

Religion-Based Emotional Social Support Mediates the Relationship between Intrinsic Religiosity and Mental Health

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Although previous research suggests that increased religiosity is associated with better mental health and many authors have conjectured that religion-based social support may help explain this connection, scant research has directly examined whether religion-based support mediates religiosity and mental health. The present study examined whether various dimensions of religion-based support (social interaction, instrumental, and emotional) mediated the relationship between religiosity and mental health in college students in the Midwest United States. As expected, of the support dimensions, perceived emotional support was the strongest predictor of decreased hopelessness, depression, and suicide behaviors; and the relationships among intrinsic religiosity and the mental health variables were fully mediated by emotional support. These findings provide strong support to the notion that the relationship between religiosity and mental health can be reduced to mediators such as social support. Research and theoretical implications are discussed.

Keywords depression, hopelessness, intrinsic religiosity, religious social support, suicide

The impact of religiosity on mental health has long been fraught with controversy and disagreement. Psychologists such as Jung (1933) and Allport (1950) believed that religiosity has a positive influence on individuals' mental health as it provides meaning and emotional stability during times of conflict. On the other hand, some critics, including Ellis (1980, 1988), have argued that being religious is irrational and that greater religiosity tends to lead to greater emotional disturbances.

Past Reviews of Research on Religiosity and Mental Health

To help address these conflictual views, during the past few decades, several authors have reviewed research findings on the relationship between religiosity and mental health. Gartner, Larson, and Allen (1991), for example, reviewed nearly 200 studies on the relationship between religious commitment and psychopathology. They concluded that religiosity was generally associated with greater life satisfaction and

lower levels of depression, alcohol and substance abuse, and suicide thoughts and behaviors. Gartner et al. found, however, that religious commitment was ambiguously associated with anxiety and self-esteem; findings from these studies were equally distributed across religious commitment having a positive influence, negative influence, and no influence.

Payne, Bergtin, Bielema et al. (1991) reviewed a “representative sample of the better studies” (p. 11) on religiosity and mental health. They concluded that religiosity was generally associated with overall well-being and adjustment, lower alcohol and substance abuse, and lower suicide thoughts and behaviors. They also found, however, that religiosity had an overall equivocal relationship to self-esteem, anxiety, and depression. Of the various religiosity measures used in the reviewed studies, intrinsic religiosity (internalization of religious beliefs) tended to have the strongest relationship to greater well-being and adjustment, positive self-esteem, and lower trait anxiety and depression symptoms. Extrinsic religiosity (use of religion to obtain personal and social benefits such as status and security) and guilt related to orthodox religious views tended to associate with negative self-esteem and greater trait anxiety and depression.

Larson, Sherrill, Lyons et al. (1992) assessed all the measures of religious commitment that were reported in studies published in the *American Journal of Psychiatry* and *Archives of General Psychiatry* during the years 1978 through 1989. Of the 139 religious commitment measures Larson et al. identified, the studies’ authors reported their association to mental health for only 50 (36%). Thirty-six (72%) of these measures were associated with positive mental health; 8 (16%) were associated with negative mental health; and 6 (12%) had no significant relationship to mental health. Larson et al. categorized religious commitment through the dimensions of ceremony,

social support, prayer, relationship with God, meaning, and indeterminate (use of terms “religion” and “religiosity” with no defining characteristics). Social support (7 positive associations; 1 neutral association), ceremony (4 positive associations), and relationship with God (9 positive associations) showed the strongest relationship to positive mental health; meaning (7 positive associations; 4 negative associations) and indeterminate (5 positive associations; 3 negative associations; 5 neutral associations) showed the weakest relationship. Because the association of religious commitment to mental health was not reported in 64% of cases, it is not known whether these researchers did not assess for these associations or whether religious commitment was neutral on mental health. Despite these unknowns, Larson et al. concluded that religious commitment often has a salutary relationship with mental health. Moreover, they stated that to better understand religiosity’s influence on mental health, future research should more closely define and measure the various dimensions of religiosity.

Finally, Koenig and Larson (2001) reviewed 850 studies that examined the relationship between some religious variable and some indicator of mental health. Of the 100 studies that assessed religion and well-being/life satisfaction, 79% found a positive relationship between religious beliefs/practices and well-being. Of the 101 studies that examined religion and depression, approximately two-thirds found that greater religiosity was related to lower depression rates and symptoms. Of the 68 studies that examined religiosity and suicide, 57 (84%) found that greater religiosity was associated with lower suicide rates or more negative attitudes toward suicide. The relationship between religiosity and anxiety was more equivocal. Thirty-five of 69 studies (51%) found that greater religiosity was related to less anxiety; 11 of 69 (16%) found that greater religiosity was

associated with greater anxiety; the remainder of the studies found no relationship between religiosity and anxiety. In sum, the authors conclude that, in general, religiosity appears to have a positive influence on mental health.

