A Lonely Search?

Risk for Depression When Spirituality Exceeds Religiosity

Jeffrey R. Vittengl, PhD

Abstract: This study clarified longitudinal relations of spirituality and religiosity with depression. Spirituality's potential emphasis on internal (*e.g.*, intrapsychic search for meaning) versus religiosity's potential emphasis on external (*e.g.*, engagement in socially-sanctioned belief systems) processes may parallel depression-linked cognitive-behavioral phenomena (*e.g.*, rumination and loneliness) conceptually. Thus, this study tested the hypothesis that greater spirituality than religiosity, separate from the overall level of spirituality and religiosity, predicts longitudinal increases in depression. A national sample of midlife adults completed diagnostic interviews and questionnaires of spiritual and religious intensity up to three times over 18 years. In time-lagged multilevel models, overall spirituality plus religiosity did not predict depression. However, in support of the hypothesis, greater spirituality than religiosity significantly predicted subsequent increases in depressive symptoms and risk for major depressive disorder (odds ratio = 1.34). If replicated, the relative balance of spirituality and religiosity may inform depression assessment and prevention efforts.

Key Words: Spirituality, religiosity, depression, risk factor, longitudinal

(*J Nerv Ment Dis* 2018;206: 386–389)

Relations of spirituality and religiosity with depression are complex and incompletely understood. For example, previous research suggests that positive spiritual or religious engagement (*e.g.*, feelings of hope, thankfulness, meaning in life, participation in a community) predicts less depression, whereas negative spiritual or religious engagement (*e.g.*, questioning, struggles, perceived insecure relationship with God) predicts increased depression (Dew et al., 2008; Dein, 2013; Abu-Raiya et al., 2016; Mihaljevic et al., 2016). However, measures of spirituality and religiosity often contain words marking positive emotionality (*e.g.*, joyful, inspired, hopeful, strong) or negative emotionality (*e.g.*, afraid, angry, ashamed, guilty) that are central to depression symptoms and diagnoses (Watson, 2000; Watson et al., 1988).

Consequently, measures of religiosity and spirituality that contain emotional words may spuriously inflate relations with depression. For example, in a US national sample, a general measure of religiosity was largely unrelated to depression, but a measure of religious thankfulness was a relatively strong predictor of (low) depression (Kendler et al., 2003). One purpose of the current study was to test prediction of depression from neutrally worded measures of spirituality and religiosity (*i.e.*, questionnaire items without positive or negative emotional words). The current measures tapped intensity or personal importance of spirituality and religiosity (Idler et al., 2003), rather than the emotional valence of spiritual or religious experiences (cf. Yik et al., 2011).

A second issue concerns differences in spirituality and religiosity. Because spirituality and religiosity overlap conceptually and empirically (Saucier and Skrzypińska, 2006; Ammerman, 2013), they are often investigated using blended measures (Ironson et al., 2002; Exline et al., 2014). Nonetheless, the constructs are not synonymous. In particular, spirituality often emphasizes internal (*e.g.*, intrapsychic, contemplative) processes or experiences, whereas religiosity may be more externally observable (*e.g.*, interpersonal, institutional; Saucier and Skrzypińska, 2006; Greenfield et al., 2009; Hastings, 2016). Thus, spirituality with commensurate religiosity may signal multifaceted (*i.e.*, internal and external) engagement in a formalized belief system.

In contrast, spirituality that exceeds religiosity may reflect a search for meaning with evolving or fluid beliefs and less engagement in socially sanctioned patterns of behavior. One part of this range is captured by the popular phrase "spiritual but not religious" (Saucier and Skrzypińska, 2006; Ammerman, 2013). Conceptual analysis suggests that spirituality that exceeds religiosity may share intrapsychic and behavioral processes with depression. For example, rumination refers to a repetitive internal search for answers characteristic of depression (*e.g.*, "why do I feel so sad?"; Olatunji et al., 2013) and is an important treatment target (Teismann et al., 2014). Moreover, loneliness is a subjective sense of social isolation and detachment often present in depression (Mahon et al., 2006; Cacioppo et al., 2015) that may be treated through changes in social cognition (Masi et al., 2011). Conceptually, similarities between rumination and loneliness include more internal and less external engagement, similar to spirituality that exceeds religiosity (cf. Pyszczynski and Greenberg, 1987).

