ISSN 1556-3723 (print)

Interdisciplinary Journal of Research on Religion

Volume 19 2023 Article 3

Religious, Spiritual, and Secular Identity and Group Participation in U.S. College Students During the COVID-19 Pandemic: Differences in Quality of Life and Psychological Distress

Christopher R. Dabbs, Ph.D.[1]
Knox College
Galesburg, Illinois

Carrie L. Winterowd, Ph.D.[2]
Oklahoma State University
Stillwater, Oklahoma

[1] crdabbs@knox.edu

[2] carrie.winterowd@okstate.edu

Religious, Spiritual, and Secular Identity and Group Participation in U.S. College Students During the COVID-19 Pandemic: Differences in Quality of Life and Psychological Distress

Christopher Dabbs, Ph.D.
Carrie L. Winterowd, Ph.D.

Abstract

This study explored inter-and-intragroup differences in college student psychological distress and quality of life through centering religious, spiritual, and secular identity and participation in meaning-making groups. A total of 607 college students participated in an online survey which included measures of depression, anxiety, stress, and quality of life. Results showed that participants who identified as 'spiritual and religious' reported higher quality of life scores and lower anxiety scores than those who identified as secular or 'spiritual or religious.' Participants who attended religious and/or spiritual meaning-making groups reported less anxiety and enhanced aspects of psychological and environmental quality of life compared to those who attended secular meaning-making groups, although differences were not large. These findings bring nuance to the conversation regarding religious, spiritual, and secular group identity and participation, including the potential benefits of both spiritual/religious and secular meaning-making group participation in college students. Implications for college and university personnel and recommendations for future areas of research are explored.

ISSN 1556-3723 (print)

Multicultural orientation and diversity have been growing in recognition and value by counseling psychologists and other mental health professionals, 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 in the literature 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 identity, impacting sense of self in relation to the world and 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.

Identity, including RSS identity, is a complex, recursive process involving individual beliefs, external messages, and the intersections thereof. Many identities, including 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 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 incorporates 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 in the literature as a core component of RSS identity that is strengthened through group participation (Hummer et al., 1999). One of the purposes of the current study is to further elaborate on the group differences between college students who identify/participate in religious/spiritual (R/S) groups, and those who do not, a topic that has been under-researched.

QUALITY OF LIFE, EMOTIONAL DISTRESS, AND RSS IDENTITY

Religion and spirituality have played unique and important roles 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 psychological evidence of the protective factors of R/S orientation, beliefs, and practices—with evidence for the protective nature of R/S 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), improved college adjustment and functioning (Kneipp et al., 2009), enhanced well-being (Milevsky, 2017) and quality of life (Ferris, 2002; Roming & Howard, 2019), as well as lower levels of stress (Yun et al., 2019), lower risk of suicidality

(Burshtein et al., 2016), and protection against chronic health issues (Dodor et al., 2018). Researchers have denoted R/S community participation as a major driving force behind the positive adapting abilities of people of faith (Pargament et al., 1998; Pargament, 2001; Pargament, 2010; Xu, 2016).

COMMUNITY

The significant role of R/S group dynamics in healthy functioning 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). Through confirmatory factor analysis of their Religious Coping Scale, Pargament and colleagues (2000) found that connection to others and social interaction in an R/S setting was one of the five methods of religious coping. A sense of life purpose and/or connection to a community of people who share similar 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 stressors of college, and the inherent socializing nature thereof, students' R/S orientation and group participation may have an important impact on adaptation to college stressors, levels of psychological distress, life satisfaction, and overall quality of life.

While spirituality and religiosity have been shown in the literature to be protective wellness factors with associated health benefits, the R/S 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%). Similarly, around 29% of the U.S. population identifies with "no religion" (Pew Research, 2021). This demographic change 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.

Based on a recent literature search, only four peer-reviewed studies were found related to secularism and psychological distress in college students published within the last five years– compared to over 431 peer-reviewed studies on R/S orientation and psychological distress in college students within the past five years. Researchers have found that social connection predicts positive adjustment outcomes in college students, but does not control for, or delineate between, the spectrum of belief (Bowman, 2019). Secular students comprise approximately 28% of college student body populations according to the 2013 National College Student Survey (Kosmin & Keysar, 2013), yet are significantly underrepresented in the research literature on college student adjustment and functioning. 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 (including negative religious coping) could protect them in this regard (Sedlar et al., 2018).

THE CURRENT STUDY

While there is extant literature that supports the protective nature of religious group participation in college student samples (Milevsky, 2017; Parenteau et al., 2019; Roming, 2019), this literature exclusively compares *intra*group differences (e.g., differences between

people who are less and more religious) but does not compare *inter*group differences (e.g., differences between people who are and are not religious). 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, with the intent to fill a significant gap in the college student RSS identity and group participation literature. Theoretically positioned in both identity development and community psychology, we hope that these results may be useful in their application to colleges and university student support staff: mental health professionals, college student development staff, etc.

RESEARCH QUESTIONS AND HYPOTHESES

The research questions and hypotheses for this study were broken down into RSS identity comparisons (1, 2) and group participation comparisons (3, 4).

1. Do college students who identify as religious and/or spiritual differ from college students who identify as secular in terms of psychological distress and quality of life?

   We hypothesized that college students who identified as religious and/or spiritual would report significantly less psychological distress and a significantly greater quality of life compared to college students who identified as secular. While we hypothesized that there would be no group differences regarding physical, environmental, and social relational aspects of quality of life, we hypothesized that religious or spiritual college students would report higher psychological quality of life than secular college students.