Meta-Analyses of Religiosity and Mental Health

Although reviews such as those above can help identify trends in research findings, they are limited in that it is often difficult to determine the precise strength of relationships among the variables reviewed. Moreover, the authors of reviews often fail to define the inclusionary criteria used to determine which studies to review. For example, as noted earlier, Payne, Bergin, Bielema et al. (1991) wrote that they reviewed the “better” studies on religiosity and mental health but they failed to mention how they determined which studies were better. The use of meta-analytic procedures helps to counteract these limitations (Rosenthal, 1991).

Bergin (1983) conducted a meta-analysis of studies published through 1979 that had at least one religiosity measure and at least one clinical pathology measure. They identified 24 studies with 30 outcome effects. Four of 30 (13.3%) indicated that greater religiosity was significantly associated with less pathology; 2 of 30 (6.7%) found that religiosity was significantly associated with greater pathology; and 24 of 30 (80%) found no significant relationship between religiosity and pathology. The overall correlation between religiosity and better mental health was .09. Bergin concluded that his meta-analysis provides only marginal support for a positive effect of religiosity on mental health.

Witter, Stock, Okun et al. (1985) identified 556 empirical articles on subjective well-being that had been published through

1979. Twenty-eight of these articles contained measures of religiosity (religious activity; religious importance). From these 28 articles, the authors extracted 56 effect sizes of religiosity and subjective well-being. Their meta-analysis found that the mean correlation of these effect sizes was .16. Witter et al. concluded that religiosity appears to have an overall small to moderate influence on adult subjective well-being, although it appeared to be a less potent predictor of well-being compared to other sociodemographic variables such as income, occupational status, and work satisfaction.

Finally, Hackney and Sanders (2003) conducted a meta-analysis of religiosity and psychological adjustment in studies published from 1990 through 2000. They identified 35 studies from which they extracted 264 effect sizes. They found a mean correlation of .03 for institutional religiosity (extrinsic orientation; church participation) and greater psychological distress; and a mean correlation of .10 for institutional religiosity and greater life satisfaction. In addition, they found a mean correlation of .01 for ideological religiosity (belief salience; fundamentalism) and greater psychological distress and a mean correlation of .12 for ideological religiosity and life satisfaction. Finally, they found a mean correlation of $-.11$ for personal devotion (intrinsic religiosity; devotional intensity) and psychological distress and a mean correlation of .14 for personal devotion and life satisfaction. In discussing their findings, Hackney and Sanders noted that one can find evidence for religiosity having both a negative and a positive influence on psychological adjustment depending on which of their particular definitions of religiosity and psychological adjustment one focuses. Whereas all definitions of religiosity were positively associated with life satisfaction, two of three definitions of religiosity were associated with greater psychological distress.

Recent Studies of Religiosity and
Mental Health

Because the most recent meta-analysis was published in 2003, it should be noted that research findings since then tell a similar story: across a variety of samples, religiosity tends to be associated with decreased mental health problems at a small to moderate level, although the findings are somewhat inconsistent. For example, in regards to studies on depression and anxiety, Watlington and Murphy (2006) found that, in a sample of domestic violence victims, religious involvement was moderately associated with lower depression and anxiety symptoms. Similarly, Sternthal, Williams, Musick et al. (2010) found that religious meaning was mildly to moderately associated with less anxiety and depression in a community sample of adults and Johnson, Tulsy, Hays et al. (2011) found that religious meaning was moderately associated with less depression in patients with advanced illnesses. In addition, Murray-Swank, Lucksted, Medoff et al. (2006) found a moderate negative association between intrinsic religiosity and depression in caregivers of persons with serious mental illnesses and Kirchner and Patino (2010) and Hovey and Magaña (2002) found that intrinsic religiosity was moderately associated with less depression and anxiety in Latin American immigrants. On the contrary, in a sample of HIV/AIDS patients, Yi, Mrus, Wade et al. (2006) found that intrinsic religiosity was not associated with depression, although attendance at religious meetings was moderately associated with less depression. Similarly, in a sample of postpartum women, Mann, McKeown, Bacon et al. (2008) found that intrinsic religiosity was not associated with depression whereas religious meeting attendance was moderately associated with less depression. Finally, Bosworth, Park, McQuoid et al. (2003) found that neither

public nor private religious practices were related to depression in older adults, and Dew, Daniel, Goldston et al. (2008) found that neither public nor private religious practices were related to depression in adolescent psychiatric outpatients.