In this context, the current study tested relations of neutrally worded measures of spirituality and religiosity with depression in a national sample of adults assessed at three times over 18 years. In particular, the hypothesis was that greater spirituality than religiosity, separate from the overall level of spirituality and religiosity, predicts longitudinal increases in depression.

METHODS

Participants and Procedure

Data were collected in three waves in years 1994–1995, 2004–2006, and 2013–2014 in the Midlife Development in the United States Survey (Ryff et al., 2016). Community-dwelling, English-speaking adults, aged 25 to 74 years, residing in the coterminous United States, were eligible to enter the study. Wave 1 participants (n = 7108; mean age, 46.4 years; 51.7% women, 90.7% of white race/ethnicity) were recruited via national random digit dialing (n = 3487), a sample of their siblings (n = 950), a national twin database (n = 1914), and random digit dialing in metropolitan areas (n = 757). At wave 1, participants' religious preferences were 85.9% Christian (58.8% Protestant, 27.2% Catholic), 2.4% Jewish, 0.3% Buddhist, 0.2% Hindu, 0.2% Muslim, 1.7% other, 7.0% none, and 2.2% atheist or agnostic. At waves 2 (n = 4963) and 3 (n = 3294), researchers attempted to reassess all living

Department of Psychology, Truman State University, Kirksville, Missouri.
Send reprint requests to Jeffrey R. Vittengl, PhD, Department of Psychology, Truman State University, 100 East Normal Street, Kirksville, MO 63501-4221. E-mail: vittengl@truman.edu.

Funding: Preparation of the current report was not externally funded. The MIDUS 1 study (Midlife in the United States) was supported by the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife Development. The MIDUS 2 and 3 research was supported by a grant from the National Institute on Aging (P01-AG020166) to conduct longitudinal follow-ups of the MIDUS 1 investigation. The content of this report is solely the responsibility of the author and may not represent views of the study funders.

ISSN: 0022-3018/18/20605–0386
DOI: 10.1097/NMD.0000000000000815

TABLE 1. Descriptive Statistics for Study Variables

Variable	Survey Wave	*N*	Mean	*SD*
Depressive symptoms	1	7108	0.79	1.93
	2	4963	0.63	1.74
	3	3294	0.60	1.71
Spirituality	1	6196	3.07	0.82
	2	3998	3.21	0.79
	3	2672	3.23	0.81
Religiosity	1	6246	2.97	0.83
	2	4000	2.97	0.88
	3	2677	2.93	0.94

participants from the previous wave. Participants completed structured interviews and questionnaires.

Measures

Depressive Symptoms and Diagnosis

The Composite International Interview short-form (Kessler et al., 1998) assessed criteria for major depressive disorder (MDD; American Psychiatric Association, 1987) over the past year. Participants with 2 weeks of depressed mood and/or anhedonia completed assessment of six additional symptoms (*e.g.*, appetite changes, fatigue, and thoughts of death). This interview yielded a 0 to 7 scale of depressive symptoms, on which scores of 4 or higher defined MDD. The reliability of this interview has been good in past research (Kessler et al., 1998).

Spirituality and Religiosity

Items without positive or negative emotional words were selected to measure spirituality and religiosity in parallel. Participants rated two spirituality ("How spiritual are you?"; "How important is spirituality in your life?") and religiosity ("How religious are you?"; "How important is religion in your life?") items on a scale from 1 (*not at all*) to 4 (*very*). Averages of the relevant items formed the spirituality and religiosity scales, which demonstrated high internal consistency reliability (*e.g.*, alpha coefficients of 0.91 and 0.89 at survey wave 1, respectively).

