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Relationships Between Religiosity, Spirituality, Gender, Psychological Distress, and Treatment Preference

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Abstract

The underutilization of mental health services by college students is an enduring problem, highlighted by increasing popularity of mental health awareness efforts. One strategy used to understand this problem is examining college students' attitudes toward seeking psychological help. The present study sought to examine college students' attitudes toward seeking both psychological *and* religious forms of help, and the roles of religiosity/spirituality, psychological distress, and gender in predicting treatment preference. Understanding what kind of treatment students prefer and the important predictors of this preference may help us to address more effectively the problem of mental health service underutilization. In a large (N = 153) sample of college students, the present study found that gender and an interaction between gender and religiosity/spirituality did not predict treatment preference. Additionally, religiosity/spirituality positively related to attitudes toward religious help-seeking, but had no significant relationship with psychological help-seeking. Finally, the present study found that an interaction between religiosity/spirituality and psychological distress helped predict a significant portion of variation in participants' treatment preference.

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Introduction

College students in the United States underutilize mental health services. One national study of college students found that less than half who screened positively for major depression or anxiety had received treatment within the last year (Eisenberg, Golberstein, & Gollust, 2007). Another study with college students found that while nearly a quarter of the participants reported clinically significant levels of psychological distress, 72% of those failed to utilize available mental health services (Rosenthal & Wilson, 2016).

Research concerning the underutilization of mental health services by college students has often focused on either intrinsic or systemic barriers to seeking help. Students experiencing psychological distress are more likely than their peers to seek mental health services (Eisenberg et al., 2007), and the help-seeking attitudes of college students have been demonstrated to predict subsequent help-seeking behavior (Marsh & Wilcoxon, 2015). Other person-related barriers to seeking help include emotional openness and gender (Komiya, Good, & Sherrod, 2000). Systemic barriers to seeking help include monetary cost, proximity to care, and knowledge about available resources (Marsh & Wilcoxon, 2015).

The literature on the help-seeking attitudes and behaviors of college students, while growing, has by and large neglected to explore a potentially important influence on help-seeking attitudes: religion. This is a troubling omission because religious and spiritual beliefs are important factors in the lives of many young people in the United States. In a large survey titled the “Religious Landscape Study,” the Pew Research Center collected data on the religious behaviors and attitudes of populations across the United States. Fifty-one percent of respondents in the 18-29 age range reported an “absolutely certain” belief in God, and another 22% reported a “fairly certain” belief (Pew Research Center, 2014). Forty percent of respondents between ages

18-29 stated that religion is “very important” in their lives, and another 28% regarded religion as “somewhat important” (Pew Research Center, 2014). Additionally, religious behaviors are continually relevant in the lives of young people, with 27% of respondents attending religious services weekly, 41% praying daily, and 27% reading scripture at least once a week (Pew Research Center, 2014).

The Religious Landscape Study confirms that religious beliefs and behaviors are important in the lives of many young people. As such, it stands to reason that religious and spiritual beliefs factor within the more specific mental health arena. Indeed, research has sought to document the links between religiosity and mental health. For example, Baker and Cruickshank (2009) found a significant inverse relationship between religiosity and depressive symptoms across participants with various religious affiliations. A study assessing the relationship between religiosity, spirituality, and mental health in Filipino Americans found a correlation between higher levels of spirituality and lower levels of mental distress (Abe-Kim, Gong, & Takeuchi, 2004). Similar results have been found in studies conducted internationally. In a study of religious beliefs and well-being of Brazilian adults, researchers found significant positive relationships between spirituality, religiosity, and psychological quality of life (Peres, Kamei, Tobo, & Luchetti, 2017). A systematic review of Australian research concerning religiosity and mental health found correlations between dimensions of religiosity and positive mental health outcomes (Snider & McPhedran, 2014).

Given that religion is an important part of young people’s lives, and that religiosity or spirituality can relate significantly to mental health, we can expect that religiosity and spirituality will relate to help-seeking attitudes and treatment preferences. Findings from the literature on this link, however, have been mixed.

On the one hand, several studies have found a positive relationship between levels of religiosity and attitudes toward seeking psychological counseling. For example, in a study of Christian undergraduate students, Miller and Eells (1998) found that students with higher levels of intrinsic religiosity had more positive attitudes towards psychological counseling, compared to students with lower levels of religiosity. In another study of college students, levels of religious commitment were positively associated with attitudes toward seeking psychological help (Brenner, Engel, Vogel, Tucker, Yamakaki, & Lannin, 2018). In a sample of mostly elderly Jewish women, participants who spent more time in private religious activity and who reported higher intrinsic religiosity were more likely than others to have sought any form of mental health services (Pickard, 2006).