In regards to studies on suicidality, Simonson (2008) and Taliaferro, Rienzo, Pigg et al. (2009) found that greater intrinsic religiosity and church attendance were mildly to moderately associated with lower suicide ideation in college students. Similarly, Rushing, Corsentino, Hames et al. (2013) found that church attendance was mildly associated with decreased suicide ideation in older adults with depression. Finally, Rasic, Belik, Elias et al. (2009) found that religious attendance was associated with decreased suicide attempts, but not suicide ideation, in a community sample of adults.

In sum, as a whole, previous research findings suggest that religiosity appears to have a positive influence on mental health. The relationship is not dramatic, however. Although the above reviews indicated a general trend towards increased religiosity being associated with positive mental health, they also indicated a somewhat inconsistent relationship as numerous studies have not found a positive association between religiosity and better mental health. Moreover, although each of the meta-analyses offered evidence for the connection between religiosity and better mental health, the strength of association appeared to depend on how religiosity and mental health were defined. When greater religiosity was associated with better mental health, it was at a relatively small level as religiosity accounted for roughly 1% to 2% of the variance in mental health. Finally, in the reviews and meta-analyses that parsed religiosity into intrinsic and extrinsic categories, intrinsic religiosity appeared to be a better predictor of mental health than was extrinsic religiosity.

Explanations for the Relationship between Religiosity and Mental Health

Given this link between religiosity and mental health, the question becomes, “What is it about religiosity that may contribute to positive mental health?” In addressing this question, several authors have discussed the possible mechanisms through which religiosity may benefit mental health. For example, some authors (e.g., Ellison, 1991; George, Ellison, & Larson, 2002; Koenig & Larson, 2001; Pargament, 1997) have stated that religious beliefs and practices promote an optimistic world-view that gives *meaning* to experiences, which in turn provides a sense of purpose and direction in life that decreases one’s worry and enhances one’s hope, motivation, and self-efficacy. Especially during times of stress, these qualities may help one cope with negative life events. Second, many religions prescribe support and care for others and such outward-directed behaviors may serve to distract individuals from their own difficulties and thus enhance their own well-being (Koenig & Larson, 2001). Third, religious commitment may lead an individual to adopt healthy behaviors (e.g., abstinence from alcohol and other substances), which may in turn positively impact the individual’s mental health (George, Ellison, & Larson, 2002; Seybold & Hill, 2001). Finally, numerous authors (e.g., Ellison, 1991; George, Ellison, & Larson, 2002; Koenig & Larson, 2001; Seybold & Hill, 2001) have discussed how religiosity may enhance an individual’s social network and thereby increase the emotional support available to the individual. Because effective social support has consistently been shown to protect against stress and mental health problems (e.g., Moak & Agrawal, 2010), it would appear that religion-based social support serves an important role in explaining the connection between religiosity and mental health.

Although providing social support is arguably the most commonly mentioned mechanism through which religiosity and mental health may be connected, scant research has examined this. Previous studies (e.g., Hovey, 1999) have found that frequency of attendance at religious services is negatively associated with mental health problems, thus suggesting that increased religious attendance may lead to increased social support. Moreover, two studies (Dew, Daniel, Goldston et al., 2008; Lee, 2007) have examined the direct relationship between religious social support and depression and found a significant negative association between the two variables. We are aware, however, of only one study (Ellison, Musck, Levin et al., 1997) that directly examined the *mediating* influence of social support derived from the religious setting. In comparing the influences of secular support and religious support as mediators of the relationship between church attendance and psychological distress, Ellison et al. found that religious support fully mediated this relationship but that secular support had no mediating influence. They concluded that measures of general social support may be inappropriate tests for measuring religion-based social support. Joiner, Perez, and Walker (2002) also argued that to precisely assess the mediating influence of religion-based support on mental health, researchers should measure the support that stems directly from the religious setting and that researchers should assess the different facets of this support. According to Joiner et al., such research is necessary in order to more thoroughly explore the possibility that religiosity’s effects on mental health can be reduced to the effects of social support.

