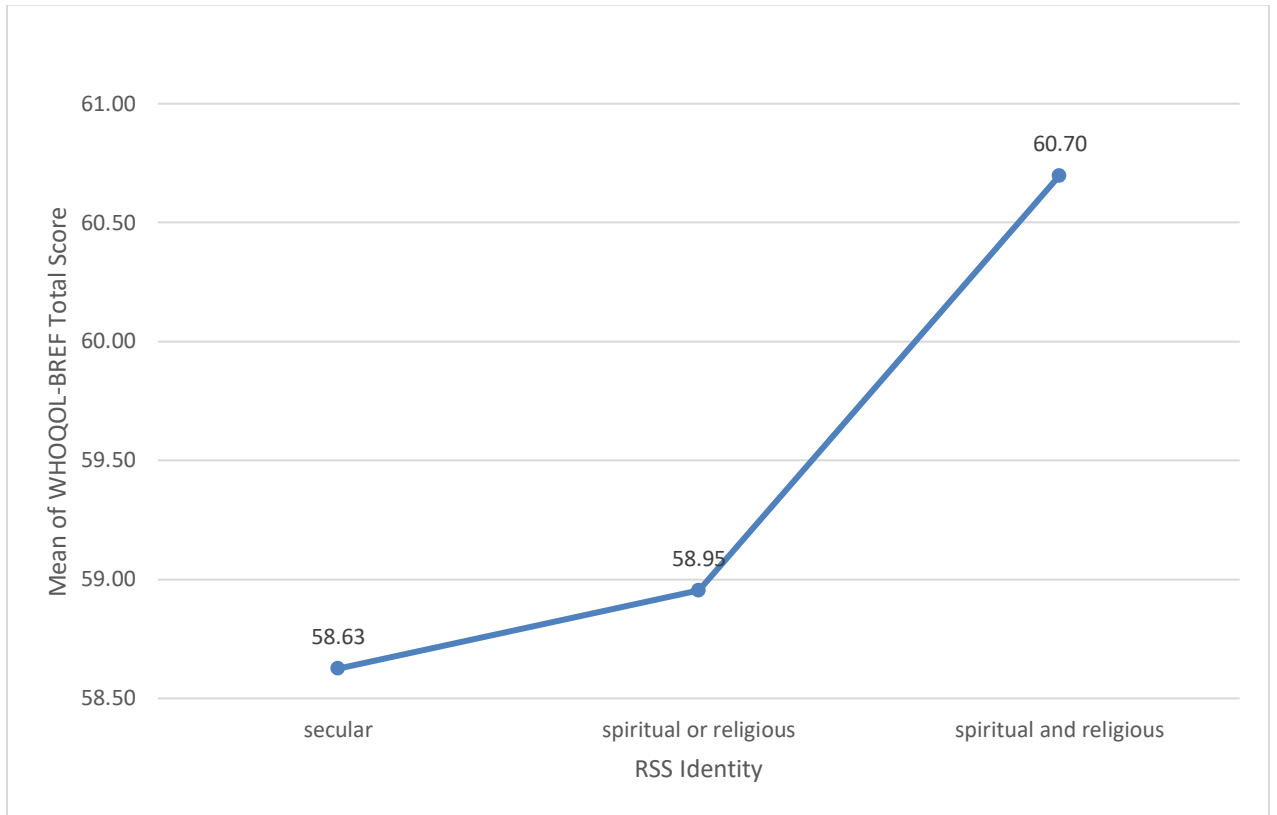


Figure 5

Mean Psychological Distress Scores for Religious/Spiritual Group Participation

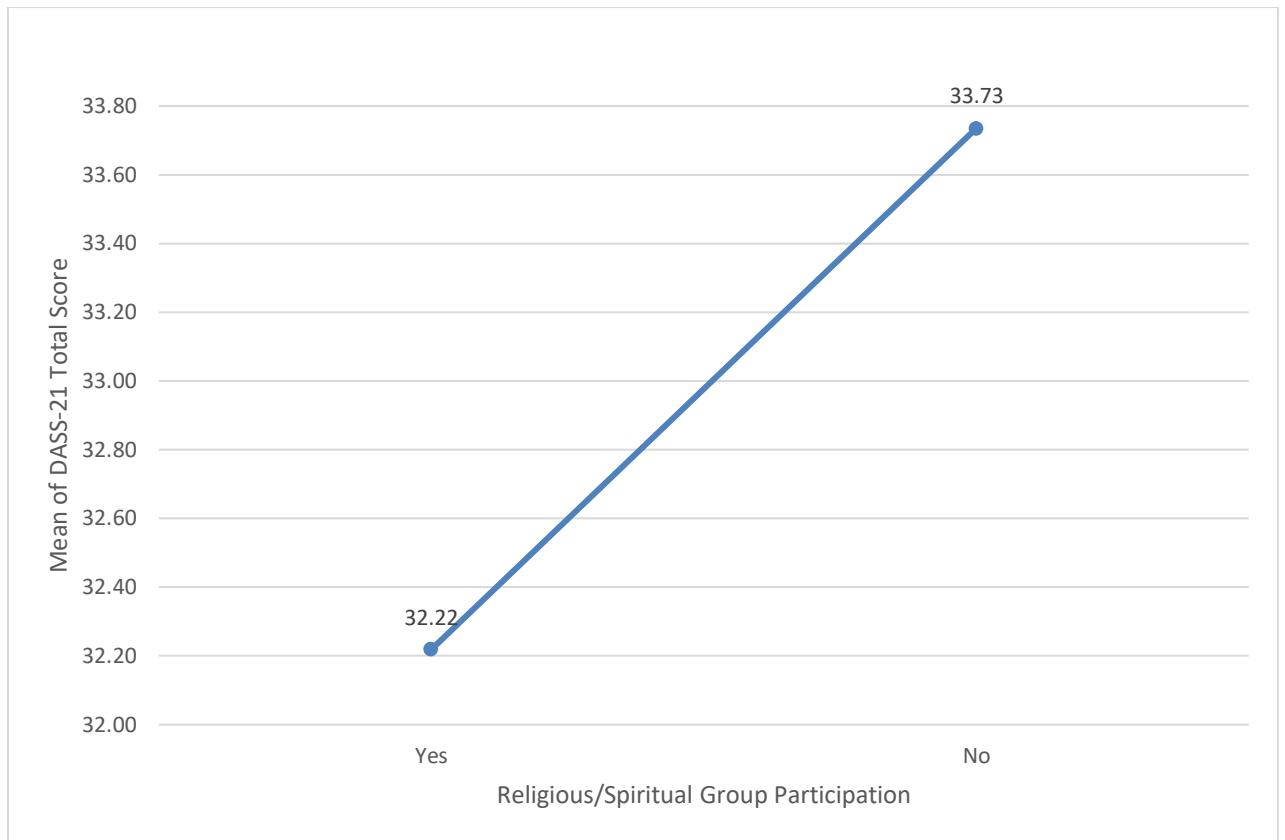
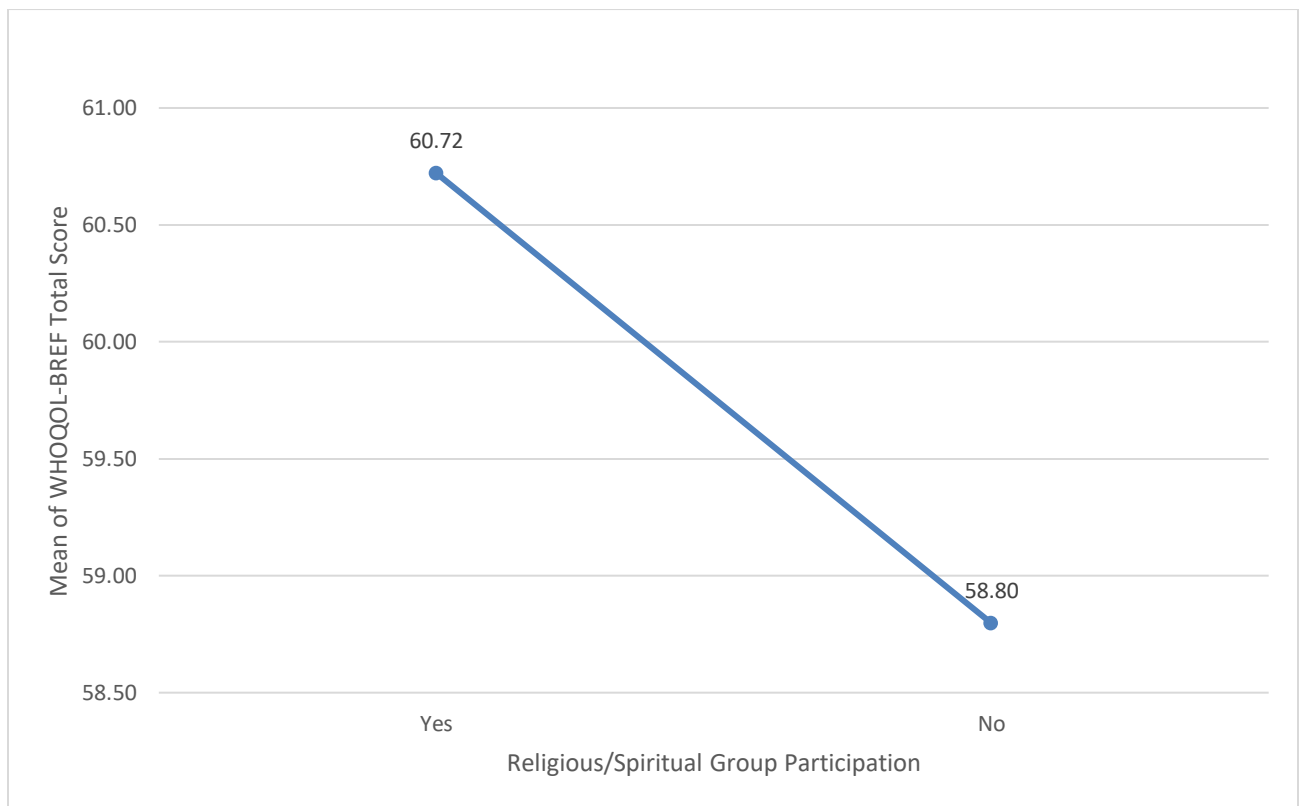