On the other hand, several studies assessing religiosity, spirituality, mental health, and help-seeking have found that higher levels of religiosity and spirituality correlate with more *negative* attitudes toward psychological help-seeking, in addition to a preference for religious help-seeking. For example, Wamser, Vandenberg, and Hibberd (2011) found that religious fundamentalism and coping were associated with a stronger preference for religious treatment in a sample of undergraduate students. In a study of Latin Americans, Moreno and Cardemil (2013) interviewed participants about their religious beliefs and attitudes toward psychological and religious help seeking. The interviews revealed that participants preferred religious counseling to psychological counseling for various reasons, including comfort with religious officials and easier access to them. In a similar sample of Mexican Americans, Moreno, Nelson, and Cardemil (2017) found a negative correlation between religiosity and attitudes toward psychological help-seeking.

An Israeli study of religious clients in community mental health clinics found that clients with higher religiosity reported greater distrust in mental health care and lack of confidence in the effectiveness of secular treatment (Nakash, Lambez, Cohen, & Nagar, 2019). Analyzing data collected on African Americans, Lukachko, Myer, and Hankerson (2015) found that religiosity and church attendance were associated with lower probability of psychological help-seeking. In a sample of college students, Crosby & Bossley (2012) found that higher levels of religiosity were associated with greater preference for religious help-seeking and more negative attitudes toward psychological help-seeking.

Finally, several studies have found that while individuals with higher religiosity might prefer religious help-seeking, they do not express more negative attitudes toward psychological help-seeking. In a study of Filipino Americans, participants with higher levels of religiosity were more likely to seek out religious clergy for help, but were not any less likely to seek out psychological help compared to those with lower levels religiosity (Abe-Kim, Gong, & Takeuchi, 2004). Similarly, a Norwegian study found no significant difference in probability of seeking psychological help between participants with high and low religiosity (Sørgaard, Sørensen, Sandanger, Ingebrigsten, & Dalgard, 1996).

In a study consisting of interviews with religious adults seeking therapy in the UK, participants recognized that spiritual counseling for mental health issues might be ineffective, even if they still expressed reservations toward psychological counseling. Additionally, most of the participants from the same study reported that they were able to find a congruence between their faith and secular therapy, indicating that the two are not always at odds (Mayers, Leavey, Valliantou, & Baker, 2007).

In sum, these findings suggest that the decision-making process underlying help-seeking behavior is complex, and has not yet been adequately mapped out. One factor that may play a role in the relationship between religiosity and help-seeking attitudes is gender. Multiple studies have shown that women tend to have more positive attitudes toward seeking psychological help compared to their male counterparts (Fischer & Farina, 1995; Komiya et al., 2000).

Gender has also been examined in studies that look specifically at religiosity/spirituality and help-seeking. In a study of college students, Crosby and Bossley (2012) found that men reported a greater preference for religious help-seeking compared to women. Additionally, this study demonstrated that women have more positive attitudes toward psychological help-seeking compared to men (which is consistent with research on general help-seeking attitudes). In another study of college students, men with high religious commitment and high levels of self-stigma were found to have the most negative attitudes toward psychological help-seeking (Brenner et al., 2018).

Another factor that may help shape the relationship between religiosity and help-seeking attitudes is psychological distress. Evidence suggests that the type and severity of distress may predict health related attitudes and behaviors. For example, Harris, Edlund, & Larson (2006), examining a large US sample, found that a combination of increasing levels of religiosity and serious psychological distress was associated with greater outpatient mental health care and medication usage. A study consisting of qualitative interviews with religious Latin Americans, conducted by Moreno & Cardemil (2013), found that participants expressed a greater willingness to seek psychological rather than religious help if their distress was significant or perceived as biological in nature.

Wang, Berglund, & Kessler, (2003) found that people with serious mental illness were often contacting clergy for help, but increasing levels of mental disorder/distress made respondents more likely to visit mental health professionals. However, this study does not include a measure of religiosity or spirituality. A study of Norwegians in community mental health clinics found that participants who had previously contacted priests for help had less severe psychiatric symptoms than participants who had contacted mental health professionals (Sørgaard et al., 1996). Specifically, participants with psychiatric symptom scores that the researchers defined as "needing intervention" sought mental health professionals at a higher rate than priests (Sørgaard et al., 1996). In a study of African Americans, Lukachko, Myer, and Hankerson (2015) found that participants with high reported church attendance and a DSM-IV mental disorder were more likely to have sought mental health services compared to those with high attendance and no DSM-IV mental disorder.

While existing research has explored how psychological distress may predict psychological help-seeking in religious participants, studies to date have not examined psychological distress in relation to attitudes toward both psychological *and* religious help-seeking, while also accounting for gender. In other words, we need to know more about how the interaction between religiosity/spirituality and psychological distress may predict individual male and female preference toward psychological and religious help-seeking.