Purposes and Hypotheses of Present Study

To better understand the relationships among religiosity, religion-based social support, and mental health, the present

study examined the influences of intrinsic religiosity, extrinsic religiosity, and dimensions of religion-based social support (emotional support, instrumental support, and social interaction) on hopelessness, depression, and suicide behaviors in college students. In specific, we hypothesized that (1) intrinsic religiosity would have a stronger relationship to hopelessness, depression, and suicide behaviors than would extrinsic religiosity; (2) greater intrinsic religiosity would be associated with lower levels of hopelessness, depression, and suicide behaviors; (3) greater church-based support would be associated with less hopelessness, depression, and suicide behaviors; (4) religion-based social support would significantly mediate the relationships between intrinsic religiosity and hopelessness, intrinsic religiosity and depression, and intrinsic religiosity and suicide behaviors; (5) and given research that indicates the relative importance of perceived emotional support (Taylor, 2007), we expected that emotional support would be a stronger predictor and mediator than would instrumental support and social interaction.

METHOD

Participants

Participants consisted of 200 undergraduate students (M age = 21 years; SD age = 5.2; 63% females) from a university in the Midwest United States. They were recruited on a voluntary basis from an undergraduate research subject pool and from various undergraduate psychology courses. Seventy-seven percent of the participants were White; 13% were African American; 5% were Middle Easterners; 2% were Asian; and 3% were biracial.

Forty-one percent of participants were Catholic; 18% were Protestant; 5% were Muslim, 2% were Jewish; 26% reported an “other” religious affiliation; and 8%

reported having no religious affiliation. In regards to religious attendance, 13% reported that they never attended religious services; 28% reported attending once or twice a year; 17% reported attending once every 2 or 3 months; 10% reported attending once a month; 14% reported attending 2 or 3 times a month; and 18% reported attending church services once a week or more. In regards to prayer, 10% of participants reported that they never pray; 23% prayed less than once a week; 15% prayed once a week; 18% prayed two or more times a week; 16% prayed once a day; and 18% prayed two or more times a day.

Measures

Demographic Form. A demographics form assessed age, gender, ethnicity, year in school, religious affiliation, church attendance, and frequency of prayer.

Intrinsic-Extrinsic-Revised Scale (I/E-R). The I/E-R (Gorsuch & McPherson, 1989; Kirkpatrick & Hood, 1990) was used to assess intrinsic and extrinsic religious orientations. The overall scale consists of 14 items on a 5-point scale according to how much participants agree with the attitude or behavior expressed by each item (1 = not at all; 2 = a little bit; 3 = moderately; 4 = quite a bit; 5 = very much so). The intrinsic subscale consists of 8 items which measure the extent to which an individual internalizes religious beliefs. The extrinsic subscale consists of 6 items which measure the extent to which an individual uses religion as a means of obtaining personal and social benefits. Previous findings have indicated that the I/E-R subscales have good internal consistency reliability and construct validity (Salsman & Carlson, 2005). The Cronbach alphas in the present study were .82 for the intrinsic subscale and .77 for the extrinsic subscale, thus indicating adequate internal reliability for the two subscales.

Church-Based Social Support Scale (CBSSS). Religion-based emotional support was assessed by the Emotional Support from Church Members (ES) and Anticipated Support from Church Members (AS) subscales of the CBSSS (Krause, 2002). The ES subscale measures the level of perceived emotional support that participants receive from members of their religious community. The AS subscale measures the level of future emotional support that participants perceive they would receive from members of their religious community if the need arises. The ES and AS each consists of 3 items and were combined to form “religious emotional support.” The possible overall scores for religious emotional support ranged from 6 to 24, with higher scores indicating greater levels of emotional support. Religion-based instrumental support was measured by the Tangible Support from Church Members (TS) subscale of the CBSSS, which consists of 4 items with a possible overall score of 4 to 16. Finally, religion-based social interaction was assessed by the Church Embeddedness (CE) subscale of the CBSS. The CE measures the level of contact that participants maintain with people and activities in their religious setting; it consists of 5 items with a possible overall score of 5 to 39. Previous findings (e.g., Krause, 2002) have indicated that the ES, AS, TS, and CE subscales have good internal consistency reliability and construct validity. In the present study, Cronbach alphas were .89 for the ES subscale, .94 for the AS subscale, .92 for the combined religious emotional support subscale, .77 for the TS subscale, and .81 for the CE subscale.

Beck Hopelessness Scale (BHS). The BHS (Beck & Steer, 1988) was used to measure hopelessness. It consists of 20 true-false items. Each item is scored as 0 or 1 and the items are summed to produce a total score that ranges from 0 to 20. Higher scores represent higher levels of hopelessness.