Figure 6

Mean Quality of Life Scores for Religious/Spiritual Group Participation



CHAPTER VI

LITERATURE REVIEW

Religiosity and Spirituality as a Form of Coping

Coping is one way that people can manage and/or decrease their level of psychological distress, and it is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). A comprehensive review of the coping literature has pinpointed the dynamic, flexible nature of the transactional model of coping as beneficial for the adjustment of college students (Heffer & Willoughby, 2017). Heffer and Willoughby (2017) found that the number of coping strategies college students use correlates more strongly with effective coping than *the amount* of coping done, in that increased quantity of coping strategies provides more flexibility in choosing the type of coping needed for situational demands. In this research, college students who used more positive coping strategies showed less depressive symptomology and suicidal ideation than those who used fewer positive coping strategies. Increased use of negative coping strategies (e.g., ignoring problems) was correlated with both increased depressive symptomology and emotional regulation difficulties in college students. Thus, using the most effective positive coping strategy for a shorter period is more beneficial than using a less effective coping strategy for a longer period. One of the most ubiquitous coping strategies worldwide is religious and/or spiritual beliefs and practices, and this

manner of coping can potentially be positive and negative in nature. More research is needed to explore how religious/spiritual beliefs and practices might be a way of being and coping, and thus, a protective factor, for college students, which is one of the purposes of the current study.

Religion and spirituality have been denoted as core features of human coping for decades (Pargament, 2001). For some people, religion and spirituality are the most important coping mechanisms during times of significant distress. For example, previous research with people who had been paralyzed show divine reasoning behind their explanations for their accidents (e.g., it was God's plan; Bulman & Wortman, 1977). Similar research has shown this same reasoning in Black Americans who are primary caregivers for family members with dementia (Segall & Wykle, 1988). Patterns of religious coping have been reaffirmed in more recent studies, in which results show that religion can buffer the impact of stressful life events in people with depressive symptomology and adjustment disorders, including college students (Kolchakian & Sears, 1999; Lorenz et al., 2019). Researchers have pointed to cognitive reappraisal as the driving force behind the utilization of religion for coping (Dolcos et al., 2021).

Dolcos and colleagues analyze the process of cognitive change, the fourth step in the process model of emotion regulation (Suri et al., 2013). Primarily, Dolcos and colleagues focused on the constructs of cognitive reappraisal, coping self-efficacy, religious coping, and well-being. These researchers deduced that cognitive reappraisal was functionally similar to the benevolent (positive) religious reappraisal often found in people who identify as religious. In this experimental work, the researchers propose that religious coping was linked to cognitive reappraisal and feelings of coping self-efficacy. Results showed that people who used religious coping also used reappraisal as a method of emotion regulation. The researchers also found that use of reappraisal as method of emotion regulation and higher levels of coping self-efficacy mediated the links between religious coping and lower levels of anxiety. As a general theme of human coping, religiosity and spirituality can also have impacts on the coping and well-being of

college students. While a more in-depth review of this research literature is presented later in this manuscript, the general themes associated with this line of research are presented here.

Research has shown that college students use religious coping to ease the transition into college life (Schindler & Hope, 2013). This research has shown that those college students who heavily lean on their religious communities during stressful times report lower levels of anxiety. In fact, researchers have shown that college students in late adolescence may experience an intersection of stress reduction in religious/spiritual group identification (King, 2003). First, college students gain communal benefits through group affiliation because of the inherent stress reduction associated with social support. Second, developmentally, college students in late adolescence are experiencing a significant amount of unconscious identity formation—stalwart affiliation with a stable group (e.g., a religious/spiritual group) can facilitate ease of identity development. Religious and spiritual coping may be beneficial for the reduction of negative emotionality in multitudes of populations. However, many college students are not religious or spiritual (~28%; Kosmin & Keysar, 2013), and the research on the irreligious and non-spiritual is significantly lacking.

Therefore, the intent of the current study is to explore three research questions: 1) do college students who identify as religious/spiritual differ from those who identify as secular on levels of psychological distress and quality of life?, 2) what are the potential group differences in psychological distress and quality of life in college students who participate in religious/spiritual groups and those who do not?, and 3) what are the potential group differences in psychological distress and quality of life in college students who participate in secular meaning-making groups compared to those who participate in religious/spiritual groups?

In this review of the literature, the research on religious, spiritual, and secular identities, particularly for college students, and its correlates are summarized, following by a review of the

literature on what we know about the factors associated with quality of life and psychological distress for college students, and finally a summary of the research findings on the relationship of religiosity, spirituality, and/or secularism with quality of life and psychological distress, particularly among college students.

Religious, Spiritual, and Secular Identities

Religious, spiritual, and secular (RSS) literatures exist at an intersection of wildly different fields of study: theology, history, literature, anthropology, sociology, philosophy, psychology, and others. Because of the myriad of research approaches in studying RSS identities, these literatures present confusing, often competing, definitions of what it means to be religious, spiritual, or secular.

Religious Identity

Difficulties with operationalization stem from the difference between substantive and functional definitions (Galen, 2015). Substantive definitions of religion are characterized by their focus on content (e.g., religious practices, modes of belief, liturgy, etc.). In contrast, functional definitions of religion are characterized by the centering of pragmatics. That is, functional definitions focus on what religions *do* for practitioners. In the past, religiosity has often been measured by church attendance, a substantive approach, which has been criticized for its inadequacy (Ferriss, 2002). Religion has been defined as:

“...beliefs, practices, and rituals related to the transcendent, where the transcendent is God, Allah, HaShem, or a Higher Power in Western religious traditions, or to Brahman, manifestations of Brahman, Buddha, Dao, or ultimate truth/reality in Eastern traditions. This often involves the mystical or supernatural. Religions usually have specific beliefs about life after death and rules about conduct within a social group. Religion is a multidimensional construct that includes beliefs, behaviors, rituals, and ceremonies that

may be held or practiced in private or public settings but are in some way derived from established traditions that developed over time within a community. Religion is also an organized system of beliefs, practices, and symbols designed (a) to facilitate closeness to the transcendent, and (b) to foster an understanding of one's relationship and responsibility to others in living together in a community” (Koenig et al., 2012, pp. 2-3).

Therefore, for the purposes of the current study, participating in a *religious* group will refer to college students who have systems of beliefs, practices, and rituals related to the transcendent and attend a social group that emphasizes such. College student participants in the current study who identify as religious were categorized as such.

Spiritual Identity

While, historically the words religion and spirituality have been used synonymously within the study of religion (Mercandante, 2014), spirituality most often refers to a search for transcendence, meaning and purpose in life, and a sense of connection or unity among all living things (Adams et al., 2000; Emmons et al., 1998; Pargament, 1997; Plante & Sherman, 2001; Standard et al., 2000).