Statistical Analyses

Hypotheses were tested with time-lagged multilevel models using maximum likelihood estimation. Models were linear (depressive symptoms) or logistic (MDD diagnostic status). In each model, the outcome variable at the target survey wave was predicted from the fixed effects of depressive symptoms at the previous survey wave plus other predictors of interest at the previous survey wave. Models controlled nesting of data within families (some participants were siblings). The multilevel models allowed retention of cases with some missing outcome data (*e.g.*, due to attrition) to produce unbiased results when data were missing at random or due to processes captured by predictors (*e.g.*, spirituality or religiosity; Schafer and Graham, 2002). Models were weighted using age (decade ranges from 25 to ≥75 years), sex (female, male), and race (white, non-white) distributions from the 2015 US Current Population Survey (US Census Bureau, 2015).

RESULTS

Descriptive statistics for study variables appear in Table 1. On average, participants reported moderately high levels of spirituality and religiosity (means of about 3 on the 1–4 scale) and few depressive symptoms (means of roughly 1 on the 0–7 scale). Spirituality and religiosity were moderately highly correlated ($r = 0.61$ among observations available for prediction models)—participants who reported greater spirituality tended to report greater religiosity and vice versa.

Because statistical models with substantially correlated predictors often yield unstable results, and moreover, the hypothesis concerned the relative balance of spirituality and religiosity, these variables were transformed. In particular, the sum (spirituality + religiosity) and difference (spirituality − religiosity) contained the same total information as the two original variables (canonical correlation = 1.0). However, unlike the original variables that were substantially correlated, the sum (overall level) and the difference (relative level) of spirituality and religiosity were largely independent ($r = -0.06$).

Models predicting depressive symptoms and MDD controlled depressive symptoms from the previous survey wave, plus age, sex, and ethnicity (Table 2). Thus, these models tested changes in depression independent of basic demographic influences. History of depressive symptoms, younger age, and female sex predicted subsequent depression, consistent with past research.

The transformed variables were used to test the hypothesis that greater spirituality relative to religiosity predicts depression (Table 2, Model 1). Spirituality + religiosity did not predict change in depressive symptoms significantly, whereas a larger spirituality − religiosity difference predicted subsequent increases in depressive symptoms.

To clarify the primary finding's clinical relevance, the spirituality − religiosity difference was dichotomized to predict MDD. Spirituality exceeded religiosity in 26.5% of observations, whereas religiosity was

TABLE 2. Prediction of Changes in Depression from Religiosity and Spirituality

Model: Outcome Variable at Target Survey Wave	Predictor Variables at Previous Survey Wave	β	SE	*p*
1: Depressive symptoms	Depressive symptoms	0.282	0.011	<0.001
	Age in years	−0.009	0.002	<0.001
	Female gender	0.290	0.039	<0.001
	White ethnicity	0.030	0.059	0.610
	Spirituality + religiosity	−0.005	0.013	0.704
	Spirituality − religiosity	0.106	0.025	<0.001
2: MDD	Depressive symptoms	0.321	0.016	<0.001
	Age in years	−0.021	0.003	<0.001
	Female gender	0.665	0.088	<0.001
	White ethnicity	0.070	0.127	0.580
	Spirituality > religiosity	0.294	0.087	<0.001

Note. $N = 6295$ midlife adults who completed assessments at three survey waves over approximately 18 years. The lag between the target and previous survey waves was approximately 9 years. Data were analyzed in linear (model 1) or logistic (model 2) multilevel models. Intercepts are not shown.

the same or higher than spirituality in 73.5% of observations in the prediction models. Greater spirituality than religiosity was slightly more common among women (27.6%) than men (25.2%), among persons of white (26.6%) than nonwhite (25.2%) ethnicities, and among younger (28.7%) than older (24.3%) participants based on a median split at age 49 years. Controlling previous depressive symptoms and demographics, the odds of MDD were 34.2% higher (odds ratio = 1.342) when spirituality exceeded religiosity during the previous survey wave (Table 2, Model 2).