2. Do college students who identify as a) secular and b) spiritual *or* religious (SoR) differ from those who identify as spiritual *and* religious (SaR) on levels of psychological distress and quality of life?

   We hypothesized that there would be significant group differences between the secular college student group compared to both the SoR and the SaR 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 their levels of psychological distress.

3. Do college students who participate in R/S groups differ from those who do not in terms of their psychological distress and quality of life?

   We hypothesized that college students who participate in R/S groups would report significantly lower overall psychological distress and significantly higher overall quality of life than those college students who do not participate in R/S groups. College students who participate in R/S groups were hypothesized to report significantly less depression, anxiety, and stress, more specifically, and more positive psychological and social quality of life than college students who do not.

4. Do college students who participate in secular meaning-making groups and those who participate in R/S groups differ in their levels of psychological distress and quality of life?

   We hypothesized that there would be no group differences in the physical and

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

METHOD

Participants

The participants in this study were 607 college students who averaged 23 years of age (M_{age} = 23.54). 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 sample. Our sampled population skewed Protestant (53.4%), female (66.2%), heterosexual (85.7%), White (66.3%), and single (78.6%). Compared to the general frame of national college student demographics, our sample included Christians (66% nationally, 72.4% in our sample) and atheists (5% nationally, and 5% in our sample). However, we did see an oversampling of agnostic students (6% nationally, Pew Research, 2014, and 10.2% in our sample). According to recent statistics, women comprise close to 60% of college students nationwide, so our sample (66.2%) was a small oversampling (National Student Clearinghouse, 2021). A larger oversampling in our data was related to racial identity. Nationally, 41% of college students are White, while this number is 66.3% in our current sample (National Center for Educational Statistics, 2022). Complete demographic information can be found in Tables 1 (RSS identity), 2 (gender, sex, and sexual/affectional orientation), and 3 (race):

Table 1

Sample Demographics (cont.), Religious, Spiritual, and Secular Identity

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

ISSN 1556-3723 (print)

Table 2

Sample Demographics (cont.), Gender, Sex, and Sexual/Affectional Orientation

Gender (n = 606)	n	% of sample
Women	396	65.3
Men	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

Table 3
Sample Demographics (cont.), Race

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*: 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. Many participants included multiple meaning-making groups, so n > 100%.*

It should be noted that we removed 67 total participants (10% of total data) 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.

Procedures

To categorize RSS identities, we asked participants a series of forced-choice questions regarding religious, spiritual, and secular identity. These questions included: a) 'do you view yourself as a spiritual person', and b) 'do you view yourself as a religious person.' If participants answered in the affirmative to both questions, they were grouped into the 'spiritual and religious' category (*n* = 340). If they answered in the affirmative to one and not the other, they were grouped as 'spiritual *or* religious' (*n* = 183). If they answered in the negative to both questions, they were grouped as 'secular' (*n* = 84). To prevent participant confusion regarding the definition of 'secular,' the word 'secular' did not appear in survey material. We operationalized 'secular' in the current study as an identification with *neither spiritual nor religious* identities. As a check for our secular operationalizing, we numerically compared the secular grouping to participants who self-identified as atheist/agnostic (*n* = 91). We trimmed seven agnostic/atheist participants from the 'secular' grouping because they also identified as spiritual.

To categorize religious and spiritual meaning-making group participation, we asked participants if they attended a religious or spiritual group that gave them meaning or purpose in life. If they answered in the affirmative, we asked them to list the name of their community in an open-ended response. We also asked questions regarding spiritual or religious group attendance

frequency to relevant participants via survey logic (*n* = 555).

To categorize secular meaning-making group identity, we asked participants if they participated in a non-religious, non-spiritual group that gave them meaning or purpose in life. If answered in the affirmative, we asked them to complete an open-ended response listing their secular meaning-making group (*n* = 55). 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 support groups (e.g., Alcoholics Anonymous, Narcotics Anonymous), and other extracurriculars (e.g., Future Farmers of America, volunteering, employment). Complete themes can be found in Table 4:

Table 4

Secular Meaning-Making Group Themes

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. Many participants included multiple meaning-making groups, so n > 100%.

Measures

We presented participants with an informed consent page, a demographic questionnaire, the

World Health Organization Quality of Life Brief measure (WHOQOL-BREF; World Health Organization, 1998, 2012), and the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995).

Demographic Questionnaire

We asked participants to provide information about their age, biological sex, gender/gender identity, race/ethnicity, sexual/affectional orientation, current relationship status, year in college, annual family income, spiritual identification, religious identification, perception of having meaning in life, RSS group identification, R/S group participation, R/S group attendance, and non-spiritual/non-religious meaning-making group participation.

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-like scale (1 = not at all, to 5 = extremely). The overall WHOQOL-BREF score can be divided into four subscales: physical (i.e., physical ailments associated with life quality), psychological (i.e., emotional and cognitive variables impacted by psychological distress), social relationships (i.e., satisfaction with interpersonal relations), and environment (i.e., socioeconomic factors associated with life quality). WHOQOL-BREF overall and unweighted composite subscale scores were used as primary outcome variables for this study. Higher scores on the overall and subscale measures indicate a better quality of life—perceptions of increased socioeconomic opportunities, physical and psychological health, and good social relationships. Lower scores indicate perceptions of socioeconomic difficulties, poorer physical and psychological health, and social relationship difficulties.

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 (WHOQOL Group, 1998) 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 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 Scale (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 rated their level of agreement with each item, using a polytomous 4-point Likert-like scale (0 = did not apply to me at all, 3 = applied to me very much, or most of the time), with the previous week as a response anchor. 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.