In recent years, “spiritual” has been a term used to describe groups of people who participate in organized religions, those who do not participate in religious services but identify with a faith group, and even those who are secular. There is a rising number of people who call themselves spiritual, but not religious (SBNR; Kenneson, 2015). These irreligiously spiritual people can be described as: 1) those who consider themselves spiritual and claim a faith group (e.g., Christianity, Judaism, Islam, Buddhism, etc.) but for whom religion is not a significant part of their lives, and 2) those who consider themselves spiritual but have no religious or faith group affiliation (Barna, 2017). Approximately one-third of people who claim to have no faith (e.g.,

atheists, agnostics, unaffiliated, etc.) also consider themselves spiritual. The term, spiritual, like religious, is complex in nature.

For the purposes of the present study, participating in a *spiritual* group will refer to people who search for transcendence, meaning and purpose in life, and a sense of connection or unity among all living things and attend a social group that emphasizes such. College student participants in the current study who self-identify as spiritual were categorized as such.

Secular Identity

The religious and spiritual demographics of the United States are changing. There is a current upward trend in the percentage of people who consider themselves religious unaffiliated (Pew, 2019). Between 2007 and 2019, there was a 10% increase in the number of Americans reporting no religious affiliation. In the same time span, there was a 13% decrease in the number of surveyed Americans reporting that they were Christian (from 78% to 65%). Other representative surveys have found similar trends. For instance, the General Social Survey showed an almost 22% increase in respondents claiming no religious affiliation between 1988 and 2018 (GSS, n.d.). Therefore, the religious landscape of the United States is not only becoming less Christian, but increasingly less religious, with influxes of irreligious, nonreligious, religious nones, atheists, and agnostics.

Researchers have pointed to a nominal issue with research concerning secular identities, in that generic “non-religious” categories are often too broad to be methodologically effective (Lee, 2014). For instance, as is discussed later in the current work, many people who claim no religion consider themselves “spiritual” (Barna Group, 2017). Therefore, the intent of a descriptive category such as “secular” does not share complete overlap with a descriptor like “nonspiritual.” Because of the extant operationalization issue with terms such as “secular” and “nonspiritual”, a phenomenological approach was used to address this issue in the current study.

More specifically, secular identity, for the purposes of the current study, referred to college student participants who did not indicate current participation in a religious and/or spiritual group, and who did not identify as spiritual/religious.

Correlates of Religiosity/Spirituality or Religious/Spiritual Identities

Religiosity and spirituality have been associated with a variety of factors including, but not limited to, physical health (Koenig, 2012), education level (Pew, 2016), and community engagement (Miers & Fisher, 2002). In this manuscript, the factors associated with RSS identities are addressed first in the general populace and then, more specifically, among college students.

Physical Health

A comprehensive, systematic review of the physical health correlates of religious and spiritual identity identified many strong relationships between religious/spiritual identities and physical health outcomes in a general sample of U.S. adults (Koenig, 2012). Koenig (2012) found that religiosity and spirituality were associated with a plethora of physical health benefits such as positive cardiovascular health, lower chances of hypertension, lower chances of cerebrovascular disease, lower incidence of Alzheimer's disease and dementia, better immune functioning, better endocrine functioning, lower incidence of cancer, better overall physical functioning, and longer lifespan.

In a study on religious service attendance and mortality in U.S. adults (Hummer et al., 1999), the authors posit that one explanation for the difference in mortality across the religious and less religious is the sense of community that is derived from attendance at a religious/spiritual group, and the concomitant pragmatic social resources that participation in these groups provide.

Education Level

The relationship between education level and religiosity/spirituality has been studied extensively, but the findings are inconclusive. Public debate churns in the zeitgeist of modern secularism. Some secularization theories posit that education elicits less faith—that is, the more educated a populace, the less need or desire there is for traditional religious notions (Swatos & Christiano, 1999). However, current trends seem to combat secularization theories.

For instance, among people with religious and secular identities in the United States, the nonreligious are only the third most education, after Jewish people and Christians, respectively (Pew, 2016). Intragroup religious differences in education levels do exist (Pew, 2016). For instance, Jewish people who are more highly educated tend to report less religiosity (Pew, 2016). However, this correlation does not exist within samples of people who identify as Christian, who hold similar levels of religiosity across all levels of education. Largely, there seems to be an inverse relationship between level of education and *how important* religion is for the average American, a finding that has been reconfirmed by multiple public research agencies across a 15-year timeframe (Gallup, 2003; Pew, 2017).

Community

Most world religions engage in rites and rituals that are inherently communal, with some religions emphasizing the communal nature as central to their belief system (e.g., Christianity, Islam, Shinto; Miers & Fisher, 2002). Community has been defined as both locational and/or relational (Bess et al., 2002). Locational communities are those that are beholden to geographical limitations. For example, a small, local church in rural America may be defined as a locational religious community because its membership may be comprised entirely of denizens of the surrounding town. Relational communities, conversely, are those that transcend geography and interpersonally connect people through a common interest. For example, two Muslim individuals

may have a friendly online debate in an online forum about the nature of interpreting the *hadith*; these individuals are not geographically related but are part of a wider Muslim relational community. Whether relational or locational, people have a psychobiological imperative to relate to others.

Correlates of Secularism/Secular Identity

Being secular, or non-religious, has been associated with a variety of factors, including, but not limited to, increased rates of psychological distress (addressed later in this manuscript; Brewster et al., 2020), increased depressive symptomology (addressed later in the manuscript; Cheng et al., 2018), as well as decreased physical well-being (Abbott & Mollen, 2018), and less life satisfaction (Sedler et al., 2018).

Physical Well-Being

In a 2018 sample of 1,024 U.S. atheists, it was shown that there was a significant correlation between anticipated stigma of being atheist and physical well-being (Abbott & Mollen, 2018). Atheist participants who faced more anticipated stigma in their day-to-day lives reported significantly lower levels of physical well-being (measured by the Pannebaker Inventory of Limbic Languidness, a 54-item questionnaire of common physical symptoms) than participants who anticipated less stigma regarding their atheism in their daily lives.

Life Dissatisfaction

In another 2018 sample of U.S. adults, researchers found that, when compared to theists, atheists reported struggling with questions of meaning (e.g., “why am I here”) and reported less meaning in their lives (Sedler et al., 2018). In this same sample, atheists were found to report less overall life satisfaction (measured by the Satisfaction with Life Scale) than the theistic comparison group.

To this point, some of general correlates of secular and religious/spiritual identities among individuals have been briefly summarized. Given that the focus of the current study is on RSS identity and group experiences of college students in relation to their quality of life and psychological distress, the previous research on religiosity, spirituality, and secularism and correlates thereof among college student samples is summarized next.

Correlates of Religiosity, Spirituality, and Secularism Among College Students

College can be a time of extraordinary stress in a person's life. In fact, college has been denoted as one of the most difficult and stressful periods of time in a person's life (Bland et al., 2012). Generationally, most university populations are comprised of students within Millennial (born after 1982) and Generation Z (born after 1997) cohorts (Hanson, 2021). Researchers have identified unique characteristics of these generations, that separate them from previous college-educated generations, which could contribute to excess stress during college years.

For example, Millennials are more numerous than any previous generation since Baby Boomers, meaning there is more competition for limited economic resources within college (Bland et al., 2012). Millennials are also more culturally diverse than any previous generation, which could lead to increases in acculturation difficulties for many students (Bland et al., 2012), and this cultural diversity is only increasing (Barnes & Noble College, 2019). It is also noteworthy that Millennials and Generation Z have grown up in a time and lived in the wake of huge sociocultural upheavals, including the largest domestic and international terrorist attacks against the United States (the Oklahoma City bombing and the 9/11 attacks, respectively), economic tragedy (e.g., the 2007-2009 financial crisis), and a global pandemic (SARS-CoV-2; COVID-19). Taken together, these factors suggest that most current university students are particularly unique in their stress tolerance.

Religiosity/Spirituality

Researchers have found that correlates of religiosity and spirituality in college students include increased levels of college adjustment and functioning (Kneipp et al., 2009), well-being (Milevsky, 2017), quality of life (Roming & Howard, 2019), and lower levels of stress (Yun et al., 2019). However, religious beliefs may not be entirely positive for college students, as some research has shown religion to be correlated with worsened grief (in the context of negative religious coping; Lee et al., 2013). This research is addressed further within the section *Religiosity/Spirituality and Quality of Life*.

Secularism

One of the most important features of this manuscript is to further elaborate on a sorely under-researched group of college students—secular individuals, or those who do not affiliate with a religion. An EBSCO search with parameters *atheism OR atheist OR agnostic OR secular* + *college students OR university students OR undergraduates* + *adjustment OR adaptation OR coping* returned only five results, none of which were published in the last five years, and all of which were relatively unrelated to the search terms. For comparison, a similar database search replacing the secular variable with a religious/spiritual-oriented Boolean phrase returned 431 results, some published as recently as the month this manuscript was being written (August 2020). Of interest, secular students comprise approximately 28% of college student body populations, according to the 2013 National College Student Survey (Kosmin & Keysar, 2013), yet are chronically underrepresented in the college student adjustment and functioning research literature.