The present study is designed to address this question. It attempts to build on existing research by examining the relationships between religiosity, spirituality, help-seeking, gender, and psychological distress, in hopes of gaining a better understanding of the mental health service utilization of college students. Given the dearth of a literature directly addressing the link

between religiosity/spirituality, help-seeking, gender, and psychological distress in a college student sample, predictions for this study are made tentatively, as follows:

1. Religiosity/spirituality scores will be inversely associated with psychological distress, indicating a positive relationship between religiosity/spirituality and mental health.
2. Women will have more positive attitudes toward psychological help-seeking comparted to men. Additionally, men with high religiosity/spirituality will have the greatest preference toward religious help-seeking.
3. Higher levels of religiosity/spirituality will be associated with more positive attitudes toward religious help-seeking compared to lower levels of religiosity/spirituality. However, higher levels of religiosity/spirituality will not be associated with more *negative* attitudes toward psychological help-seeking.
4. Level of psychological distress will significantly predict treatment preference, independent of religiosity/spirituality. Religiosity/spirituality will not significantly predict treatment preference when accounting for psychological distress. However, an interaction between religiosity/spirituality and psychological distress may help explain variation in treatment preference.

Method

Participants

Participants (N = 153) were surveyed over a one-month period in March and April of 2020. Of those, 139 were recruited through Otterbein University's psychology research sign-up system. These participants received course credit for their participation in the study. The rest of the participants (N = 14) were solicited by the researcher through social networks. These participants received no credit or direct reward for their participation. From this original sample, fourteen sloppy or incomplete responses were omitted, leaving a final sample of 139 participants, of which 75% (104) participants identified as female, 24.5% (34) as male, and .007% (1) as non-binary gender fluid.

Participant age ranged from 18-38 years old (M = 20). Forty-three percent of participants identified as non-denominational or non-specified Christian, 24.5% listed their religious beliefs as "None" or "N/A," 10% of participants listed Catholic, while another 10% wrote "Agnostic" or "Agnosticism" for their belief system. Ten other belief systems were reported, accounting for another 12.2% of participants. These included: Wiccan/Witchcraft, "Spiritual," Buddhism, Islam, Judaism (practicing and non-practicing), Mormon (non-practicing), and Simulation/Divine Command Theory.

Of the 139 final participants, seven were left out of the main analyses due to missing a question on one of the four primary measures. However, these seven participants were included in the demographic reporting and supplemental analyses when possible.

Materials and Measures

The online survey used in this study consisted of three primary measures, as follows:

Religiosity/Spirituality. In order to determine participant's level of religiosity/spirituality, a 34-item measure was adopted using sample items from the Fetzer Institute's Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research (Fetzer Institute, 1999). Items are presented in a Likert-scale format, assessing the frequency of religious/spiritual activities and religious/spiritual beliefs (see Appendix A for examples). Scores ranged from 31-159, with higher scores indicating a higher level of religiosity/spirituality. Although religiosity and spirituality are not identical constructs, the current study assesses them as one dimension.

Psychological Distress. To measure psychological distress, a gauge of general psychological functioning, the "Distress Index" of the Counseling Center Assessment of Psychological Symptoms 34-item measure (CCAPS-34), was utilized (Center for Collegiate Mental Health, 2019). This measure was originally developed in order to assess psychological symptoms in college student populations, and the Distress Index yields a generalized psychological functioning score for use in research. In the current study, psychological distress is operationally defined as scores on the CCAPS-34 Distress Index. Mean scores that ranged from one to five were calculated, with higher scores indicating greater psychological distress (see Appendix D).

Treatment Preference. The treatment preference variable was calculated using the Attitudes Toward Seeking Professional Psychological Help Short Form (ATSPPH-SF) scale (Fischer & Farina, 1995) and a modified version of the same scale, titled Attitudes Toward Seeking Religious Help (ATSRH). The ATSPPH-SF scale is a psychometrically validated measure of people's general attitudes toward seeking mental health services (Fischer & Farina,

1995). Scores on each scale range from 9 to 36, with higher scores on both scales indicating more positive attitudes toward each form of help-seeking.

The ATSRH scale is a modified version of the ATSPPH-SF, meant to assess attitudes toward religious help-seeking (Wamser, Vandenberg, & Hibberd, 2011). Terms from the ATSPPH-SF like "psychologist," "professional help," and "counseling" are replaced with "religious official," "God," and "spiritual/religious counseling" (see Appendices B and C). The ATSPPH-SF and ATSRH scales were scored separately. For each participant, the sum ATSPPH-SF score was subtracted from the sum of their ATSRH score to create the treatment preference value. Treatment preference scores range from -27 to 27, with negative scores indicating some amount of preference for psychological help-seeking, and positive scores indicating some amount of preference for religious help-seeking.

This method was developed by Wamser, Vandenberg, and Hibberd (2011). The authors note that the ATSRH scale is derivative and not as psychometrically sound as the ATSPPH-SF, and more research is needed concerning its effectiveness as a measure. One question was omitted from both of the 10-item measures due to the wording being too general to differentiate between the two scales.