The DASS-21 is commonly employed in college student samples because of its psychometric goodness-of-fit with the population 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. The DASS-21 has shown significant discriminant, concurrent, and convergent validity properties; subscales are correlated ($p < .001$) with other self-rated measures of depression and anxiety. Results of the internal consistency and reliability analyses for the current sample revealed 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)—results congruent with extant internal consistency and reliability analyses.

Procedures

Participants in the current study were invited to the study via two methods. First, participants were invited to complete an online survey through the online research system at the researchers' home institution. Second, participants were invited via snowball sampling through postings on listservs, Facebook, and through direct communication with department heads of various universities. Participants were presented with an informed consent page and were free to end participation at any time in the study. There were no foreseeable risks in participating in our study. Participants were compensated via one of two methods: a) receiving extra credit for their education and/or human sciences courses for voluntary research participation, or b) entering a drawing for one of five $25 VISA gift cards.

Multiple research ethics trainings were completed before collecting data to ensure the safety of all participants in the current research under the auspices of a university Internal Review Board. These trainings included best practices for social, behavioral, and educational research and internet research methodologies.

RESULTS

We completed all data analyses 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. We determined all skewness and kurtosis of data to be normal (with ranges between -1 and 1), and type 1 error was controlled for using Bonferroni and Tamhane's adjustments 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

We calculated descriptive statistics using the total sample (N = 607). Means, standard deviations, actual score ranges, and possible score ranges for the main study variables can be found in Table 5:

Table 5

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

	Secular		SaR		SoR			
Measure	M	SD	M	SD	M	SD	Range (Possible)	Range (Actual)
WHOQOL-BREF overall	58.63	9.34	60.69	8.12	58.95	7.60	16-80	27-80
Physical	14.89	2.62	14.56	2.50	14.63	2.55	4-20	8-20
Psychological	13.66	2.78	14.53	2.21	14.02	2.30	4-20	7-20
Social	14.59	3.51	15.18	3.18	14.46	3.14	4-20	4-20
Environment	15.48	2.69	16.43	2.27	15.84	2.25	4-20	8-20
DASS-21 overall	11.50	8.55	11.13	9.56	13.44	9.88	0-63	0-56
Depression	3.67	3.91	3.22	3.45	3.81	3.49	0-21	0-20
Anxiety	2.74	2.79	2.76	3.31	3.71	3.68	0-21	0-16
Stress	5.10	3.55	5.15	4.06	5.91	4.27	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
SaR = spiritual and religious
SoR = spiritual or religious

According to Lovibond and Lovibond (1995) narrative cutoff scores, participants reported "normal" levels of depression, anxiety, and stress. A correlation matrix for the subscale study variables can be found in Table 6:

ISSN 1556-3723 (print)

Table 6

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*

[1] DASS-21 = Depression, Anxiety, and Stress Scale-21 subscales

[2] WHOQOL-BREF = World Health Organization Quality of Life-Brief Measure subscales

We conducted procedural analyses, in the form of correlational and univariate Analyses of Variance (ANOVA), to navigate potential demographic connections to outcome variables in the data. Results of the procedural analyses indicated 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. However, some variables were found to be significantly correlated with outcome variables, including: year in college, gender, annual income, race, and relationship status. These variables were controlled in the representative analyses. A matrix of demographic correlation with outcome variables can be found in Table 7:

Table 7

Procedural Analyses Between Demographics and Main Study Variables

	Depression[1]	Anxiety[1]	Stress[1]	Social[2]	Physical[2]	Psych[2]	Environment[2]
Year in college	**2.99***	**3.64****	**4.86****	--	**6.07*****	**2.42***	**6.03*****
Racial identity	--	--	--	--	--	--	**2.20***
Gender identity	--	--	**3.43***	--	--	**5.07****	**4.44****
Income level	--	--	--	**2.88****	--	**3.23*****	**10.44*****
Relationship Status	--	--	--	**4.64****	--	--	--

Note: statistic reported = F

** = p < .05, ** = p < .01, *** = p < .001*

[1] DASS-21 = Depression, Anxiety, and Stress Scale-21 subscales

[2] WHOQOL-BREF = World Health Organization Quality of Life-Brief Measure subscales

RESEARCH QUESTIONS

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

   Psychological Distress. Analysis of covariance (ANCOVA) results indicated that there were no significant differences between R/S college students and secular college students in their overall levels of psychological distress, when controlling for significant covariates, F (1,580) = 0.26, p = .60, $\eta^2 < .01$. Multivariate analysis of covariance (MANCOVA) was conducted and there were no significant differences between R/S college students and secular college students on the subscale scores of depression, F (1,578) = 0.37, p = .54, $\eta^2 <. 01$, anxiety, F (1,578) = 0.58, p = .45, $\eta^2 < .01$, and stress, F (1,578) = 0.30, p = .59, $\eta^2 < .01$.

   Quality of Life. ANCOVA results indicated that there were no significant differences between R/S college students and secular college students in their overall quality of life when controlling for significant covariates (gender and annual income), F (1,598) = 3.53, p = .06, $\eta^2 = .006$. However, MANCOVA results indicated significant group differences between secular and R/S college student participants on the subscale scores of psychological quality of life, F (1,598)= 9.74, $p < .01$, $\eta^2 = .02$, and

environmental quality of life, F (1,598) = 8.98, $p < .01$, $\eta^2 = .02$. R/S college student participants reported significantly higher levels of psychological and environmental quality of life than those college student participants who identified as secular.