Previous findings (e.g., Chang, D’Zurilla, & Maydeu-Olivares, 1994; Steed, 2001) indicated that the BHS has good internal consistency reliability and construct validity in college students. In the present study, the Cronbach alpha for the BHS was .74, thus indicating adequate internal consistency reliability.

Beck Depression Inventory-Second Edition (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996) consists of 21 items that assess affective, behavioral, cognitive, motivational, and vegetative aspects of depression. Each item is scored from 0 to 3 and the items are summed to produce a total score that ranges from 0 to 63, with higher scores indicating a greater severity of depressive symptoms. Several studies (e.g., Dozois, Dobson, & Ahnberg, 1998; Sprinkle, Lurie, Insko et al., 2002; Storch, Roberti, & Roth, 2004) have found that the BDI-II has good internal consistency, reliability, and construct validity in college students. The Cronbach alpha in the present study was .86, thus indicating good internal consistency reliability.

Suicidal Behaviors Questionnaire-Revised (SBQ-R). The SBQ-R (Osman, Bagge, Gutierrez et al., 2001) consists of 4 items assessing an individual’s history of suicide ideation and attempts, frequency of suicide ideation during the past year, communication of suicide intent to others, and the likelihood of future suicide attempts. Possible overall scores for the SBQ-R measure range from 3 to 18. A cut-off score of 7 has been shown (Osman, Bagge, Gutierrez et al., 2001) to distinguish suicidal individuals from non-suicidal individuals. Previous findings (e.g., Chang, Sanna, Hirsch et al., 2010; Osman, Bagge, Gutierrez et al., 2001) have indicated that the SBQ-R has excellent internal consistency reliability and construct validity in college students. The Cronbach alpha for the SBQ-R in the

present study was .78, thus indicating adequate internal consistency.

Procedure

The present study received approval from the University of Toledo's Institutional Review Board (IRB). Participants were recruited from an undergraduate introductory psychology subject pool and various undergraduate psychology courses. Participation occurred in small groups in research laboratory settings. Participants provided written consent and the completion of the questionnaire packet took 15 to 20 minutes. After participation, each participant was debriefed and given contact information to several mental health agencies and telephone hotlines in the event that she or he experienced mental health difficulties as the result of participation.

RESULTS

Descriptives and Correlations

Table 1 shows the means and standard deviations for the religiosity, religion-based support and mental health variables. These values were within expected limits. Table 1

also shows the intercorrelations among variables. As expected, intrinsic religiosity was significantly negatively associated with hopelessness, depression, and suicide behaviors whereas extrinsic religiosity was not. In regards to the religion-based support measures, emotional support was significantly negatively associated with each of the mental health variables whereas tangible support was negatively associated with hopelessness and church embeddedness was negatively associated with hopelessness and depression. Finally, as would be expected, all the mental health variables were strongly positively associated with each other.

Analyses Assessing the Mediating Influence of Religious Support

A series of regressions and Sobel tests (Sobel, 1982) were conducted to assess whether religious support significantly mediated the relationship between intrinsic religiosity and each of the mental health variables. Several conditions must be met for a variable to be considered a mediator (Baron & Kenny, 1986). First, the independent variable (intrinsic religiosity) must significantly relate to the presumed mediator (religious support). Second, the independent variable must significantly relate to the dependent

TABLE 1. Intercorrelations and Means and Standard Deviations of Religiosity, Church-Based Social Support, and Mental Health Variables

	Intrinsic religiosity	Hopelessness	Depression	Suicide behaviors	M	SD
Intrinsic religiosity	–	–.25***	–.14*	–.13*	25.1	7.0
Extrinsic religiosity	.60***	–.08	.08	.03	14.1	4.3
Emotional support	.57***	–.31***	–.18**	–.18**	14.7	5.6
Tangible support	.37***	–.18**	–.04	–.11	5.7	2.3
Church embeddedness	.65***	–.18**	–.13*	–.06	12.1	6.8
Hopelessness	–.24***	–	.50***	.19**	2.9	2.6
Depression	–.14*	.50***	–	.39***	10.7	6.7
Suicide behaviors	–.13*	.19**	.39***	–	4.4	2.1

Note: * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

TABLE 2. Hierarchical Multiple Regression Analyses Testing the Mediation of Religion-Based Emotional Support