Procedure

A small (N = 30) pilot study was conducted before the final survey was released. After gathering data from the pilot study, minor changes to the survey's wording and structure were made by the researchers. Additionally, the measure used to determine psychological distress changed to the CCAPS-34 scale used in the final survey. Informed consent was obtained from each participant, followed by a brief set of demographic questions. Participants were also given an option to enter a gift card raffle as further incentive for their participation in the study. Next,

participants were presented with the Religiosity/Spirituality measure and the CCAPS-34. Although the Distress Index was the primary focus of this study, participants completed the entire CCAPS-34 measure in accordance with the policy of its creators (Center for Collegiate Mental Health, 2019). Lastly, participants completed both the ATSPPH-SF and ATSRH measures. These two measures were counterbalanced to mitigate ordering effects. Responses to the final online survey were collected through Otterbein University's psychology sign-up system and social media between March 24th and April 29th of 2020. Data was collected on Qualtrics and then organized into Microsoft Excel. Data analysis was completed using JASP, a free-to-use data analytics program.

Results

Hypothesis 1

To test the relationship between religiosity/spirituality scores and psychological distress, a Pearson's correlation was obtained for the two variables. Religiosity/spirituality scores were significantly related to psychological distress [r (130) = -0.2233, p = .007]. The hypothesis that religiosity/spirituality would be inversely associated with psychological distress is therefore supported by the data. However, this relationship is weak, with religiosity/spirituality accounting for less than 5% of the variance in psychological distress.

Hypothesis 2

An independent samples t-test was conducted to compare attitudes toward psychological help-seeking by gender. There was no statistically significant difference in attitudes toward psychological help-seeking between men (M = 26.250, SD = 4.745) and women (M = 28.0, SD = 4.616), [t (129) = -1.852, p = 0.066]. This finding does not support the hypothesis that women would have more positive attitudes toward psychological help-seeking compared to men. A two-way ANOVA was conducted exploring the relationships between gender, religiosity/spirituality scores, and treatment preference. Gender difference between men (M = -5.625, SD = 8.178) and women (M = -7.677, SD = 8.046) did not significantly predict treatment preference [F (1, 127) = 1.509, p = 0.222]. However, difference between low (M = -11.492, SD = 6.622) and high (M = -2.924, SD = 7.135) religiosity/spirituality did significantly predict treatment preference [F (1, 127) = 38.583, p < .001, η^2 = 0.231]. The interaction between gender and religiosity/spirituality was not significant [F (1, 127) = 0.078, p = 0.781]. These results fail to provide support for the hypothesis that men with high levels of religiosity/spirituality would have the greatest preference towards religious help-seeking.

Hypothesis 3

Two independent samples *t*-tests compared attitudes toward psychological and religious help-seeking across high and low religiosity/spirituality. There was a large and significant difference in attitudes toward religious help-seeking between the low religiosity/spirituality group (M = 16.727, SD = 3.841) and the high religiosity/spirituality group (M = 23.924, SD = 5.584), [t (130) = -8.627, $p < .001$, Cohen's d = -1.502]. The results of this *t*-test show that people with high religiosity/spirituality have significantly more positive attitudes toward religious help-seeking compared to those with low religiosity/spirituality. Therefore, part of the hypothesis is supported.

Secondly, there was no statistically significant difference in attitudes toward psychological help-seeking between the low religiosity/spirituality group (M = 28.394, SD = 4.784) and the high religiosity/spirituality group (M = 26.848, SD = 4.531), [t (130) = 1.905, p = .059]. The lack of significant difference in attitudes toward psychological treatment between participants with high and low religiosity/spirituality supports the hypothesis that higher levels of religiosity/spirituality would not result in more negative attitudes toward psychological help-seeking.

Hypothesis 4

In order to test this hypothesis, a multiple linear regression was calculated to predict treatment preference based on religiosity/spirituality, level of psychological distress, and the interaction between the two. The descriptive statistics for each predictor are as follows: religiosity/spirituality score (M = 74.508, SD = 27.038), level of psychological distress (M = 2.563, SD = 0.797), and interaction between the two (M = 51.087, SD = 19.409). The regression model found that religiosity/spirituality, level of psychological distress, and their interaction

explain a significant portion of the variance in treatment preference [F (3, 128) = 80.743, p < .001, R^2 = 0.654, R^2_{adjusted} = 0.646]. Religiosity/spirituality alone did not significantly predict treatment preference in this regression [ß = 0.027, t (131) = 1.134, p = 0.259], but level of psychological distress did [ß = -7.889, t (131) = -7.902, p < .001]. Additionally, the interaction between religiosity/spirituality and level of psychological distress significantly predicted treatment preference [ß = 0.412, t (131) = 9.571, p < .001].