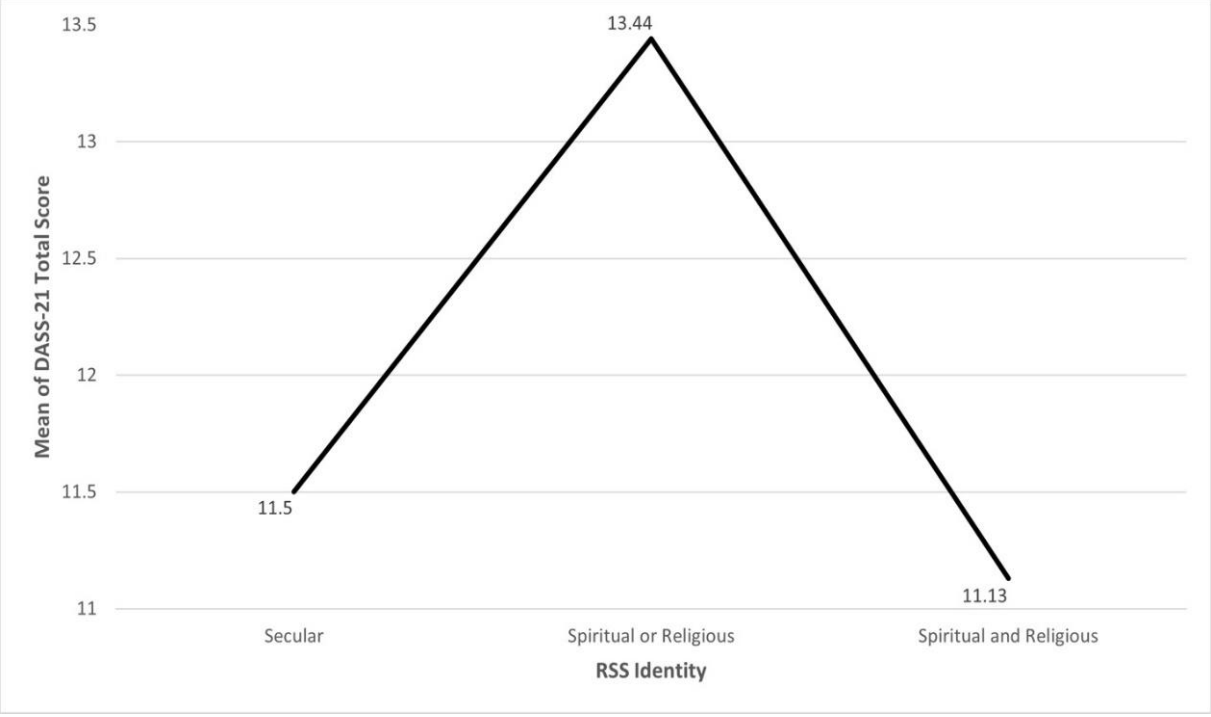
2. Do college students who identify as secular (n = 84), spiritual *or* religious (SoR; n = 183), and spiritual *and* religious (SaR; n = 340) differ from each other on overall psychological distress (including subscale depression, anxiety, and stress) and overall quality of life (including subscale physical, psychological, environmental, and social quality of life)?

   Psychological Distress. ANCOVA results indicated no significant group differences between secular, SoR, and SaR college student participants on overall levels of psychological distress, F (2,579) = 2.52, p = .08, $\eta^2 = .01$.

   MANCOVA results indicated significant group differences in the subscale scores of psychological distress, F (3,603) = 2.105, p = .50, $\eta^2 = .01$. However, after controlling for significant correlates of year in college and gender, there were only significant group differences in level of anxiety reported, F (2,579) = 4.68, $p < .01$, $\eta^2 = .02$. Further post-hoc testing with Tamhane's 2 found that the significant group differences in anxiety were between the SoR and the SaR groups (p = .01), with the SoR group reporting significantly more anxiety than the SaR group. See Figure 1 for a means plot:

Figure 1

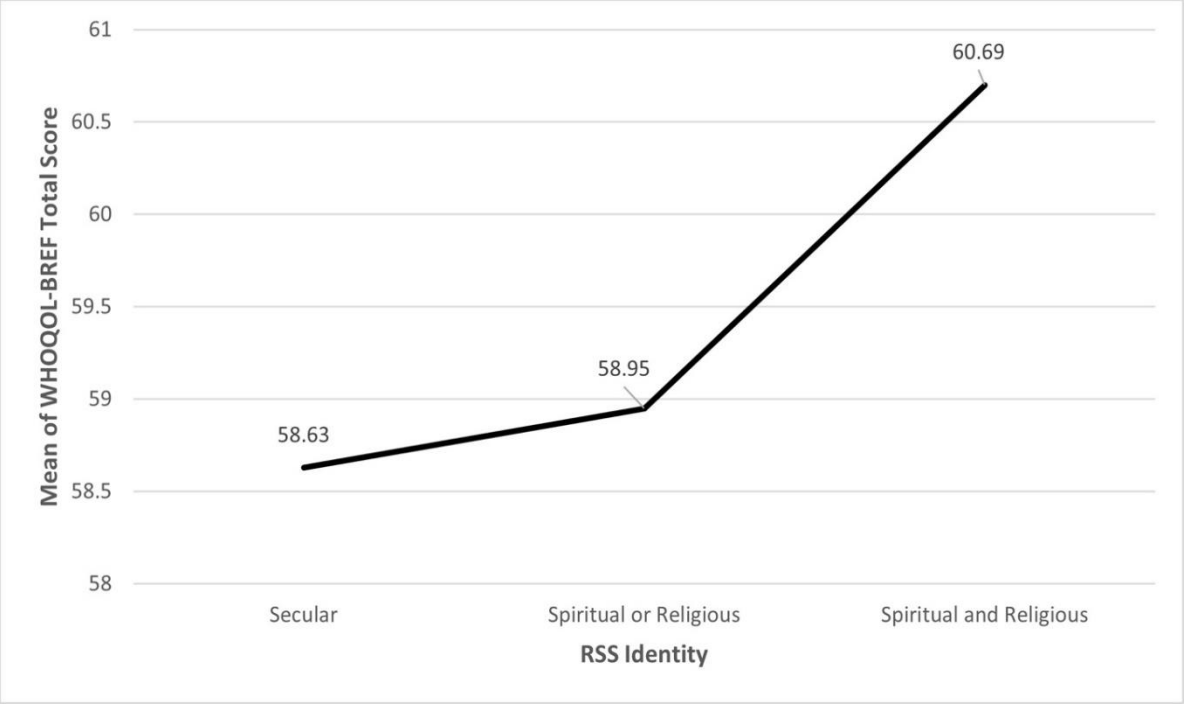
Mean Psychological Distress Scores for Secular, Spiritual or Religious, and Spiritual and Religion