Psychological Sense of Community

Psychological sense of community is defined as “the perception of similarity with others, an acknowledged interdependence with others, a willingness to maintain this interdependence by

giving to or doing for others what one expects from them, the feeling that one is part of a larger dependable and stable structure” (Sarason, 1974, p. 157). Follow-up research and theorizing has pointed to a five-dimensional theory of psychological sense of community. McMillan and Chavis (1986) developed the first four dimensions of a theory of psychological sense of community which include: membership, influence, integration and fulfillment of needs, and a shared emotional connection.

Membership is the personal investment felt by members of a community. Critical to the nature of membership is the concept of boundaries. That is, without boundaries to denote who *is* and who *is not* a member of a community, membership is a futile notion. Components of membership include emotional safety, a sense of belonging and identification, personal investment, and a common system of symbols.

Second, for McMillan & Chavis, influence is a bi-directional concept—community members influence other members and are, in turn, influenced by other members. Research findings suggest that this influence is an important aspect of community formation: members want to feel as though they have the agency to exert some change over their communities.

Third, integration and fulfillment of needs refers to “reinforcement.” That is, shared values and behaviors are reinforced in a self-serving manner to create an integrated community membership that is fulfilled.

Fourth, shared emotional connection is comprised of seven components and principles: contact hypotheses (i.e., people become closer the more they interact), the quality of the interaction, closure to events, the shared valent event hypothesis (i.e., shared important events create stronger bonds), investment, effect of honor and humiliation on community members, and a spiritual bond.

Factor analyses validated the four-dimensional psychological sense of community theory proposed by McMillan and Chavis (Obst et al., 2002). However, Obst and colleagues (2002) also found a fifth dimension that was significant and independent of McMillan's and Chavis' four factors: conscious identification. This factor related to the awareness and salience of group membership for participants in the study. That is, someone could be a member of a community, but not be impacted by their membership in a manner that makes membership salient or important for the member's everyday life.

To summarize, the theory of psychological sense of community is a five-dimensional approach that includes: membership, influence, integration and fulfillment of needs, emotional connection, and conscious identification. Since its construct development in the 1970s, psychological sense of community (PSOC) has been used in the literature as a measure of communal strength and resilience in a variety of populations, but particularly with college students. In general, psychological sense of community in college students has been associated with psychological well-being and less grief (McNally et al., 2020).

Spiritual and Religious Psychological Sense of Community

Participation in religious and/or spiritual practices and a sense of community can help people feeling connected to one another (Todd et al, 2020). For example, the number of congregational friends and conditional positive regard within a community contributes to a member's sense of community (Itzhaki et al., 2019). The type of support received, such as emotional support, has been associated with positive outcomes (e.g., sense of belonging and satisfaction with current health status; Krause & Wulff, 2005).

The Psychological Sense of Religious/Spiritual Community scale (PSRSC; adapted from Lounsbury & DeNeui, 1996; Dabbs et al., in press; Williams et al., in press;) is a 13-item scale that was adapted from the original Psychology Sense of Community Scale (PSOCS) to measure

spiritual and religious psychological sense of community, a concept that had not been addressed in the research literature until this year when it was used in two empirical studies (Dabbs et al., in press; Williams et al., in press.). Psychological sense of religious/spiritual community refers to feelings of connectedness between a participant and their religious/spiritual group—the extent to which people a sense of community to their spiritual and/or religious group as a source of support and connection in their lives.

Dabbs et al. (in press) conducted a study to explore how psychological sense of religious/spiritual community was related to quality of life and psychological distress in a midwestern college student sample. Participants completed a demographic survey, and measurements of PSRSC, quality of life, and psychological distress. They found that spiritual/religious psychological sense of community was associated with a better quality of life and less psychological distress in their college student sample. Exploratory factor analysis of the PSRSC scale indicated evidence of a two-factor solution: one factor related to how members feel about their religious/spiritual communities and another factor related to how members *think other members feel* about their religious/spiritual communities.

There is some evidence that gender can impact spiritual and/or religious beliefs and practices. Williams et al. (in press) conducted a study to explore gender differences in spiritual/religious psychological sense of community, quality of life, and psychological distress. A total of 101 college student participants completed three measures: the PSRSC (as a measure of spiritual/religious psychological sense of community), the World Health Organization Quality of Life questionnaire (WHOQOL; as a measure of quality of life), and the Depression, Anxiety, and Stress Scale (DASS-21; as a measure of psychological distress). The primary finding of this research was that surveyed cisgender male college students experienced greater psychological connectedness to their spiritual/religious group than did cisgender woman college students. The researchers posit two possible explanations for this finding: 1) men inherently desire more

spiritual/religious community connection to moderate their well-being that do women, and 2) due to the sociocultural nature of the sample (college students from a midwestern university in the “Bible belt” of the U.S.), perhaps the spiritual/religious groups that men feel connected to are those that uphold a conservative, patriarchal nature that is unattractive to women. A secondary finding of this work is that college men and women who reported more psychological connection to their spiritual and religious groups also reported lower levels of psychological distress and higher levels of quality of life and there were no gender differences in that regard, both those relationships were more pronounced for college women. These research results provide evidence of the protective factors of spiritual/religious connections.

In the next section, the research on quality of life and psychological distress and RSS identities and group participation are briefly summarized, with an emphasis on college students’ experiences as the main population of interest in the current study.

Quality of Life and Psychological Distress as Related to RSS Identity and RSS Group Participation

Previous research has shown that the major contributors of human happiness are life satisfaction and emotional well-being (Diener, 2000; Lyubomirsky, King, & Diener, 2005). Given that quality of life is one of the main outcome variables of interest in the current study, the literature is briefly reviewed regarding how quality of life has been operationalized, significant correlates of quality of life, and how quality of life has been studied in relationship to religiosity, spirituality, and secularism.

Quality of life and psychological distress are two major psychological constructs with healthy and robust bodies of literature. While there are innumerable empirical examples of these constructs being researched in tandem, there has been only two previous studies to date (Dabbs et al, in press; Williams et al, in press) exploring how psychological sense of religious/spiritual

community (PSRSC) is related to quality of life and psychological distress as well as gender differences in PSRSC, quality of life, and psychological distress, which were summarized in the previous section. There is some evidence that religiosity can serve as a protective factor for quality of life and emotional well-being (Kneipp et al., 2009; Milevsky, 2016; Parenteau et al.; Park, 2016), which is summarized shortly.

Quality of Life

Quality of life is a psychological construct that refers to standards of health, physical and emotional well-being, socioeconomic status, interpersonal relationship quality, and wellness, including family wellness. Researchers have posited that quality of life entered the empirical consciousness around the 1960s, when *The Report of the President's Commission on National Goals* was developed and released (Schuessler & Fisher, 1960). *The Report* was a non-partisan and comprehensive list of national policies and procedures to bolster issues core to the U.S. at the time: equality, the democratic process, economic growth, arts and sciences, among others (CIA, 2002). *The Report* was commissioned by President Dwight D. Eisenhower, and completed by The American Assembly, a thinktank that President Eisenhower had founded during his tenure as the president of Columbia University. Many topics within *The Report*—political, social, and economic equality, education, living conditions, health and welfare—are core components of modern quality of life research.

As a comprehensive structure, quality of life has been used by national and international organizations to measure general citizen wellness. For instance, the U.S. Center for Disease Control maintains that their Health-Related Quality of Life Measure (HRQOL) can measure “perceived physical and mental health over time” (CDC, 2018). Likewise, the World Health Organization has developed a quality of life instrument that measures four domains: physical,

psychological, social relationships, and environment. The World Health Organization Quality of Life (WHOQOL) index is, arguably, the most widely validated measure of quality of life.

Correlates of Quality of Life in College Students. College can be a stressful and difficult time for many students. According to the American College Health Association, 87.4% of college students reported feeling “overwhelmed by all [they] had to do” in the last 12 months with 53.3% reporting that feeling in the last two weeks (ACHA-NCHA-II, 2019, p. 13). Approximately 66% of students reported feeling overwhelming anxiety in the last 12 months, with approximately 44% reporting that feeling in the last 14-30 days. Over 13% of surveyed students had seriously considered suicide in the last year. The immense amount of stress that college students are under has shown to negatively impact their quality of life (Civitci, 2015). These statistics, while disheartening, shed light on the difficulties of the college system for many students. However, there are many ways that students can cope with their transitions to college and their college lives.