The hypothesis that religiosity/spirituality would not significantly predict treatment preference when accounting for psychological distress was supported. Both level of psychological distress and the interaction between the two predictors significantly predicted treatment preference. The relationship between religiosity/spirituality, level of psychological distress, and their association with treatment preference is displayed in Figure 1. Examination of Figure 1 reveals that both participants with high and low religiosity/spirituality show an overall preference for psychological treatment. In the highly religious/spiritual group, an increase in distress is associated with a decrease in preference for religious treatment (that is, an increase in preference for psychological treatment). Conversely, in the low religiosity/spirituality group, there is no significant change in treatment preference across levels of distress.

Discussion

Findings from this study provide multiple relevant insights into the relationships between mental health, gender, religiosity/spirituality, and treatment preferences of college students. The results indicate a significant, but weak relationship between religiosity/spirituality and lower psychological distress. This finding is consistent with previous research documenting a positive relationship between religiosity/spirituality and mental health (Abe-Kim, Gong, & Takeuchi, 2004; Baker & Cruickshank, 2009; Peres et al., 2017; Snider & McPhedran, 2014). Although mental health service utilization is a multi-faceted issue, the possible effect of religiosity/spirituality on psychological distress should be considered as a factor in utilization.

Interestingly, this study found no statistically significant gender difference in attitudes toward psychological help-seeking, which was contrary to the hypothesis and inconsistent with past research (Crosby & Bossley, 2012; Fischer & Farina, 1995; Komiya, Good, & Sherrod, 2000). Additionally, gender and the interaction between gender and religiosity/spirituality did not predict treatment preference. This finding further diverges from previous research (Brenner et al., 2018; Crosby & Bossley, 2012). The lack of significant relationships between gender and help-seeking attitudes may (if replicated elsewhere) indicate that gender is becoming less significant as a person-related barrier in the help-seeking behaviors of college students.

Looked at individually in the present sample, religiosity/spirituality a stronger predictor of treatment preference compared to gender. Given that, religiosity/spirituality deserves more attention in the research concerning mental health service utilization by college students. Religiosity and spirituality's relationship with treatment preference could result in students seeking help from their own faith or religious forms of counseling instead of mental health services.

Prior research examining the relationship between religiosity/spirituality and help-seeking attitudes has yielded mixed results. Some studies reveal a negative relationship between religiosity/spirituality and attitudes toward psychological help-seeking (Crosby & Bossley, 2012; Lukachko, Myer, & Hankerson, 2015; Nakash et al., 2019; Moreno, Nelson, & Cardemil, 2017), some found a positive relationship (Brenner et al., 2018; Miller & Eells, 1998), and others found no relationship at all (Abe-Kim, Gong, & Takeuchi, 2004; Sørgaard et al., 1996).

The present study found that increasing levels of religiosity/spirituality were associated with more positive attitudes toward religious help-seeking, but *not* significantly associated with attitudes toward psychological help-seeking. This finding supports Hypothesis 3 and the section of prior research that found religiosity/spirituality to have no significant relationship with psychological help-seeking attitudes. While religiosity/spirituality does not predict attitudes toward psychological help-seeking, increasing religiosity/spirituality and more positive attitudes toward religious help-seeking could lead college students to either forego mental health services or augment them with religious forms of help.

Results from the present study appear to support the latter proposition. While increasing levels of religiosity/spirituality were associated with more positive attitudes toward religious help-seeking, even the highly religious participants hovered around a score of 0, indicating a neutral treatment preference. The lack of significantly negative attitudes toward psychological help-seeking by the highly religious/spiritual means that religiosity/spirituality may facilitate improved mental health in part by providing those students with two acceptable paths toward seeking help.

Finally, past research has shown that psychological distress facilitates greater likelihood of mental health service utilization in general (Eisenberg et al., 2007), and among religious

individuals (Harris, Ellund, & Larson, 2006, Lukachko, Myer, & Hankerson, 2015; Moreno & Cardemil, 2013). Likewise, the present study found that psychological distress factors significantly into treatment preference in college students. In the present study, level of psychological distress and the interaction between psychological distress and religiosity/spirituality were significantly related to treatment preference, accounting for a large portion of the variance in treatment preference scores.

As shown in Figure 1, while those higher in religiosity/spirituality showed an increasing preference toward religious help-seeking, higher levels of psychological distress were also associated with greater preference for psychological help-seeking in the same group. Interestingly, Figure 1 shows that those with low levels of religiosity/spirituality and higher distress show a greater variation in treatment preference than those with high religiosity and high distress. Psychological distress seems to factor more heavily in treatment preference for those who are highly religious/spiritual.

The present study contains several limitations that should be taken into account with the results and their implications. First, the sample consisted of mostly female, Christian college students. Future research on religiosity/spirituality and treatment preference in college students should strive to include more diverse samples. Second, much of the previous research cited here was conducted with culturally or ethnically specific (Latinx, Black, Filipino, etc.) and international populations. This fact may account for why some of the current study's results diverge from the literature. Third, the findings of this study are also limited by the measures used. The choice to combine religiosity and spirituality into one measure may have impacted the results (for example: participants with higher religiosity *alone* could have more negative attitudes toward psychological help-seeking, but this may not be reflected in the results due to the

inclusion of spirituality). Finally, the central variable of treatment preference was operationalized using help-seeking attitudes, rather than directly asking (or observing) preferences or actual usage of mental health or religious services.