Quality of Life. ANCOVA results indicated significant group differences between secular, SoR and SaR college student participants on their overall quality of life when controlling for covariate factors (gender, annual income), F (2,597) = 3.22, $p < .05$, $\eta^2 = .01$. The SaR group of college students reported having a better quality of life than either the secular or SoR groups of college students. See Figure 2 for a means plot:

Figure 2

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



MANCOVA results (controlling for gender and annual income) indicated significant group differences on psychological quality of life, F (2,597) = 6.85, $p < .01$, $\eta^2 = .02$, and environmental quality of life, F (2,597) = 6.13, $p < .01$, $\eta^2 = .02$. Post-hoc analyses revealed that the SaR group of college students scored significantly higher than the secular or SoR group of college students on their psychological quality of life ($p < .05$ for both groups) and environmental quality of life ($p < .05$ for both groups).

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

Psychological Distress. ANCOVA results (controlling for college year) indicated no significant group differences in overall level of psychological distress between those college students who participated in religious/spiritual groups and those who

participated in no meaning-making groups, F (1,267) = 0.27, $p > .05$, $\eta^2 = .001$. MANCOVA results indicated that there were no significant group differences on levels of depression, F (1,267) = 0.03, $p > 0.5$, $\eta^2 < .001$, anxiety, F (1,267) = 0.62, $p > 0.5$, $\eta^2 = .002$, or stress, F (1,267) = 0.50, $p > 0.5$, $\eta^2 = .002$

Quality of Life. ANCOVA findings indicated no significant group differences in overall quality of life. Those college students who attended religious/spiritual groups reported similar levels of quality of life when compared to those college students who did not participate in any meaning-making group when controlling for covariates (gender, annual income), F (1,273) = 1.37, $p > .05$, $\eta^2 = .005$. MANCOVA results indicated no significant group differences between the two groups on physical, F (1,273) = 0.55, $p < .05$, $\eta^2 = .002$, psychological, F (1,273) = 1.77, $p < .05$, $\eta^2 = .006$, social, F (1,273) = 3.70, $p = .056$, $\eta^2 = .01$, or environmental quality of life, F (1,273) = 0.78, $p < .05$, $\eta^2 = .003$.

4. 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, F (1,421) = 0.13, $p < .05$, $\eta^2 = .005$. However, MANCOVA results indicated group differences in anxiety, F (1,421) = 4.83, $p < .05$, $\eta^2 = .01$, with the secular meaning-making group participants scoring higher—indicating higher levels of anxiety than those attending R/S groups. However, there were no other group differences on any subscale facets of psychological distress after controlling for college year (depression, stress) and gender (stress).

Quality of Life. ANCOVA results indicated significant group differences on overall quality of life after controlling for gender and annual income, F (1,433) = 4.57, $p < .05$, $\eta^2 = .01$. MANCOVA results indicated significant group differences on psychological quality of life when analyzed with requisite covariates, F (1,414) = 12.55, $p < .001$, $\eta^2 = .03$, with the R/S meaning-making group participants scoring significantly higher on psychological quality of life than secular meaning-making group participants.

DISCUSSION

Main Findings

When comparing religious/spiritual (R/S) college students (as a combined group) and secular college students, there were no significant differences in their overall psychological distress, specific aspects of distress, (i.e., depression, anxiety, and stress), nor overall quality of life. However, R/S college students scored significantly higher on psychological quality of life and environmental quality of life than secular college students.

While correlated, the DASS subscales and the WHOQOL psychological subscale measure different facets of psychological wellness at the item-level, with the WHOQOL approaching wellness more holistically (e.g., including questions about self-esteem, body image, and

thinking/memory; WHOQOL, 2012). Environmental quality of life indicates access to health and social care, financial resources, stable home life, and life opportunities—significantly higher in the R/S students in our sample compared with secular students. In this case, our hypothesis was partially supported. While R/S college students did show increased psychological quality of life, they also showed increased environmental quality of life, which we did not predict. We also hypothesized that R/S students would report significantly less psychological distress than secular students, but results indicated no differences between the groups.