One method through which college students can maintain their quality of life during the difficult college transitions is by maintaining social support systems (Bowman, et al., 2018; Kingery et al., 2020; Milevsky, 2017; Roming, 2019). Other factors that can enhance the quality of life of college students include: an internal locus of control (Fritz & Gallagher, 2020), higher trait mindfulness (Kingery et al., 2020), higher trait gratitude (Wang, 2020), recognizing a meaning in life (Lew et al., 2019; Park, 2017), self-compassion (Marshall & Brockman, 2016), and family social support (Garcia-Mendoza et al., 2020), among others. Factors that may decrease the quality of life of college students include depression and anxiety (Lew et al., 2019), lack of emotional autonomy (Garcia-Mendoza et al., 2020), internalized stigma (Tran & Lumley, 2019), and racial battle fatigue (Hernandez et al., 2020), among others. While all these factors have been shown to have significant associations with the quality of life of college students, due to the

purview of the current study, special attention is given to the research that establishes social support as a protective factor for college students.

Research has shown social support to be essential for the adjustment of college students. Roming and Howard (2019) found significant differences in quality of life (measured by the Student's Life Satisfaction Scale) between those college students who scored high and low on social support (as measured by the Social Support from Parents and Friends Scale). In particular, college students with higher levels of social support reported having higher levels of quality of life, especially for first-year college students. Similar results were found across first-year college students in another study (Milevsky, 2017). College student participants who had more social support (as measured by tallying social support figures for each participant) reported less depression (as measured by the Center for Epidemiologic Studies Short Depression Scale) and higher levels of self-esteem (as measured by the Rosenberg Self-Esteem Scale).

Other researchers have also highlighted the importance of social support for college student well-being. In a longitudinal study spanning the length of one 16-week semester, Bowman and colleagues (2018) found that social connection (as measured through self-reported Likert-like scales) was related to more positive well-being and feelings of belonging (both measured through self-reported Likert-like scales). In particular, college students who felt more connected and satisfied with their friends and roommates reported a higher quality of life than those who were not as satisfied. This pattern was sustained even amongst those college students who reported skipping class twice per week. In fact, college students who reported skipping a couple of classes every week reported *more* college belonging and positive well-being than those who attended class (this could be due to students skipping class to engage in social events). Social interaction and support appear to be essential for the well-being, life satisfaction, and adjustment of college students based on these previous findings.

WHOQOL and College Students

A review of EBSCO databases shows that quality of life measures have been used to gauge college student functioning since at least the late 1980s. Prominent measures of college student quality of life include the Student's Life Satisfaction Scale (Huebner, 1991), the 12-item Short-Form Health Survey (SF-12; Ware, Kosinski, & Keller, 1996), and the Quality of College Life measure (Sirgy et al., 2007). While these measures have been effectively used in addressing student populations in the past, the WHOQOL-BREF was selected for the current work because of its construct depth and to reduce the need for additional measures. The Student's Life Satisfaction Scale has been used to measure student quality of life but, unlike the WHOQOL-BREF, does not contain health behavior information thus necessitating the use of additional measures (Roming et al., 2019). The WHOQOL-BREF, as a comprehensive measure of quality of life, may be a better choice for some researchers.

Religiosity, Spirituality, Secularism and Quality of Life

The intent of this section is to discuss the interrelatedness of religiosity/spirituality and secularism with quality of life. First, research on the general population is addressed, followed by research on college students.

Religiosity and Spirituality. Research on religiosity and physical health has shown that, in general, higher levels of religiosity, as defined by amount of prayer and attendance in a religious/spiritual group, predicted better physical health outcomes for a general sample of adults in the U.S. (Ferraro & Albrecht-Jensen, 1991). However, this same research shows an inverse relationship between the intersection of religiosity and political beliefs and physical health. That is, conservative religious participants had worse physical health outcomes than liberal religious participants, even when controlling for potentially moderating variables such as socioeconomic status.

In a nationally representative sample of over 20,000 U.S. adults, religious involvement, as measured by religious service attendance, was found to be positively correlated with longer life (lower mortality; Hummer et al., 1999). Those surveyed who never attended religious services were at a 1.87 times higher likelihood of mortality than those who attended services at least once per week.

Research in elderly Taiwanese adults (mean age = 64.5 years) has shown that religious involvement, as defined by religious/spiritual group attendance, has a moderating effect on quality of life outcomes, such as health and functioning, socio-economic factors, psychological/spiritual wellness, and family life (Huang et al., 2010). Participants who were more religious reported having a better quality of life than non-religious participants. While much of the research has found a positive relationship between religious/spiritual involvement and QoL in the general population, there is some evidence of an inverse relationship between religious/spiritual involvement and QoL. In one Canadian study in British Columbia where religious involvement was lower than the rest of Canada, religiously unaffiliated men were more satisfied with their health, friendships, and family than those who were affiliated (Gee & Veevers, 1990).

College Student Experiences. The extent to which religion is important in a college student's life has been shown to be correlated with enhanced well-being, including self-esteem and life satisfaction (Milevsky, 2017). Milevsky (2017) found that greater levels of both intrinsic (i.e., religious importance) and extrinsic (i.e., religious activity group participation) religiosity, as measured with the Religious Orientation Scale, predicted increased psychological well-being in college students. Similarly, in another study, college students who reported higher spiritual coping strategies (as measured by the Spiritual Growth Scale) were found to have lower levels of stress (as measured by the Perceived Stress Scale) and a better quality of life (as measured with the Student's Life Satisfaction Scale).

The quality of relationship(s) with higher power(s) can be relevant to functioning. Research on college student functioning shows that being securely attached to God (capitalized here to specify the Abrahamic God) leads to more emotion-focused and problem-focused manners of positive coping (Parenteau et al., 2019). These same researchers found that an ambivalent or avoidant attachment to God may lead to dysfunctional styles of religious coping, which can increase negative affect and depressive symptomology among college students.

While positive religiosity has been shown to have adaptive results for college students, researchers have found that the aforementioned patterns of negative religious coping can be detrimental to college students' mental health. For example, Lee and colleagues (2018) found that college students who engaged in negative religious coping (e.g., reframing tragic events as punishment from God, feeling abandoned by God) was associated with maladaptive coping when college students were faced with a significant loss and the subsequent grief that ensued. Researchers have also showed that college students facing spiritual struggles (i.e., spiritual/religious disillusionment, confusion about suffering) may face an increased likelihood of psychological distress, lower self-esteem, and lower levels of physical well-being (Bryant & Astin, 2008).

Secularism. As discussed in the previous section, *Correlates of Secularism/Secular Identity*, people in the United States who hold secular identities are at risk of facing huge amounts of minority stress, ostracization, and stigma (Abbott & Mollen, 2018; Brewster et al., 2020). These negative experiences may have detrimental effects on the physical and psychological health of those with secular identities (Sedlar et al., 2018). Sedler and colleagues collected data from 3,978 undergraduates and 1,048 internet workers and found that atheists suffer from lower levels of certain types of religious/spiritual struggles than theists (i.e., less demonic, doubt, and moral struggles), but equally struggled with ultimate meaning and interpersonal factors. Ultimate meaning struggles (across atheists and theists) predicted lower well-being and higher distress.

To summarize, religiosity and spirituality have been found to enhance college student adjustment (Kneipp et al., 2009), well-being (Milevsky, 2017), quality of life (Roming & Howard, 2019), and to decrease their stress levels (Yun et al., 2019). However, there is some research evidence that negative coping related to religiosity as well as spiritual struggle are related to maladaptive coping and less well-being among college students (Bryant & Astin, 2008; Lee et al., 2018; Sedler et al., 2018). The research on secularism and quality of life as well as for psychological distress and/or well-being for college students is nearly non-existent, which positions the current study as a unique endeavor into the college student adjustment and well-being literature, particularly for those college students who view themselves as secular and/or participate in secular meaning-making groups but not in religious/spiritual groups.

Psychological Distress

Psychological stress has been defined as “the sense that challenges and demands surpass one’s current capacities, resources, and energies” (Gilovich et al., 2018, p. 515). Physiologically, psychological stress begins with the hypothalamic-pituitary-adrenal (HPA) system and its active neurotransmitter cortisol. Psychological stress activates the amygdala, the brain region associated with fear and anxiety. The amygdala activates the hypothalamus, a brain region associated with core bodily functions such as regulating body temperature, controlling appetite, and releasing hormones. The downstream effect of hypothalamus activation is pituitary gland activation—adrenocorticotrophic hormone is released from the pituitary gland and signals release of cortisol (stress hormone) from the adrenal glands. This biophysiological process creates feelings of urgency, fear, and anxiety associated with both harmful and harmless frightening events (e.g., being chased by a pursuer and watching a horror film, respectively). Often, this system can be managed internally (i.e., when the activating event is over, the system deactivates). However, various psychological conditions (e.g., post-traumatic stress disorder) may require purposeful control over this system (e.g., through deep breathing and grounding techniques). An inability to

control the hypothalamic-pituitary-adrenal system can lead a person to experience psychological *distress*.