Dependent variables, steps, and predictor variables	β	t	P
Hopelessness			
Step 1			
Intrinsic religiosity	-.25	-3.6	.00
Step 2			
Intrinsic religiosity	-.10	-1.2	.11
Religious emotional support	-.25	-3.0	.00
Depression			
Step 1			
Intrinsic religiosity	-.14	-2.0	.02
Step 2			
Intrinsic religiosity	-.06	-0.7	.23
Religious emotional support	-.17	-2.5	.01
Suicide Behaviors			
Step 1			
Intrinsic Religiosity	-.13	-1.9	.03
Step 2			
Intrinsic religiosity	-.04	-0.5	.30
Religious emotional support	-.18	-2.5	.01

variable (hopelessness; depression; suicide behaviors). Third, the presumed mediator must significantly relate to the dependent

variable while controlling for the independent variable. Mediation exists when a previously significant relationship between the independent and dependent variable (in step two) becomes significantly reduced after the presumed mediator is entered into the equation (in step three).

Emotional Support. To test the first condition, we regressed emotional support on intrinsic religiosity and found that intrinsic religiosity had a significant influence on emotional support ($\beta = .57, t = 9.7, p < .0001$). Table 2 shows findings from hierarchical multiple regressions that we conducted to test steps two and three. As indicated in the table, the conditions were met for religious emotional support as a mediator between intrinsic religiosity and each of the mental health variables. According to Sobel tests, when controlling for religious emotional support, the relationships between intrinsic religiosity and hopelessness ($\chi = 2.9, SE = 0.02, p < .01$), intrinsic religiosity and depression ($\chi = 2.4, SE = 0.04, p = .01$), and intrinsic religiosity and suicide behaviors ($\chi = 2.5, SE = 0.01, p = .01$) were significantly reduced. Figures 1 through 3 summarize our analyses

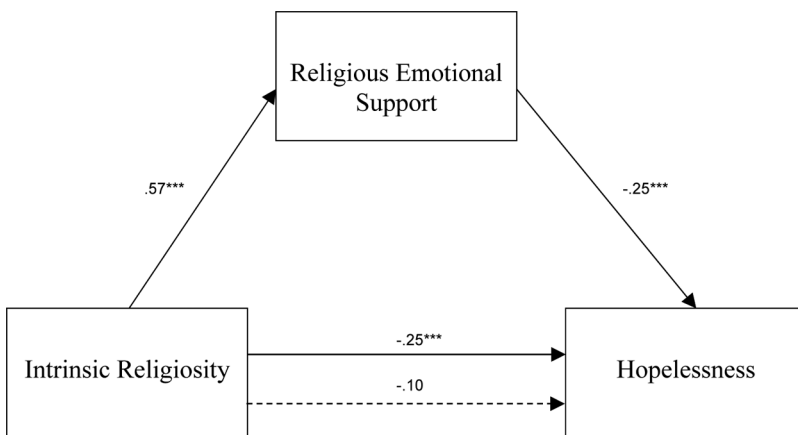


FIGURE 1. Religious emotional support as a mediator between intrinsic religiosity and hopelessness. Note. The above values are standardized beta coefficients. *** $p \leq .001$.

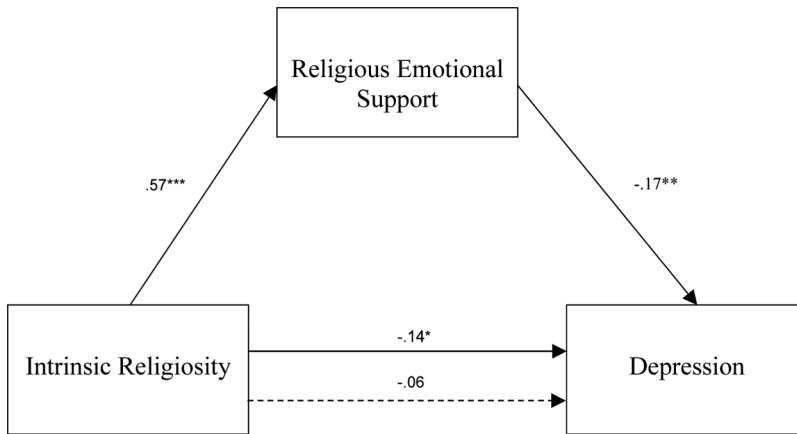


FIGURE 2. Religious emotional support as a mediator between intrinsic religiosity and depression. Note. The above values are standardized beta coefficients. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

for emotional support. The dotted lines represent the indirect relationships.