Results were slightly different when separating the religious/spiritual group into nuanced identity categories. College students who identified as "spiritual *and* religious" (SaR) reported higher overall quality of life than college students who identified as secular and college students who identified as "spiritual *or* religious" (SoR). Specifically, SaR students also scored significantly higher on subscale levels of psychological and environmental quality of life than either SoR or secular students. Regarding psychological distress, results indicated that SoR students scored significantly higher on anxiety when compared to SaR students. Our second hypothesis was partially supported. We hypothesized differences in quality of life across these groups, which we see in our results, but also hypothesized no difference between SaR and SoR groups. However, we found significant differences between these two groups specifically, which could be reconciled through identity-development literature (discussed below).

Regarding group participation, we found that college students who attended R/S groups and those who did not attend meaning-making groups did not differ in their overall quality of life or psychological distress nor specific aspects of those constructs. This runs counter to our hypothesis that R/S group participants would report less psychological distress and higher quality of life across overall and subscale scores. These results also sit in opposition to the extant literature, which places religious/spiritual group participation as a core protective and wellness factor (Kneipp et al., 2009; Roming & Howard, 2019; Pargament, 2010). One potential explanation for these results could be the limited sampling of participants indicating no meaning-making group participation in the current study (n = 52). Due to this limited sampling, these results should be interpreted with caution.

Finally, results indicated that college students who participated in secular meaning-making groups reported higher levels of anxiety and less psychological quality of life than college students who participated in R/S groups. These results run counter to our hypothesis that there would be no group differences in either psychological distress or quality of life. Explanation for this disparity may be informed by our thematic analysis of secular meaning-making groups and the COVID-19 pandemic.

For many religious and spiritual college students, these systems of behaviors, rites, rituals, and beliefs are both private and public. Private religiosity involves solitary activities, such as reading holy texts, praying, and meditating, whereas public religiosity may involve worship attendance or public charitable acts (Ellison et al., 1989; Neil & Kahn, 1999). In the wake of the COVID-19 pandemic, although many facets of public religiosity were disrupted, private religiosity—and the solace afforded thereof—remained. However, the secular participants in our study listed many meaning-making groups that were solely public. For example, secular participants who viewed their sporting extracurriculars as meaning-making in nature (n = 15) did not have the option or privilege to engage in "private collegiate sports"—many universities and colleges sent students home and some sporting seasons were cancelled entirely (National Collegiate Athletic Association, 2020). In fact, researchers identified the COVID-19 pandemic as one of the biggest upsets to sporting ever (Wong et al., 2020). This inability to engage in community privately could be said for many of our secular meaning-making group themes such

as Greek life, sporting, friend groups, volunteering, and a bevy of other public-facing groups.

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). The results of the current study may be shedding light on the "identity crises" of those who are spiritual, but not religious, and those who are religious, but not spiritual.

James Marcia, a psychological contemporary of Erik Erikson, suggested four stages of identity (1963). Most relevant to the current study 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 and religious/spiritual 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 pole, those with firm spiritual *and* religious identities at the opposite pole, and those with *less* firm identities and beliefs comprising the middle of the spectrum ("spiritual *or* religious"). 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 participated in R/S groups reported lower anxiety and higher psychological quality of life than college students who participated in secular meaning-making groups. These results are consistent with extant literature that suggests R/S 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/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 R/S groups and those who attended secular meaning-making groups in terms of depression, stress, environmental QOL, social QOL, or physical QOL. 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 *non-significance* of group differences between college students who participated in R/S groups and those who participated in secular meaning-making groups is significant in that there has been a strong focus in the literature on the potential benefits of R/S group participation for college students' 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 R/S labels and identities. Secular students may find similar psychological and communal comfort in non-religious, non-spiritual groups that R/S 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, on and off campus, 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 groups/organizations 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 psychological distress, quality of life, and religious/spiritual identities. 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 religious/spiritual college student experiences.

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 (Hood, Hill, & Spilka, 2018; Koenig, 2008). For instance, one common measure of behavioral religiosity is worship service attendance, an approach that has

been extensively criticized as invalid (Ferriss, 2002). To carefully circumvent comparison effects by avoiding questions such as "how religious/spiritual are you compared to your friends/family/etc.," we 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

Based on the results of the current study, we have identified three primary directions for future research. 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 characteristics and experiences of secular college students.

Second, future researchers may want to include more nuanced identity categories for religious, spiritual, and secular participants. While much research centers 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, dones, unaffiliated theists, spiritual but not religious, etc. (Kenneson, 2015). There may be unique characteristics of these identities that are left 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. The data for the current study was collected during the height of 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). 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 recent human 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, one's connection to meaning-making community(ies) regardless of theistic intent. It is hoped that the results of this study may effectively guide college administrators, counselors, psychologists, professors, directors, college student development specialists, and all the parties who are invested in college student well-being and the betterment of college student quality of life everywhere.

REFERENCES

Bowman, N. A., Jarratt, L., Jang, N., & Bono, T. J. (2019). The unfolding of student adjustment during the first semester of college. *Research in Higher Education*, *60*, 273-292. https://doi.org/10.1007/s11162-018-9535-x

Burshtein, S., Dohrenwend, B. P., Levav, I., Werbeloff, N., Davidson, M., & Weiser, M. (2016). Religiosity as a protective factor against suicidal behaviour. *Acta Psychiatrica Scandinavica, 133,* 481-488. https://doi.org/10.1111/acps.12555

Camacho, Á., Cordero, E. D., & Perkins, T. (2016). Psychometric properties of the DASS-21 among Latina/o college Students by the US-Mexico border. *Journal of Immigrant and Minority Health, 18*(5), 1017–1023. https://doi.org/10.1007/s10903-016-0415-1

Coker, A. O., Coker, O. O., & Sanni, D. (2018). Psychometric properties of the 21-item Depression, Anxiety, Stress Scale (DASS-21). *African Research Review, 12*(2), 135-142. https://doi.org/10.4314/afrrev.v12i2.13

Draper, S. (2020, July 7). Effect size. *University of Glasgow Department of Psychology*. https://www.psy.gla.ac.uk/~steve/best/effect.html

Ellison, C. G., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction? *Social Forces, 68*(1), 100-12

Erikson, E. (1963). *Childhood and society* (2nd Ed.). Norton.