Psychological distress is a psychophysiological construct which describes a combination of symptomology typically including depression, anxiety, stress, and other adverse mental health states (Drapeau, Marchand, Beaulieu-Prevost, 2004). Some researchers have pointed to the confusing operational problem with “psychological distress” due to its potential indistinct nature (Ridner, 2004). Psychological distress is intended to reflect an overall sense of internal, emotional distress, as measured by a variety of symptoms. For the purposes of the current research study, psychological distress is defined as college student participants’ overall level of depressive, anxious, and stress symptoms as well as their specific symptoms related to each of these emotions, as measured by the Depression, Anxiety, and Stress Scale (Lovibond & Lovibond, 1995).

There are a number of questionnaires to measure psychological distress (Knowlden et al., 2015; Lincoln et al., 2011; Zou et al., 2016), including, but not limited to, The Adverse Childhood Experiences Questionnaire (ACES; Felitti et al., 1998), the Beck Youth Inventories (BYI-2; Beck et al., 2005), the Mood and Feeling Questionnaire (MFQ; Goodman, 1997), and the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995). The current study used the DASS-21 as a measure of psychological distress due to its common use with college student samples in research studies, with reported psychometric goodness-of-fit with college students, and its validation as a measure of general psychological distress (Camacho et al., 2016; Liu et al., 2019; Zanon et al., 2020).

The research delineated paints a clear picture regarding psychological distress and secularism, in that generally, people with positive religious or spiritual expression report lower levels of psychological distress, both in the general population and in college students (Burshtein

et al., 2016; Ferraro & Albrecht-Jensen, 1991; Gee & Veevers, 1990; Huang et al., 2010; Kneipp et al., 2009; Milevsky, 2017). So, why do irreligious people seem to fare worse on some variables of psychological distress than theists? One explanation for the increased negative psychological distress faced by the irreligious may stem from the minority stress model.

Secular Identity and Minority Stress

Minority groups of individuals in the United States have been recognized as having unique stressors than those in majority groups (Dentato, 2012). Many people in minority groups face discrimination, ostracization, and inequitable treatment, when compared to majority groups of individuals, that can and does have adverse biopsychosocial repercussions. To further explain minority stress, Meyer (2003) developed the empirically supported minority stress model to delineate the process and potential outcomes of minority stressors (note: while the subject of the original model was sexual/affectional minorities, this same model had been translated across various minority identities)

Atheists and non-believers comprise approximately 20% of the U.S. population, a majority Christian country, placing them staunchly in a religious minority category (Pew, 2019). Due to their minority status in the U.S., recent research has pinpointed atheists and other non-believers as a burgeoning minority stress population—particularly due to the stereotypes that surround secular identities/orientations. For an in-depth review of atheism and minority stress, see Brewster et al. (2020).

One common misconception (stereotype) regarding atheists and nonbelievers is that they are angry (Meier et al., 2015). Meier and colleagues report that atheists are often portrayed as angry in film, magazines, and books, and that the “New Atheist” movement, forwarded by confrontational figures such as Richard Dawkins and Sam Harris, are all factors that contribute to the “angry atheist” stereotype. In their review of three studies, it was found that Americans

believe, both explicitly and implicitly, that atheists are angrier than believers and other minority groups. However, through a review of four different studies comparing the personalities of atheists and theists, Meier and colleagues (2015) also found no differences in levels of trait anger between believers and non-believers. Regardless, the myth of the “angry atheist” persists.

Researchers have also denoted that atheists are among the least-trusted group of people in the United States (Caldwell-Harriss et al., 2018). However, research into these beliefs reveal that atheists hold comparable levels of compassion and empathic concern when compared to Christians and Buddhists. Of interest, due to the negative societal appraisals of nonbelievers, many people choose not to disclose their irreligious status (Abbott & Mollen, 2018).

Abbott and Mollen (2018) have referred to atheism as a “concealable stigmatized identity” or CSI (pp. 1). A CSI is a marginalized identity that can be hidden (e.g., sexual orientation, religious/spiritual beliefs, and mental health history), unlike marginalized identities that cannot be hidden, often because they are phenotypic (e.g., racial and sexual/gender identity). Comparing it to sexual orientation, the authors discuss how “outness” as an atheist or non-believer can be stressful, sometimes impossible, and potentially dangerous. For atheists who conceal their identities, they report more psychological distress and less well-being in their lives than people with higher rates of identity disclosure. Conversely, those with higher rates of disclosure experience more stigma in their everyday lives.

Given the societal and interpersonal stigma that effects those of secular identities, the reasons for higher incidences of psychological and physical distress become more apparent. From the information presented here, holding a secular identity in the U.S. presents unique minority stressors that may be difficult to overcome for atheists, agnostics, irreligious individuals, and others who identify as secular.

Psychological Distress in College Students

Psychological distress among college students has been associated with several variables and correlates including depression and anxiety (Hunt & Eisenberg, 2009; Mahmoud et al., 2012), burnout (Mostert & Pienaar, 2020), low self-esteem (Gençoğlu et al., 2018), sleeplessness (Lew et al., 2019), poor self-care behaviors (DiBenedetto et al., 2020), and hopelessness (Lew et al., 2019).

Mahmoud and colleagues (2012) conducted research with 508 full-time undergraduate students in assessing the relationships between college students' levels of depression, anxiety, stress, life satisfaction, and their coping styles. The researchers found maladaptive coping to be the strongest predictor of depression, anxiety, and stress (measured with the DASS-21) and less life satisfaction (measured with the Life Satisfaction Scale) among college students. To counteract maladaptive coping, Mahmoud and colleagues suggest the implementation of college programs that support college student social lives, a positive coping strategy that has been denoted in the research literature previously (Coffman & Gilligan, 2002; Misra & McKean, 2000).

Increased psychological distress in college students is not a uniquely American phenomenon. Research with college students in China has shown that they too experience significant psychological distress (Lew et al., 2019). Lew and colleagues conducted research with 2,074 college students enrolled in a Chinese university and found that their levels of depression, anxiety, stress, hopelessness, coping style, and orientation to happiness were all significant predictors of suicidality in these college students. Surprisingly, the presence of a self-reported meaning in life was identified as a significant protective factor against suicidality for the Chinese college students in their study.

Di Benedetto and colleagues (2019) conducted research with 355 Australian university students and assessed their self-care behaviors and mental health risk. They found that good sleep quality was associated with lower levels of depression and stress for these Australian college students. In this study, college student behaviors that reduced their psychological distress included higher levels of fruit consumption (alluding to a more nutritional diet), less binge drinking, and less sedentary behavior. However, college student participants who ate less fruit, binge drank more, were less active, and slept less reported significantly more depression, anxiety, and stress than their counterparts.

Religiosity/Spirituality/Secularism and Psychological Distress

Religiosity has been shown to be a protective factor against psychological distress, for example, suicide. Rates of suicidal ideation were lower in people who describe themselves as “religious” and “ultra-religious,” than in participants who described themselves as “secular” or “partially observant” (Burshtein et al., 2016). In a sample of elderly Taiwanese participants (mean age = 64.5), anxiety and depressive symptomology were significantly lower in those with more religious service attendance than in those who were less religious. Likewise, in a sample of elderly African Americans (mean age = 68.7 years), religious involvement, as measured by organizational participation (e.g., church attendance) and subjective reports of religiosity, was associated with factors of psychological well-being (e.g., self-acceptance, positive interpersonal relations, purpose in life, and personal growth).

Previous research on the positive aspects of religious and spiritual beliefs in people’s lives have led some researchers to falsely infer that lack of these belief systems lead to more negative outcomes in non-believers. However, the little extant research comparing religious/spiritual and secular ways shows no significant differences in levels of social support satisfaction, life satisfaction, positive affect, or negative affect (Moore & Leach, 2016). In fact,

the only significant differences between the religious and secular involved the religiously certain (i.e., those who claimed with certainty that a higher power existed): religiously certain people reported significantly higher levels of gratitude than any other group.

Religiosity/Spirituality in College Students

Previous researchers have demonstrated significant relationships between religiosity/spirituality in college students and correlates of their psychological distress, including anger (Winterowd et al., 2005), religious/spiritual social support (Milevsky, 2017; Roming & Howard, 2019; Wang et al., 2016), acculturative stress (Philip et al., 2017), meaning in life (Wang et al., 2016), and extrinsic religiosity (Buzdar et al., 2015; Nadeem et al., 2017).