The above limitations notwithstanding, results of the present study suggest that religiosity and spirituality, along with psychological distress, play a role in shaping the mental health treatment preferences, and therefore the mental health service utilization, of college students. The findings also suggest that gender plays a less significant role in the treatment preferences of college students. Ultimately, psychological distress and religiosity/spirituality interact to predict treatment preference (combined attitudes toward religious and psychological help-seeking). Future studies of treatment preference should include these variables as predictors while striving to more directly link help-seeking attitudes to actual patterns of mental health service utilization.

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Table 1

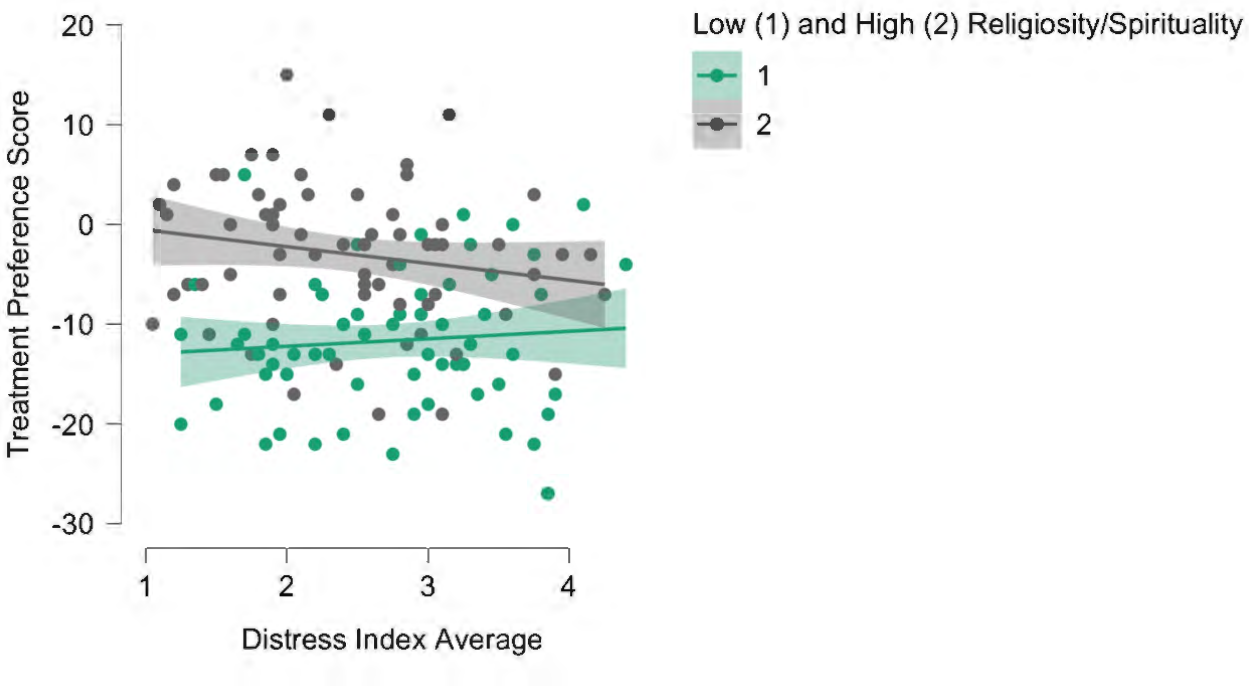
Descriptive Statistics

	Religiosity/Spirituality Score	Distress Index Average	Religion/Spirituality Treatment Attitudes Score	Psych Treatment Attitudes Score	Treatment Preference Score	Gender
Valid	132	132	132	132	132	132
Missing	0	0	0	0	0	0
Mean	74.508	2.563	20.326	27.621	-7.295	1.765
Std. Deviation	27.028	0.797	5.987	4.706	8.181	0.443
Minimum	31.000	1.050	9.000	17.000	-27.000	1.000
Maximum	145.000	4.400	36.000	36.000	15.000	3.000

This table provides descriptive statistics for the mean analysis variables.

Figure 1

Main Interaction Between Distress and Religiosity/Spirituality



Green: Low Religiosity/Spirituality Group, Grey: High Religiosity/Spirituality Group

Appendix A

Religiosity/Spirituality Measure (Brief Multidimensional Measurement of Religiousness/Spirituality)

The following questions will ask you about your personal religious or spiritual beliefs and practices. Please answer as honestly as possible.