Erikson, E. (1968). *Identity: Youth and crisis.* W.W. Norton & Company, Inc.

Ferriss, A.L. (2002). Religion and the quality of life. *Journal of Happiness Studies, 3,* 199–215. https://doi.org/10.1023/A:1020684404438

Gilovich, T., Keltner, D., Chen, S., & Nisbett, R. E. (2018). *Social Psychology* (5th ed.). New York: W.W. Norton & Company.

Heesacker, M. (2018). Presidential address: Counseling psychology in the Trump era. *The Counseling Psychologist, 46*(1), 77-86. https://doi.org/10.1177/0011000018754324

Hood, R. W., Hill, P. C., & Spilka, B. (2018). *The psychology of religion: An empirical approach* (5th Ed.). The Guilford Press.

Howell, K. H., & Miller-Graff, L. E. (2014). Protective factors associated with resilient functioning in young adulthood after childhood exposure to violence. *Child Abuse & Neglect, 38*(12), 1985–1994. https://doi.org/10.1016/j.chiabu.2014.10.010

Hummer, R. A., Rogers, R. G., Nam, C. B., & Ellison, C. G. (1999). Religious involvement and U.S. adult mortality. *Demography, 36*(2), 273-285.

Ilić, I., Šipetić-Grujičić, S., Grujičić, J., Mačužić, I. Z., Kocić, S., & Ilić, M. (2019). Psychometric properties of the World Health Organization's Quality of Life (WHOQOL-BREF) questionnaire in medical students. *Medicina, 55*(12), 772-782. https://doi.org/10.3390/medicina55120772

Jones, J. M. (2019, April 18). *U.S. church membership down sharply in past two decades.* Gallup. https://news.gallup.com/poll/248837/church-membership-down-sharply-past-two-decades.aspx

Kasen, S., Wickramaratne, P., Gameroff, M. J., & Weissman, M. M. (2012). Religiosity and resilience in persons at high risk for major depression. *Psychological Medicine, 42*(3), 509–519. https://doi.org/10.1017/S0033291711001516

Kenneson, P. D. (2015) What's in a Name? A brief introduction to the "spiritual but not religious." *Liturgy, 30*(3), 3-13, https://doi.org/10.1080/0458063X.2015.1019259

Klaassen, D.W., McDonald, M. J., & James, S. (2006). Advances in the study of religious and spiritual coping. In P.T.P. Wong & L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 105-132). Springer.

Kneipp, L. B., Kelly, K. E., & Cyphers, B. (2009). Feeling at peace with college: Religiosity, spiritual well-being, and college adjustment. *Individual Differences Research, 7*(3), 188-196.

Koenig H. G. (2008). Concerns about measuring "spirituality" in research. *The Journal of Nervous and Mental Disease, 196*(5), 349–355. https://doi.org/10.1097/NMD.0b013e31816ff796

Koenig, H., King, D., & Carson, V. B. (2012). *Handbook of religion and health* (2nd ed.). Oxford: Oxford University Press.

Kosmin, B. A., & Keysar, A. (2013). Religious, spiritual, and secular: The emergence of three distinct worldviews among American college students. *Trinity College.* Retrieved August 30, 2020, from https://www.trincoll.edu/Academics/centers/isssc/Documents/ARIS_2013_College%20Students_Sept_25_final_draft.pdf

Lee, S. A., Roberts, L. B., & Gibbons, J. A. (2013). When religion makes grief worse: negative religious coping as associated with maladaptive emotional responding patterns. *Mental Health, Religion, & Culture, 16*(3), 291-305. http://dx.doi.org/10.1080/13674676.2012.659242

Liu, X., Ping, S., & Gao, W. (2019). Changes in undergraduate students' psychological well-being as they experience university life. *International Journal of Environmental Research and Public Health, 16,* 2864-2878. https://doi.org/10.3390/ijerph16162864

Lovibond, S. H. & Lovibond, P. F. (1995). *Manual for the Depression, Anxiety, & Stress Scales.* (2nd ed.). Sydney: Psychology Foundation.

Magaldi-Dopman, D. (2014). An "afterthought": Counseling trainees' multicultural competence within the spiritual/religious domain. *Journal of Multicultural Counseling and Development, 42*(4), 194–204. https://doi.org/10.1002/j.2161-1912.2014.00054.x

Marcia, J. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551-558.

McNally, R. D. S., Winterowd, C. L., & Farra, A. (2020). Psychological sense of community, perceived social support, and grief experiences among bereaved college students. *College Student Journal, 55*(1), 67-79.