Winterowd and colleagues (2005) found that higher levels of spirituality (measured with the Spiritual Involvement and Beliefs Scale) were associated with higher levels of stress (as measured with the Perceived Stress Scale) and anger (as measured with the State-Trait Anger Expression Inventory) in a sample of college students. While it was predicted that higher levels of spirituality would show decreased levels of anger and stress, the inverse was found in this college student sample. One explanation for this inverse relationship includes the utilization of spiritual beliefs and practices to cope with anger and stress—that is, perhaps college students with more anger and stress may be more attracted to their spiritual beliefs to modulate their distress, thus showing an increase in both.

Social support has been shown to be intimately connected to the functioning and coping of college students. For instance, Milevsky (2017) found that social support mediated the relationship between religious importance and life satisfaction in a sample of college students. Similar findings were reported by Roming and Howard (2019) who found that both spiritual growth and social support were quintessential factors in enhancing quality of life for college students. Finally, Wang and colleagues (2016) found that social support and purpose in life were

strong indirect predictors of psychological distress in college students, as seen through their levels of religiosity.

Secularism in College Students

There is little extant research comparing between religious/spiritual and secular college student groups on variables of interest, including psychological distress. Unfortunately, much of this research focused on intragroup differences (i.e., between groups of religious people, often of the same religion) rather than exploring potential intragroup differences (i.e., between secular groups and religious groups). The purpose of the current study is to address these gaps and the dearth of research in this area, by comparing college students in their secular and religious/spiritual identities, and group participation as related to their overall psychological distress as well as specific aspects of their distress including their depression, anxiety, and stress.

Summary

In summary, the transition to college life can be exceedingly difficult. Transitional stressors require positive coping methods, one of which can be social support from friends, family, and groups. Traditionally, religiosity and/or spirituality centers around a group component (e.g., attending church, mass, synagogue, temple, mosque, traditional ceremonies and/or spiritually-oriented meetings, meditation, spiritual healing groups, etc.)—this is often a positive method of coping for the religious and/or spiritual. However, there are increasing numbers of secular college students in the United States who may, by nature of their identification, not affiliate with any religious and/or spiritual groups but may or may not participate in secular meaning-making groups. Among the purposes of this study is the exploration of group differences in college students' quality of life and psychological distress for those who identify as spiritual/religious and secular, while also evaluating the potential protective factor(s) of secular meaning-making groups for secular college students, as well as the potential protective factor(s)

of religious and/or spiritual groups for religious/spiritual college students, which are among some of the research questions in this current study.

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APPENDICES
APPENDIX A: Informed Consent



**School of Community Health Sciences, Counseling, and
Counseling Psychology**

PARTICIPANT INFORMATION FORM

Religious/Spiritual Practices, Sense of Community, and Well-Being

You are invited to participate in our study about the connections between your sense of religious/spiritual/faith community, and how you view your health, happiness, comfort, and well-being. This research is being conducted by Barrett Williams, M.A., Audrey Scaer, B.S., Chisom Anunobi, B.S., Alicia Abbott, M.A., Blake Savage, M.S., and Chris Dabbs, M.A., under the direction of Dr. Carrie Winterowd, Ph.D., all of the School of Community Health Sciences, Counseling, and Counseling Psychology at Oklahoma State University. This study has received Institutional Review Board (IRB) approval through Oklahoma State University (IRB # ED-19-149).

If you agree to be in this study, we would ask you to do the following things: Complete an online survey that will take approximately 15 minutes.

Compensation: For your participation in this study, you will receive 0.5 SONA credits.

Confidentiality: The information you provide in this study will be anonymous. You will not include your name on any forms. The data for this survey will be stored in a password-protected computer. The research team will ensure anonymity to the extent that technology allows. Your participation in this study involves the same risks to confidentiality as everyday use of the internet. If you choose to participate in the drawing for one of four VISA gift cards, you may choose to enter your email address on a form separate from your survey responses. If you have concerns, or would like to read more about data confidentiality, please consult the provider privacy policy at <https://www.qualtrics.com/privacy-statement/>.

Contacts and Questions: If you have questions about the research study, please contact the Principal Investigator, Chris Dabbs, at chris.dabbs@okstate.edu or the advising faculty, Dr. Carrie Winterowd, at carrie.winterowd@okstate.edu. If you have questions about your rights as a participant, please contact the OSU IRB at (405) 744-3377 or irb@okstate.edu.

If you agree to participate in this research, please click "I Agree" to continue.

APPENDIX B: Online Solicitation Flyer

Scan me with your cellphone camera!



Dissertation research study

SPIRITUAL AND RELIGIOUS BELIEF AND NON-BELIEF

All college students 18+ are invited to take a 15-minute survey!

**ENTER A DRAWING FOR A CHANCE TO WIN
1 OF 4 \$25 VISA GIFT CARDS!**

If you have any questions or concerns, please contact me at chris.dabbs@okstate.edu or my dissertation chair, Dr. Carrie Winterowd, Ph.D., at carrie.winterowd@okstate.edu. If you have questions or concerns about the rights and safety of participants, please contact the Institutional Review Board at Oklahoma State University at irb@okstate.edu

Sense of Community and Spirituality - SONA

Survey Flow

Standard: Informed Consent (1 Question)

Standard: Demographics (9 Questions)

Standard: Religious, Spiritual, and Secular Identities (11 Questions)

Standard: Sense of Community (3 Questions)

Standard: DASS (2 Questions)

Standard: WHOQOL (8 Questions)

EmbeddedData

idValue were set from Panel or URL.

Page Break

Start of Block: Informed Consent



Q1

Welcome to the research study!

Religious/Spiritual Practices, Sense of Community, and Well-Being

You are invited to participate in our study about the connections between your sense of religious/spiritual/faith community, and how you view your health, happiness, comfort, and well-being. This research is being conducted by Barrett Williams, M.A., Audrey Scaer, B.S., Chisom Anunobi, B.S, Alicia Abbott, M.A., Blake Savage, M.S., and Chris Dabbs, M.A., under the direction of Dr. Carrie Winterowd, Ph.D., all of the School of Community Health Sciences, Counseling, and Counseling Psychology at Oklahoma State University. This study has received Institutional Review Board (IRB) approval through Oklahoma State University (IRB # ED-19-149).

If you agree to be in this study, we would ask you to do the following things: Complete an online survey that will take approximately 15 minutes.

Compensation: For your participation in this study, you were awarded 0.5 Sona credits.

Confidentiality: The information you provide in this study were anonymous. You will not include your name on any forms. The data for this survey were stored in a password-protected computer. The research team will ensure anonymity to the extent that technology allows. Your participation in this study involves the same risks to confidentiality as everyday use of the internet. If you choose to participate in the drawing for one of four VISA gift cards, you may choose to enter your email address on a form separate from your survey responses. If you have concerns, or would like to read more about data confidentiality, please consult the provider privacy policy at <https://www.qualtrics.com/privacy-statement/>.

Contacts and Questions: If you have questions about the research study, please contact the Principal Investigator, Chris Dabbs, at chris.dabbs@okstate.edu or the advising faculty, Dr. Carrie Winterowd, at carrie.winterowd@okstate.edu. If you have questions about you rights as a participant, please contact the OSU IRB at (405) 744-3377 or irb@okstate.edu.

- I consent, begin the study (1)
- I do not consent, I do not wish to participate (2)

End of Block: Informed Consent

Start of Block: Demographics

Q3 What is your current age?



Q4 Please select the biological sex option that best describes you:

- Male (1)
- Female (2)
- Intersex (3)



Q5 Please select the genders/gender identities that best describe you:

- Man (1)
- Woman (2)
- Transgender man (3)
- Transgender woman (4)
- Genderqueer/Non-binary (5)
- Other (6) _____



Q6 Please select the races/ethnicities which best describe you. Please check ALL that apply:

- American Indian/Alaskan Native/Native America/Indigenous (1)
 - Asian or Asian American (2)
 - Black or African American (3)
 - Hispanic or Latinx (4)
 - Native Hawaiian or other Pacific Islander (5)
 - White (6)
 - Other (7) _____
-



Q7 Please select the sexual/affectional orientations that best describe you:

- Heterosexual/Straight (1)
 - Gay (2)
 - Lesbian (3)
 - Bisexual (4)
 - Asexual (5)
 - Queer (6)
 - Questioning (7)
 - Other (8) _____
-



Q8 What is your current relationship status?

- Single (1)
 - Married (2)
 - Partnered/Common law (3)
 - Divorced (4)
 - Separated (5)
 - Widowed (6)
-



Q9 Are you currently in college/university?