1. To what extent do you consider yourself a religious person?
    1. Very religious
    2. Moderately religious
    3. Slightly religious
    4. Not religious at all
2. To what extent do you consider yourself a spiritual person?
    1. Very spiritual
    2. Moderately spiritual
    3. Slightly spiritual
    4. Not spiritual at all

The following questions deal with possible spiritual experiences. To what extent can you say you experience the following:

3. I feel God's presence.
    1. Many times a day
    2. Every day
    3. Most days
    4. Some days

5. Once in a while
6. Never or almost never

4. I find strength and comfort in my religion.
    1. Many times a day
    2. Every day
    3. Most days
    4. Some days
    5. Once in a while
    6. Never or almost never

5. I desire to be closer to or in union with God.
    1. Many times a day
    2. Every day
    3. Most days
    4. Some days
    5. Once in a while
    6. Never or almost never

6. I feel God's love for me, directly or through others.
    1. Many times a day
    2. Every day
    3. Most days
    4. Some days
    5. Once in a while
    6. Never or almost never

7. During worship, or at other times when connecting with God, I feel joy which lifts me out of my daily concern.

1. Many times a day
2. Every day
3. Most days
4. Some days
5. Once in a while
6. Never or almost never

Indicate your level of agreement with the following statements:

8. I believe in a God who watches over me,

1. Strongly agree
2. Agree
3. Disagree
4. Strongly Disagree

9. My whole approach to life is based on my religion.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly Disagree

10. How much is religion a source of strength and comfort to you?

    1. A great deal
    2. A little
    3. None

Because of my religious or spiritual beliefs:

11. I have forgiven myself for things that I have done wrong.

    1. Always or almost always
    2. Often
    3. Seldom
    4. Never

12. I know that God forgives me.

    1. Always or almost always
    2. Often
    3. Seldom
    4. Never

13. How often do you pray privately in places other than at church or synagogue?

    1. More than once a day
    2. Once a day
    3. A few times a week.

4. Once a week

5. A few times a month

6. Once a month

7. Less than once a month

8. Never

14. Within your religious or spiritual tradition, how often do you meditate?

1. More than once a day

2. Once a day

3. A few times a week.

4. Once a week

5. A few times a month

6. Once a month

7. Less than once a month

8. Never

15. How often do you watch or listen to religious programs on TV or radio?

1. More than once a day

2. Once a day

3. A few times a week.

4. Once a week

5. A few times a month

6. Once a month

7. Less than once a month

8. Never

16. How often do you read the Bible or other religious literature?

1. More than once a day

2. Once a day

3. A few times a week.

4. Once a week

5. A few times a month

6. Once a month

7. Less than once a month

8. Never

Think about how you try to understand and deal with major problems in your life. To what extent is each of the following involved in the way you cope?

17. I think about how my life is part of a larger spiritual force.

1. A great deal

2. Quite a bit

3. Somewhat

4. Not at all

18. I work together with God as partners to get through hard times.

1. A great deal

2. Quite a bit

3. Somewhat

4. Not at all

19. I look to God for strength, support, and guidance in crises.

1. A great deal

2. Quite a bit

3. Somewhat

4. Not at all

20. I feel that stressful situations are God's way of punishing me for my sins or lack of spirituality.

1. A great deal

2. Quite a bit

3. Somewhat

4. Not at all

21. To what extent is your religion involved in understanding or dealing with stressful situations in any way?

1. Very involved
2. Somewhat involved
3. Not very involved
4. Not involved at all

These questions are designed to find out how much help the people in your congregation would provide if you need it in the future.

22. If you were ill, how much would the people in your congregation help you out?

1. A great deal
2. Some
3. A little
4. None

23. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?

1. A great deal
2. Some
3. A little
4. None

24. How often do the people in your congregation listen to you talk about your private problems and concerns?

1. Very often
2. Fairly often
3. Once in a while
4. Never

25. I try hard to carry my religious beliefs over into all my other dealings in life.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

26. During the last year about how much did you contribute to your congregation or to religious causes?

1. $10,000<
2. $5,000-$9,999
3. $2,500-$4,999
4. $1,000-$2,499
5. $100-$999
6. <$100

7. $0

27. In an average week, how many hours do you spend in activities on behalf of your church or activities that you do for religious or spiritual reasons?

1. More than 40 hours
2. 30-39 hours
3. 20-29 hours
4. 10-19 hours
5. 1-9 hours
6. 0 hours

28. How often do you go to religious services?

1. More than once a week
2. Every week
3. Once or twice a month
4. Every month or so
5. Once or twice a year
6. Never

29. Besides religious services, how often do you take part in other activities at a place of worship?

1. More than once a week
2. Every week
3. Once or twice a month
4. Every month or so
5. Once or twice a year
6. Never

30. The events in my life unfold according to a divine or greater plan.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

31. I have a sense of mission or calling in my own life.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

These next three questions pertain to your religious/spiritual history, these three questions are OPTIONAL.

1. Have you ever had a religious or spiritual experience that changed your life?

No Yes

IF YES: How old were you when this experience occurred?

2. Have you ever had a significant gain in your faith?

No Yes

IF YES: How old were you when this occurred?

