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Spirituality Attenuates the Association Between Depression Symptom Severity and Meaning in Life

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Abstract

This cross-sectional study examined whether spirituality moderates the association between depression symptom severity and meaning in life among treatment-seeking adults. Participants were 55 adults (60 years of age) newly seeking outpatient mental health treatment for mood, anxiety, or adjustment disorders. Self-report questionnaires measured depression symptom severity (Patient Health Questionnaire-9), spirituality (Spirituality Transcendence Index), and meaning in life (Geriatric Suicide Ideation Scale-Meaning in Life subscale). Results indicated a significant interaction between spirituality and depression symptom severity on meaning in life scores ($\beta = .26, p = .02$). A significant negative association between depression symptom severity and meaning in life was observed at lower but not the highest levels of spirituality. In the presence of elevated depressive symptomatology, those participants who reported high levels of spirituality reported comparable levels of meaning in life to those without elevated depressive symptomatology. Assessment of older adult patients' spirituality can reveal ways that spiritual beliefs and practices can be incorporated into therapy to enhance meaning in life.

Sustaining meaning or purpose in life is an indicator of overall well-being in older adulthood (Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002; Fry, 2000, 2001; Krause, 2004, 2009; Reker, Peacock, & Wong, 1987; Steger, Oishi, & Kashdan, 2009) and is associated with lower levels of depressive symptoms (Heisel & Flett, 2006; Steger, Mann, Michels, & Cooper, 2009; Van Orden, Bamonti, King, & Duberstein, 2012). Older adults with clinically significant depressive symptoms may be particularly vulnerable to thinking life is meaningless (Reker, 1997). Depression is associated with reduced positive affect (Fiske,

Wetherell, & Gatz, 2009; Gallo & Rabins, 1999), and disengagement from positively reinforcing events (Dimidjian, Barrera, Martell, Munoz, & Lewinsohn, 2011; Lewinsohn, Hoberman, Teri, & Hautziner, 1985) that serve to create or sustain meaning. Greater levels of depressive symptoms have been shown to be associated with lower meaning in life cross-sectionally (Heisel & Flett, 2006) and prospectively (Van Orden et al., 2012). However, not all older adults with depression report lower meaning in life (Heisel & Flett, 2006).

Identifying factors that are associated with meaning in life among older adults in specialty mental health treatment may provide insight into intervention strategies that can help sustain and protect against the loss of meaning in life. Spirituality is one such factor, given meta-analytic findings demonstrating positive associations between spirituality and well-being (Smith, McCullough, & Poll, 2003). Religion and spirituality represent closely related, but distinct constructs (Hill & Pargament, 2003). Spirituality refers to an individual's experience of the sacred, while religion commonly refers to organized religious activities (Hill & Pargament, 2003). Greater spirituality is associated with lower depressive symptoms (Mofidi et al., 2006; Nelson, Rosenfeld, Breitbart, & Galietta, 2002; Yoon & Lee, 2004), greater psychological well-being (Bush et al., 2012; Fry, 2001), and greater levels of positive affect (Kim, Seidlitz, Ro, Evinger, & Duberstein, 2004). One study found that spirituality attenuated the negative association between frailty and psychological well-being in older adults (Kirby, Coleman, & Daley, 2004), but we are aware of no studies that have examined whether spirituality attenuates the association between depression symptom severity and meaning in life.

There is good reason to predict that spirituality attenuates the relationship between depression symptoms severity and feelings of meaninglessness. First, highly spiritual individuals may more readily engage in meditation or prayer and may more readily access and benefit from social support (Hill & Pargament, 2003). As such, some of the behaviors associated with spirituality may function to mitigate the negative effect of depressive symptoms on meaning in life. Second, highly spiritual individuals may appraise their depressive symptoms in different ways (Wittink, Joo, Lewis, & Barg, 2009). For example, highly spiritual individuals may view depression more as a challenge to overcome and less as a helpless, uncontrollable state.

The purpose of the current study was to examine whether spirituality attenuates the association between depression symptom severity and meaning in life in older adults seeking mental health treatment. It was hypothesized that spirituality would moderate the association between depression symptom severity and meaning in life, such that the negative association between depression symptom severity and meaning in life would be stronger at lower levels of spirituality. Prior research has shown that social support and cognitive status are associated with meaning in life (Krause, 2007; Wilson et al., 2013), thus we planned to control for these variables.

Methods

Participants

Participants were 55 adults who completed a larger study examining depression and decision-making in late-life. English-speaking patients recently presenting for treatment for mood, anxiety, or adjustment disorder (i.e., < 1 month after intake session) at a university-affiliated outpatient clinic serving adults 60 years of age and older were eligible for inclusion. Patients who were unable to provide informed consent and those with dementia, schizoaffective disorder, or schizophrenia were not eligible given that the main focus of the study was to examine outcomes for mood and anxiety disorders among older adult outpatients.

Prior to the research interview, chart diagnoses were made by an intake social worker. Of the 55 enrolled participants, one was dropped because of ineligible diagnosis and four were dropped because of missing data on a covariate (social support), leaving 50 participants. Participants had a mean age of 69 years ($SD = 9.0$ years, range = 60–97 years) and $n = 31$ were female. Most were White ($n = 39$); nine were Black; two were other or mixed race. For most participants, the primary diagnosis was a mood disorder ($n=40$); five had an anxiety disorder and five had an adjustment disorder (9.3%). Twenty-two participants were diagnosed with two or more Axis I disorders (4th ed., test rev.; *DSM-IV-TR*; American Psychiatric Association, 2002)..