Tangible Support and Church Embeddedness. Based on significant correlations, we then tested both tangible support and church embeddedness as a mediator between intrinsic religiosity and hopelessness and found that neither met the necessary conditions for mediation. When controlling

for intrinsic religiosity, neither tangible support ($\beta = -.11, p = .08$) nor church embeddedness ($\beta = -.05, p = .3$) were significantly associated with hopelessness. We also tested church embeddedness as a mediator between intrinsic religiosity and depression and found that, when controlling for intrinsic religiosity, church embeddedness was not significantly associated with depression ($\beta = -.06, p = .26$).

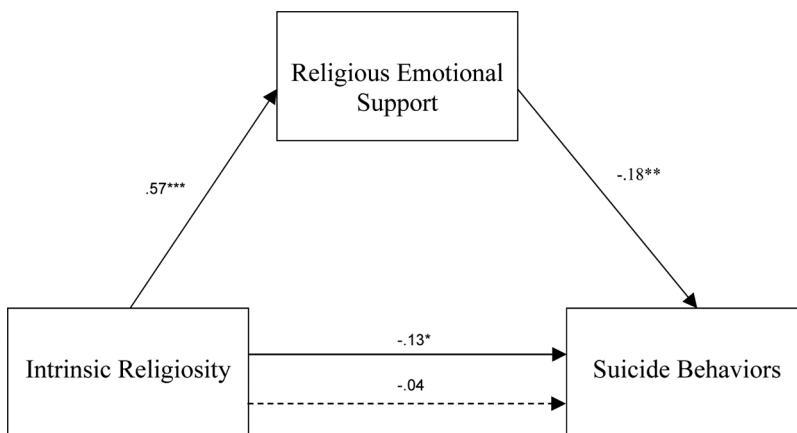


FIGURE 3. Religious emotional support as a mediator between intrinsic religiosity and suicide behaviors. Note. The above values are standardized beta coefficients. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

TABLE 3. Multiple Regression Analyses Testing the Simultaneous Influence of Religion-Based Support Dimensions

Dependent and predictor variables	β	t	p
Hopelessness			
Intrinsic religiosity	-.13	-1.3	.09
Emotional support	-.28	-2.8	.00
Tangible support	.01	0.1	.46
Church embeddedness	.06	0.6	.27
Depression			
Intrinsic religiosity	-.06	-0.7	.26
Emotional support	-.19	-1.8	.04
Tangible support	.10	1.1	.13
Church embeddedness	-.02	-0.2	.41
Suicide behaviors			
Intrinsic religiosity	-.10	-1.0	.17
Emotional support	-.19	-1.8	.03
Tangible support	-.01	-0.1	.44
Church embeddedness	.12	1.1	.12

Regression Analyses Examining the Simultaneous Influences of Support Dimensions

Finally, to simultaneously examine the influences of the religion-based social support dimensions, we regressed each of the mental health variables on the three support dimensions while controlling for intrinsic religiosity. As indicated in Table 3, perceived emotional support was a significant independent predictor of hopelessness, depression, and suicide behaviors.

DISCUSSION

Religion is an important part in the lives of many people in the United States. In a nationally representative Gallup (2013) sample of over 348,000 adults, two-thirds of respondents reported that religion played an important part in their lives. In addition, over 40% of respondents reported that they

attended religious services at least once a week and 54% reported attending religious services at least once a month. Since 1976, annual Gallup polling has found similar percentages in response to their religion questions.

Despite the fact that religion has long been important in many lives and that increased religiosity has consistently been found to relate to positive mental health, remarkably little research has examined just *how* religiosity may impact mental health. Although arguments for the importance of social integration due to religion date back to at least Durkheim (1897/1951), as mentioned earlier, to our knowledge, only one study (Ellison, Musick, Levin et al., 1997) has directly examined the mediating influence of religion-based social support on mental health.

Compared to Ellison, Musick, Levin et al. (1997), who used church attendance as their measure of religiosity, we assessed religiosity in a more intensive manner by measuring both extrinsic and intrinsic religious orientations. Not surprisingly, given previous studies (e.g., Maltby & Day, 2000; Payne, Bergin, Bielema et al., 1991) that found that intrinsic religiosity was more strongly connected to mental health than was extrinsic religiosity, we found that greater intrinsic religiosity was associated with less hopelessness, depression, and suicide behaviors whereas extrinsic religiosity was not. The magnitude of associations between intrinsic religiosity and mental health were not incredibly strong, but they were at the levels expected according to the meta-analyses of religiosity and mental health. In fact, intrinsic religiosity's correlations with depression ($r = -.14$) and suicide behaviors ($r = -.13$) were near identical to the mean correlations that Hackney and Sanders (2003) reported in their meta-analysis for intrinsic religiosity (personal devotion) and psychological distress ($r = -.11$) and intrinsic religiosity and life satisfaction ($r = .14$).