3. Have you ever had a significant loss in your faith?

No Yes

IF YES: How old were you when this occurred?

Appendix B

Attitudes Toward Seeking Professional Psychological Help- Short From

Read each statement carefully and indicate your degree of agreement using the scale below. In responding, please be completely candid.

Scale:

1. Disagree
2. Partly disagree
3. Partly agree
4. Agree

1. If I believed I was having a mental breakdown; my first inclination would be to get professional attention.
2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.
3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.
4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help.
5. I would want to get psychological help if I were worried or upset for a long period of time.
6. I might want to have psychological counseling in the future.
7. A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.

8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.
9. A person should work out his or her own problems; getting psychological counseling would be a last resort.

Appendix C

Attitudes Toward Seeking Religious Help Measure

Read each statement carefully and indicate your degree of agreement using the scale below. In responding, please be completely candid.

Scale:

1. Disagree
2. Partly disagree
3. Partly agree
4. Agree

1. If I believed I was having a mental breakdown; my first inclination would be to seek out a pastor or religious official.
2. The idea of talking about problems with a pastor strikes me as a poor way to get rid of emotional conflicts.
3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in God.
4. There is something admirable in the attitude of a person who is willing to cope with their conflicts and fears without resorting to God or a pastor.
5. I would want to get help from a pastor if I were worried or upset for a long period of time.
6. I might want to have religious or spiritual counseling in the future.
7. A person with an emotional problem is not likely to solve it alone; they are likely to solve it with help from God.

8. Talking to a pastor about my problems would have doubtful value for a person like me.
9. A person should work out their own problems; getting religious/spiritual counseling would be a last resort.

Appendix D

Psychological Distress Scale (CCAPS-34)

INSTRUCTIONS: The following statements describe thoughts, feelings, and experiences that people may have. Please indicate how well each statement describes you, **during the past two weeks**, from "not at all like me" (1) to "extremely like me" (5), by marking the correct number. Read each statement carefully, select only one answer per statement, and please do not skip any questions.

1. I am shy around others.
2. My heart races for no good reason.
3. I feel out of control when I eat.
4. I don't enjoy being around people as much as I used to.
5. I feel isolated and alone.
6. I think about food more than I would like to.
7. I am anxious that I might have a panic attack while in public.
8. I feel confident that I can succeed academically.
9. I have sleep difficulties.
10. My thoughts are racing.
11. I feel worthless.
12. I feel helpless.
13. I eat too much.
14. I drink alcohol frequently.
15. I have spells of terror or panic.
16. When I drink alcohol I can't remember what happened.

17. I feel tense.
18. I have difficulty controlling my temper.
19. I make friends easily.
20. I sometimes feel like breaking or smashing things.
21. I feel sad all the time.
22. I am concerned that other people do not like me.
23. I get angry easily.
24. I feel uncomfortable around people I don't know.
25. I have thoughts of ending my life.
26. I feel self-conscious around others.
27. I drink more than I should.
28. I am not able to concentrate as well as usual.
29. I am afraid I may lose control and act violently.
30. It's hard to stay motivated for my classes.
31. I have done something that I have regretted because of drinking.
32. I frequently get into arguments.
33. I am unable to keep up with my schoolwork.
34. I have thoughts of hurting others.

** Underlined items are those that are a part of the Distress Index, thus yielding the Psychological Distress score.

Appendix E

Institutional Review Board Approval

OTTERBEIN UNIVERSITY

INSTITUTIONAL REVIEW BOARD

X Original Review
____ Continuing Review
____ Amendment

Dear Dr. Shpancer,

With regard to the employment of human subjects in the proposed research:

HS # 19/20-34
Shpancer & Wollett: The Influence of Mental Health Issue Severity on Treatment …

THE INSTITUTIONAL REVIEW BOARD HAS TAKEN THE FOLLOWING ACTION:

X Approved
____ Approved with Stipulations*
____ Limited/Exempt/Expedited Review
____ Disapproved
____ Waiver of Written Consent Granted
____ Deferred

* Once Stipulations stated by the IRB have been met by the investigator, then protocol is APPROVED.

1. As Principal Investigator, you are responsible for ensuring that all individuals assisting in the conduct of the study are informed of their obligations for following the IRB-approved protocol.
2. It is the responsibility of the Principal Investigator to retain a copy of each signed consent form for at least four (4) years beyond the termination of the subject's participation in the proposed activity. Should the Principal Investigator leave the university, signed consent forms are to be transferred to the IRB for the required retention period.
3. If this was a limited, exempt, or expedited review, there is no need for continuing review unless the investigator makes changes to the proposed research.
4. If this application was approved via full IRB committee review, the approval period is one year, after which time continuing review will be required.
5. You are reminded that you must promptly report any problems to the IRB, and that *no procedural changes may be made without prior review and approval.* You are also reminded that the identity of the research participants must be kept confidential.

Date: 2/7/2020

Signed: _____ Chairperson

(Revised January 2019)