- Yes (1)
 - No (2)
-

Display This Question:
If Are you currently in college/university? = Yes



Q10

What year are you in college?

- First-year (1)
 - Sophomore (2)
 - Junior (3)
 - Senior (4)
 - Graduate Student--please write number of years of graduate study (5)
-

Q11

What is your annual family income level?

- Less than \$10,000 (1)
- \$10,000 - \$19,999 (2)
- \$20,000 - \$29,999 (3)
- \$30,000 - \$39,999 (4)
- \$40,000 - \$49,999 (5)
- \$50,000 - \$59,999 (6)
- \$60,000 - \$69,999 (7)
- \$70,000 - \$79,999 (8)
- \$80,000 - \$89,999 (9)
- \$90,000 - \$99,999 (10)
- \$100,000 - \$149,999 (11)
- More than \$150,000 (12)

End of Block: Demographics

Start of Block: Religious, Spiritual, and Secular Identities



Q12

Do you view yourself as a non-spiritual person?

- Yes (1)
- No (2)



Q13 Do you view yourself as a spiritual person?

- Yes (1)
 No (2)
-



Q14 Do you view yourself as a non-religious person?

- Yes (1)
 No (2)
-



Q15 Do you view yourself as a religious person?

- Yes (1)
 No (2)
-



Q16 Do you believe you have a purpose or meaning to your life?

- Yes (1)
 No (2)
-



Q17 Do you participate in a spiritual or religious group?

- Yes (1)
 No (2)
-

*Display This Question:
If Do you participate in a spiritual or religious group? = Yes*

Q18 What is the name of your spiritual or religious group?

Display This Question:

If Do you participate in a spiritual or religious group? = Yes



Q23 How often do you attend your spiritual and/or religious services/ceremonies/events?

- Daily (1)
 - 4-6 times a week (2)
 - 2-3 times a week (3)
 - Once a week (4)
 - I do not attend regular services/ceremonies (5)
 - Twice a year (6)
 - Once a year (7)
 - Other (please specify) (8)
-



Q19

Do you participate in a non-spiritual/non-religious group that helps you find purpose and/or meaning in your life?

- Yes (1)
- No (2)

Display This Question:

If Do you participate in a non-spiritual/non-religious group that helps you find purpose and/or meaning... = Yes

Q20

What is the name of your non-spiritual/non-religious group?



Q21 Please select the spiritual, religious, or secular identity/group with which you most identify:

- Atheist (1)
 - Agnostic (2)
 - Buddhist (3)
 - Catholic (4)
 - Protestant (non-denominational, Baptist, Pentecostal, Methodist, non-Catholic Christian, etc.) (5)
 - Orthodox Christian (6)
 - Latter-Day Saint (7)
 - Hindu (8)
 - Jewish (9)
 - Muslim (10)
 - Sikh (11)
 - Pagan (12)
 - Native American Church (13)
 - Other (please specify) (14)
-

End of Block: Religious, Spiritual, and Secular Identities

Start of Block: Sense of Community

Q41 We would like to ask you some questions about your religious/spiritual community.



Q37 Are you a member of a religious or spiritual community?

- Yes (1)
- No (4)

Skip To: End of Block If Are you a member of a religious or spiritual community? = No

Q25 Regarding your religious/spiritual community:	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
I really feel like I belong here. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a sociable atmosphere. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I had gone to a different one. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members feel they can get help if they are in trouble. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend it to other people. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People I know like it. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a strong feeling of togetherness. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make contributions to it. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really enjoy going. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members really care about what happens to it. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel very attached to it. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is very stimulating for me. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a real sense of community. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Sense of Community

Start of Block: DASS

Q40 The following questions are about your general emotions and feelings *from the last week*.

Q42 In the last week...	Did not apply to me at all (1)	Applied to me to some degree or some of the time (2)	Applied to me to a considerable degree, or a good part of the time (3)	Applied to me very much or most of the time (4)
I found it hard to wind down (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was aware of dryness of my mouth (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I couldn't seem to experience any positive feeling at all (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it difficult to work up the initiative to do things (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tended to over-react to situations (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced trembling (e.g. in the hands) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I was using a lot of nervous energy (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was worried about situations in which I might panic and make a fool of myself (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I had nothing to look forward to (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found myself getting agitated (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I found it difficult to relax (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt down-hearted and blue (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was intolerant of anything that kept me from getting on with what I was doing (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I was close to panic (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was unable to become enthusiastic about anything (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I wasn't worth much as a person (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I was rather touchy (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat) (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt scared without any good reason (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that life was meaningless (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: DASS

Start of Block: WHOQOL

Q44 Please read each question, assess your feelings, and select the number on the scale for each question that gives the best answer for you.

	Very poor (1)	Poor (2)	Neither poor nor good (3)	Good (4)	Very good (5)
How would you rate your quality of life? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q45 Please read each question, assess your feelings, and select the number on the scale for each question that gives the best answer for you.

	Very dissatisfied (1)	Dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Satisfied (4)	Very satisfied (5)
How satisfied are you with you health? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q47 The following questions ask about **how much** you have experienced certain things in the last two week.

	Not at all (1)	A little (2)	A moderate amount (3)	Very much (4)	An extreme amount (5)
To what extent do you feel that physical pain prevents you from doing what you need to do? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do you need any medical treatment to function in your daily life? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do you enjoy life? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you feel your life to be meaningful? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q48 The following questions ask about how much you have experienced certain things in the last two week.

	Not at all (1)	A little (2)	A moderate amount (3)	Very much (4)	Extremely (5)
How well are you able to concentrate? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How safe do you feel in your daily life? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How healthy is your physical environment? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q49 The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

	Not at all (1)	A little (2)	Moderately (3)	Mostly (4)	Completely (5)
Do you have enough energy for everyday life? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you able to accept your bodily appearance? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you enough money to meet your needs? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How available to you is the information that you need in your day-to-day life? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you have the opportunity for leisure activity? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q51 The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

	Very poor (1)	Poor (2)	Neither poor nor good (3)	Good (4)	Very good (5)
How well are you able to get around? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>Q52 The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks?</p>	<p>Very dissatisfied (1)</p>	<p>Dissatisfied (2)</p>	<p>Neither satisfied nor dissatisfied (3)</p>	<p>Satisfied (4)</p>	<p>Very satisfied (5)</p>
<p>How satisfied are you with your sleep? (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with your ability to perform your daily living activities? (2)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with your capacity for work? (3)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with yourself? (4)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with your personal relationships? (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with your sex life? (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with the support you get from your friends? (7)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>How satisfied are you with the conditions of your living place? (8)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with you access to health services? (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with your transport? (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q55 The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

	Never (1)	Seldom (2)	Quite often (3)	Very often (4)	Always (5)
How often do you have negative feelings such as blue mood, despair, anxiety, depression? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: WHOQOL

APPENDIX D: Institutional Review Board Approval Letter



Oklahoma State University Institutional Review Board

Date: 11/08/2019
Application Number: ED-19-149
Proposal Title: Religious/Spiritual Practices, Sense of Community, and Well-Being.

Principal Investigator: Chris Dabbs
Co-Investigator(s): Barrett Williams
Faculty Adviser: Carrie Winterowd
Project Coordinator: AJ Scaer
Research Assistant(s): Alicia Abbott, Blake Savage, Chisom Anunobi

Processed as: Exempt
Exempt Category:

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

VITA

Christopher Rome Dabbs II

Candidate for the Degree of

Doctor of Philosophy

Dissertation: TO BELIEVE OR NOT TO BELIEVE: RELIGIOUS/SPIRITUAL AND
SECULAR IDENTITY GROUP DIFFERENCES IN QUALITY OF LIFE
AND PSYCHOLOGICAL DISTRESS IN COLLEGE STUDENTS

Major Field: Counseling Psychology

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Counseling
Psychology at Oklahoma State University, Stillwater, Oklahoma in July, 2022.

Completed the requirements for the Master of Arts in Clinical Mental Health
Counseling at Valparaiso University, Valparaiso, Indiana in 2018.

Completed the requirements for the Bachelor of Arts in Psychology and
Religion at Wabash College, Crawfordsville, Indiana in 2016.

Experience:

Robberson Dissertation Fellow, Stillwater, OK, June 2021-July 2021
Graduate Teaching Associate, Stillwater, OK, August 2019-May 2021
Doctoral Student Supervisor, Stillwater, OK, May 2020-May 2021
Practicum Counselor, Counseling & Counseling Psychology Clinic, Stillwater,
OK, August 2019-August 2020

Professional Memberships:

American Psychological Association (Divisions 17, 36, & 50)
American Counseling Association
NAADAC – The Association for Addiction Professionals
National Association of Wabash Men