DISCUSSION

The current study tested the relations of measures of spirituality and religiosity that were neutrally worded (*i.e.*, assessed importance or intensity rather than emotionally valenced experiences) with depression among mid-life adults in the United States. Overall levels of spirituality plus religiosity related minimally to changes in depression over time. However, the balance of spirituality and religiosity significantly predicted development of depression. In particular, relatively greater spirituality than religiosity was a significant risk factor for subsequent increases in depressive symptoms and MDD, whereas equal or greater religiosity than spirituality was a protective factor.

Mechanisms of depression risk were not identifiable in the current study. One possibility is that greater self-reported spirituality (*e.g.*, as a contemplative, intrapsychic search for meaning) than religiosity (*e.g.*, as external engagement with a formalized, social-sanctioned belief system) marks depressogenic patterns of cognition and behavior. In particular, spirituality that exceeds religiosity is conceptually similar to cognitive-behavioral processes linked with depression, such as rumination (an ongoing internal search for causes and solutions to personal struggles) and subjective loneliness (a sense of detachment or isolation rather than belongingness in an external social system). Thus, persons who endorse more spirituality than religiosity may be engaging in a "lonely search" for answers to their ultimate questions that, if unsatisfied, increases risk for depression. This hypothesis is broadly consistent with models of increased self-focus in depression (Pyszczynski and Greenberg, 1987). If true, interventions similar to those that reduce rumination and loneliness (*e.g.*, Masi et al., 2011; Teismann et al., 2014) may help prevent depression among persons with greater spirituality than religiosity.

More broadly, the thoughts, feelings, and behaviors that participants ascribed to the neutrally worded spirituality and religiosity items when responding were likely variable. For example, self-descriptions as "very spiritual" and "not very religious" may encompass a wide range of experiences (*e.g.*, unwanted exclusion from traditional religious institutions versus self-initiated exploration of new ideas) with potentially different relations to depression. Consequently, future research might profitably explore individual meanings of spiritual and religious engagement and importance in the context of cognitive, emotional, and behavioral symptoms of MDD.

The current findings have noteworthy limitations. First, the finding that depression risk increases when spirituality exceeds religiosity may be novel and requires replication. Replication with neutrally worded measures of spirituality and religiosity will be important to avoid spurious overlap with measures of depression. Second, measures of intensity similar to the ones used here correlate strongly with other dimensions of spirituality and religiosity (Idler et al., 2003), but other dimensions could yield different relations with depression (Dein et al., 2012). Third, because the current participants were mid-life adults in the United States, and most identified as white and Christian, generalization to other groups is uncertain. Finally, the long lag between repeated assessments (9 years) may have prevented detection of relations operating over shorter intervals (*e.g.*, 1–2 years).

CONCLUSIONS

Adults may be at risk for increases in depressive symptoms and MDD when their spirituality exceeds religiosity, regardless of overall spiritual and religious intensity. If this finding is replicated, testing possible risk mechanisms such as rumination and loneliness would inform preventive efforts for depression.

DISCLOSURE

The author is a paid reviewer for UpToDate.

REFERENCES

Abu-Raiya H, Pargament KI, Krause N (2016) Religion as problem, religion as solution: Religious buffers of the links between religious/spiritual struggles and well-being/mental health. *Qual Life Res*. 25:1265–1274.

American Psychiatric Association (1987) *Diagnostic and statistical manual of mental disorders* (3rd ed rev). Washington, DC: American Psychiatric Association.

Ammerman NT (2013) Spiritual but not religious? Beyond binary choices in the study of religion. *J Sci Study Relig*. 52:258–278.

Cacioppo S, Grippo AJ, London S, Goossens L, Cacioppo JT (2015) Loneliness: Clinical import and interventions. *Perspect Psychol Sci*. 10:238–249.

Dein S (2013) Religion, spirituality, depression, and anxiety: Theory, research, and practice. In Pargament KI, Mahoney A, Shafranske EP (Eds), *APA handbook of psychology, religion, and spirituality (Vol 2): An applied psychology of religion and spirituality* (pp 241–255). Washington, DC: American Psychological Association.