Our findings then addressed the question of whether intrinsic religiosity was directly associated with mental health or whether its relationship was through religion-based social support. We found support for the latter. George, Ellison, and Larson (2002) and Joiner, Perez, and Walker (2002) stated that to comprehensively study the mediating influence of religion-based social support, researchers should measure four dimensions of religious support: subjective social support, instrumental support, social interaction (the extent to which individuals are in contact with network members), and network size. We examined the first three and found that subjective emotional support was the strongest predictor. It was the best predictor of each of the mental health variables and it significantly mediated the relationships between intrinsic religiosity and the mental health variables. Its mediating influences were nearly full. Based on the level of suppression of standardized betas shown in Figures 1 through 3, emotional support accounted for 60% of the relationship between intrinsic religiosity and hopelessness, 54% for intrinsic religiosity and depression, and 69% for intrinsic religiosity and suicide behaviors.

It was not surprising that perceived emotional support was the strongest dimension of social support. As noted by several authors (e.g., George, Ellison, & Larson, 2002; Taylor, 2007), in the research on social support and health, perceived emotional support has consistently been the most powerful predictor of health outcomes. According to Taylor (2007), these findings suggest that the primary benefits of social support do not come from its actual utilization, but from the implicit support that individuals receive from carrying “their social support networks around in their heads” (p. 150). In generalizing to the present findings, what this means is that it is not the intensity of religious network embeddedness nor the actual tangible support received from the religious network

that appear most important. Rather, it is the comfort of *knowing* that one has support available from one’s religious setting that appears key to the mental health of individuals.

Implications, Limitations, and Directions for Future Research

In a commentary on the status of research that had examined religiosity and mental health, Joiner, Perez, and Walker (2002) provocatively argued that there exists a real possibility that the relationship of religiosity to mental health can be reduced to mediation from variables such as social support, feelings of mastery, and efficacy. In other words, they argued that until researchers rigorously examine the influence of possible mediators, two explanations remain open. Either these variables do not fully mediate the relationship, thus providing at least some evidence for a direct relationship between religiosity and mental health—or the relationship can be explained by mediators of which religion would be only one of many sources from which they (social support, mastery, efficacy, etc.) can be generated. According to our findings, religious emotional support, for the most part, accounts for the relationship between intrinsic religiosity and mental health. Thus, our findings, in conjunction with those from George, Ellison, and Larson (1997), provide evidence for the latter explanation although more research is needed before coming to a firm conclusion about whether the relationship between religiosity and mental health can be reduced to social support and other mediators.

According to Baron and Kenny (1986, p. 1178), mediation is “best done” when the relationship between the predictor and the dependent variable is strong. Although, in the present study, the relationships between intrinsic religiosity and the mental health variables were not strong, they were

at the levels expected according to the effect sizes from the meta-analyses on religiosity and mental health (Bergin, 1983; Hackney & Sanders, 2003; Witter, Stock, Okun et al., 1985). Because the current data are cross-sectional, the directionality of variables cannot be established. We and other researchers, (Joiner, Perez, & Walker, 2002; Robins & Fiske, 2009; Rushing Corsentino, Hames et al., 2013), however, believe that the model we assessed is conceptually sound: being intrinsically religious leads individuals to become involved in the church and the emotional support they receive from church members reduces mental health difficulties. Because mediation assumes that the dependent variable does not cause the mediator (Baron & Kenny, 1986), it is important to note that numerous studies have established social support as a predictor of mental health (Taylor, 2007, 2011) and thus we assumed that social support precedes mental health in our model.

Because of the present study's focus on social support dimensions as mediators and the cross-sectional nature of its design, researchers examining religiosity and mental health should incorporate other possible mediators into their studies and utilize prospective designs in order to firmly establish mediation and the directionality of variables. In addition, because the present sample consisted of college students of whom 41% identified as Catholic (compared to 24% of individuals nationally; Pew Forum, 2013), future research should also concentrate on increasing the present findings' generalizability. For example, researchers should explore the relations among religiosity, mental health, and possible mediators across different ages, religious settings, socio-economic levels, regions of the country, and cultural and ethnic groups. Moreover, future studies on religiosity and mental health should utilize psychometrically sound measures that are culturally appropriate and that specifically assess

mental health (as compared to, for example, a general measure of happiness) and the various facets of religiosity.

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