Milevsky, A. (2017). Religiosity and social support: A mediational model of adjustment in emerging adults. *Mental Health, Religion & Culture, 20*(5), 502-512. https://doi.org/10.1080/13674676.2017.1359243

National Center for Education Statistics. (2022). *College enrollment rates.* U.S. Department of Education. Retrieved from https://nces.ed.gov/programs/coe/indicator/cpb

National College Athletic Association (2020, March 12). *NCAA cancels remaining winter and spring championships* [Press release]. https://www.ncaa.org/news/2020/3/12/ncaa-cancels-remaining-winter-and-spring-championships.aspx

National Student Clearinghouse (2021). *Term enrollment estimates Fall 2021.* Retrieved from https://nscresearchcenter.org/wp-content/uploads/CTEE_Report_Fall_2021.pdf

Neill, C.M., & Kahn, A.S. (1999). The role of personal spirituality and religious social activity on the life satisfaction of older widowed women. *Sex Roles, 40,* 319–329. https://doi.org/10.1023/A:1018811324286

Oxhandler, H. K., & Pargament, K. I. (2018). Measuring religious and spiritual competence across helping professions: Previous efforts and future directions. *Spirituality in Clinical Practice, 5*(2), 120–132. https://doi.org/10.1037/scp0000149

Parenteau, S.C., Hurd, K., Wu, H., & Feck, C. (2019). Attachment to God and psychological adjustment: God's responses and our coping strategies. *Journal of Religious Health, 58,* 1286–1306. https://doi.org/10.1007/s10943-019-00765-2

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion, 37*(4), 710-724.

Pargament, K. I. (2001). *The psychology of religion and coping: Theory, research, practice* (Revised ed.). New York: Guilford Press.

Pargament, K. I. (2010). Religion and coping: The current state of knowledge. In S. Folkman (Ed.), *The Oxford Handbook of Stress, Health, and Coping.* Oxford. https://doi.org/10.1093/oxfordhb/9780195375343.013.0014

Pew Research Center. (2014). *Religious landscape study* [Data repository]. Retrieved from https://www.pewresearch.org/religion/religious-landscape-study/

Pew Research Center. (2019, October 17). *In U.S., decline of Christianity continues at rapid pace.* Pew Research Center: Religion & Public Life. https://www.pewforum.org/2019/10/17/in-u-s-decline-of-christianity-continues-at-rapid-pace/

Pew Research Center. (2021, Dec. 14). *About three-in-ten U.S. adults are now religiously unaffiliated.*

Pew Research Center. https://www.pewresearch.org/religion/wp-content/uploads/sites/7/2021/12/PF_12.14.21_update_on_religion_trends_report.pdf

Ridner, S. L., Keith, R. J., Walker, K. L., Hart, J. K., Newton, K. S., & Crawford, T. N. (2018). Differences in quality of life among college student electronic cigarette users. *AIMS Public Health, 5*(4), 454-462. https://doi.org/10.3934/publichealth.2018.4.454

Roming, S., & Howard, K. (2019). Coping with stress in college: An examination of spirituality, social support, and quality of life. *Mental Health, Religion & Culture, 22*(8), 832-843. https://doi.org/10.1080/13674676.2019.1674794

Sarason, S. B. (1974). *Psychological sense of community: Prospects for a community psychology.* Jossey-Bass Inc. Pub.

Sedler, A. E., Stauner, N., Pargament, K. I., Exline, J. J., Grubbs, J. B., & Bradley, D. F. (2018). Spiritual struggles among atheists: Links to psychological distress and well-being. *Religions, 9*(242), 1-21. https://doi.org/10.3390/rel9080242

Sica, L. S., Sestito, L. A., & Ragozini, G. (2014). Identity coping in the first years of university: Identity diffusion, adjustment and identity distress. *Journal of Adult Development, 21*, 159-172. https://doi.org/10.1007/s10804-014-9188-8

The WHOQOL Group (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine, 28*, 551-558.

Vera, E. M. & Speight, S. L. (2003). Multicultural competence, social justice, and counseling psychology: Expanding our roles. *The Counseling Psychologist, 31*, 253-272. https://doi.org/10.1177/0011000003031003001

World Health Organization. (2012). WHOQOL user manual. *Programme on Mental Health.* Retrieved from https://apps.who.int/iris/bitstream/handle/10665/77932/WHO_HIS_HSI_Rev.2012.03_eng.pdf?sequence=1&isAllowed=y&ua=1

Wong, A. Y-Y., Ling, S., K-K., Louie, L., H-T., Law, G., Y-K., So, R., C-H., Lee, D., C-W., Yau, F., C-F., & Yung, P., S-H. (2020). Impact of COVID-19 pandemic on sports and exercise. *Asia-Pacific Journal of Sports Medicine, Arthroscopy, Rehabilitation, and Technology, 22*, 39-44. https://doi.org/10.1016/j.asmart.2020.07.006

Xu, J. (2016). Pargament's theory of religious coping: Implications for spiritually sensitive social work practice. *British Journal of Social Work, 46*, 1394-1410. https://doi.org/10.1093/bjsw/bcv080

Yun, K., K, S.-h., & Awasu, C. R. (2019). Stress and impact of spirituality as a mediator of coping methods among social work college students. *Journal of Human Behavior in the Social Environment, 29*(1), 125-136. https://doi.org/10.1080/10911359.2018.1491918

Zanon, C., Brenner, R. E., Baptista, M. N., Vogel, D. L., Rubin, M., Al-Darmaki, F. R., Gonçalves, M., Heath, P. J., Liao, H.-Y., Mackenzie, C. S., Topkaya, N., Wade, N. G., & Zlati, A. (2020). Examining the dimensionality, reliability, and invariance of the Depression, Anxiety, and Stress Scale–21 (DASS-21) across eight countries. *Assessment.* https://doi.org/10.1177/1073191119887449

Zhang, Y., Qu, B., Lun, S., Wang, D., Guo, Y., & Liu, J. (2012). Quality of life of medical students in China: A study using the WHOQOL-BREF. *PLoS One, 7*(11), 1-9. https://doi.org/10.1371/journal.pone.0049714