Dein S, Cook CC, Koenig H (2012) Religion, spirituality, and mental health: Current controversies and future directions. *J Nerv Ment Dis*. 200:852–855.

Dew RE, Daniel SS, Goldston DB, Koenig HG (2008) Religion, spirituality, and depression in adolescent psychiatric outpatients. *J Nerv Ment Dis*. 196:247–251.

Exline JJ, Pargament KI, Grubbs JB, Yali AM (2014) The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychol Relig Spiritual*. 6: 208–222.

Greenfield EA, Vaillant GE, Marks NF (2009) Do formal religious participation and spiritual perceptions have independent linkages with diverse dimensions of psychological well-being? *J Health Soc Behav*. 50:196–212.

Hastings OP (2016) Not a lonely crowd? Social connectedness, religious service attendance, and the spiritual but not religious. *Soc Sci Res*. 57:63–79.

Idler EL, Musick MA, Ellison CG, George LK, Krause N, Ory MG, Williams DR (2003) Measuring multiple dimensions of religion and spirituality for health research: Conceptual background and findings from the 1998 General Social Survey. *Res Aging*. 25:327–365.

Ironson G, Soloman GF, Balbin EG, O'Cleirigh C, George A, Kumar M, Woods TE (2002) The Ironson-Woods Spirituality/Religiousness Index is associated with long survival, health behaviors, less distress, and low cortisol in people with HIV/AIDS. *Ann Behav Med*. 24:34–48.

Kendler KS, Liu X, Gardner CO, McCullough ME, Larson D, Prescott CA (2003) Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *Am J Psychiatry*. 160:496–503.

Kessler RC, Andrews G, Mroczek D, Ustun B, Wittchen HU (1998) The World Health Organization Composite International Diagnostic Interview short-form (CIDI-SF). *Int J Methods Psychiatr Res*. 7:171–185.

Mahon NE, Yarcheski A, Yarcheski TJ, Cannella BL, Hanks MM (2006) A meta-analytic study of predictors for loneliness during adolescence. *Nurs Res*. 55: 308–315.

Masi CM, Chen H, Hawkley LC, Cacioppo JT (2011) A meta-analysis of interventions to reduce loneliness. *Pers Soc Psychol Rev*. 15:219–266.

Mihaljevic S, Aukst-Margetic B, Karnicnik S, Vuksan-Cusa B, Milosevic M (2016) Do spirituality and religiousness differ with regard to personality and recovery from depression? A follow-up study. *Compr Psychiatry*. 70:17–24.

Olatunji BO, Naragon Gainey K, Wolitzky Taylor KB (2013) Specificity of rumination in anxiety and depression: A multimodal meta analysis. *Clin Psychol (New York)*. 20:225–257.

Pyszczynski T, Greenberg J (1987) Self-regulatory perseveration and the depressive self-focusing style: A self-awareness theory of reactive depression. *Psychol Bull*. 102:122–138.

Ryff C, Almeida D, Ayanian J, Binkley N, Carr D, Williams D (2016) *National Survey of Midlife Development in the United States (MIDUS 3), 2013–2014*. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.

Saucier G, Skrzypińska K (2006) Spiritual but not religious? Evidence for two independent dispositions. *J Pers*. 74:1257–1292.

Schafer JL, Graham JW (2002) Missing data: Our view of the state of the art. *Psychol Methods*. 7:147–177.

Teismann T, von Brachel R, Hanning S, Grillenberger M, Hebermehl L, Hornstein I, Willutzki U (2014) A randomized controlled trial on the effectiveness of a rumination-focused group treatment for residual depression. *Psychother Res*. 24:80–90.

US Census Bureau (2015) 2015 United States Current Population Survey. https://www.census.gov/programs-surveys/cps.html.

Watson D (2000) *Mood and temperament*. New York: Guilford Press.

Watson D, Clark LA, Carey G (1988) Positive and negative affectivity and their relation to anxiety and depressive disorders. *J Abnorm Psychol*. 97:346–353.

Yik M, Russell JA, Steiger JH (2011) A 12-point circumplex structure of core affect. *Emotion*. 11:705–731.