Measures

Depression symptom severity was measured with the Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001), a 9-item measure of depression severity corresponding to the nine criteria upon which the diagnosis of DSM-IV depressive disorders is based. Scores can range from 0 to 27. The PHQ-9 has been validated in older adult samples (Williams et al., 2005). Internal consistency in the present sample (Cronbach's $\alpha = .79$) was adequate (Nunnally & Bernstein, 1994)..

Spirituality was measured with the Spiritual Transcendence Index (STI; Seidlitz et al., 2002), an 8-item measure of an individual's "subjective experience of the sacred" (Seidlitz et al., 2002, p. 441). Items are scored from "1" (strongly disagree) to "6" (strongly agree). Scores can range from 8 to 48. Higher scores reflect greater levels of spirituality. Sample items include "My spirituality gives me a sense of fulfillment" and "I maintain an inner awareness of God's presence in my life." Construct validity and reliability of scores derived from the STI have been demonstrated in older adult samples (Seidlitz et al., 2002). Internal consistency in the current study ($\alpha = .97$) was good (Nunnally & Bernstein, 1994).

Meaning in Life was measured with the 8-item "meaning in life" subscale from the Geriatric Suicide Ideation Scale (GSIS; Heisel & Flett, 2006) assessing one's perception of meaning or purpose in life. Items are scored on a Likert scale from "1" (strongly disagree) to "5" (strongly agree). Scores can range from 8 to 40. Higher scores reflect *greater* meaning in life. Research has supported the construct validity and reliability of scores derived from the GSIS (Heisel & Flett, 2006). Sample items include, "I feel that my life is meaningful", "I am certain that I have something to live for", and "I have come to accept life with all its ups and

downs.” Internal consistency in the current study ($\alpha = .89$) was adequate (Nunnally & Bernstein, 1994)

Cognitive Status was measured using the Montreal Cognitive Assessment (MoCA) a brief, 30-item screening tool for mild cognitive impairment (Nasreddine et al., 2005) with lower scores indicating more cognitive impairment. Scores can range from 0 to 30. The MoCA has demonstrated good test-retest reliability (Nasreddine et al., 2005), and convergent validity with a full neuropsychological battery (Gill, Freshman, Blender, & Ravina, 2008). The MoCA was administered to characterize the sample regarding overall cognitive functioning. It was not intended to exclude individuals from participation in the study.

Social Support was measured with the Perceived Social Support-Family Subscale (PSS-Family; Procidano & Heller, 1983), a 20-item self-report measure of the extent to which an individual perceives receiving support, information, and feedback from their family. Items include declarative statements to which individuals are given the response choices of “Yes,” “No,” or “Don’t know.” Affirmative responses receive 1 point, with all other responses receiving 0 points, with a minimum possible total score of 0 and maximum possible score of 20. Higher scores are indicative of higher levels of perceived social support. An example item includes, “My family gives me the moral support I need.” Scores on PSS-family subscale have demonstrated construct validity in adult samples with correlations in the expected direction and magnitude with measures of tangible and intangible social support and symptoms of distress and psychopathology (Procidano & Heller, 1983). Internal consistency in the current study ($\alpha = .93$) was good (Nunnally & Bernstein, 1994). Seven participants completed 15 to 19 PSS-family items. Missing data were imputed.

Procedures

From April 2008 to April 2010, clerical staff members distributed letters of invitation to new patients immediately preceding their initial clinic appointment. Interested participants who met eligibility criteria were then contacted by a member of the research team. Two participants had particularly low MoCA scores (11 and 12, respectively) but retained capacity to consent to the study. In addition, their scores on study variables were not outliers, nor suggestive of unreliable responding. Therefore, they were included in the current analyses.

Study entry interviews took place at the clinic or at participants’ residence, according to preferences. Within one month following initial presentation to the clinic, data were collected in an in-person interview and by mail. Depression symptom severity and cognitive status were assessed in-person. Participants returned meaning in life, spirituality, and social support assessments by mail after completing these questionnaires at home.

Data Analytic Strategy

SPSS (Version 21) was used for data analyses. Missing data were handled by mean imputation. Following preliminary analyses (e.g., descriptives, correlations), we conducted a linear regression. The outcome variable was Meaning in Life, as assessed by the GSIS. Independent variables were depression symptom severity (PHQ-9) and spirituality (STI). In

addition to exploring main effects, we tested the hypothesized moderator effect (PHQ-9 x STI). Given the small sample size only covariates that were significantly associated with meaning in life were included in the regression model (Weisberg, 1979); thus, social support (PSS-Family) was included as a covariate. Predictors were centered prior to creation of the interaction term. Simple slopes of depression symptom severity on meaning in life scores across the range of spirituality scores were examined. Given the small sample size, standard errors were computed using robust bootstrapping estimates (1000 samples and 95% CI) for the regression model, as well as simple slope analyses.

Results

Descriptive statistics and Pearson's correlations are presented in Table 1. Meaning in life was significantly positively associated with greater spirituality and greater family social support and significantly negatively associated with depressive symptom severity. MoCA was not significantly associated with MIL and subsequently not included in the regression model. Spirituality and depressive symptom severity were not significantly correlated.

The full regression model was significant, ($R^2 = .35$, Adjusted $R^2 = .29$, $F(4, 45) = 6.06$, $p < .001$). Spirituality was positively associated with meaning in life ($\beta = .27$, $p = .04$), but PSS-family was not significantly associated with MIL ($\beta = .20$, $p = .13$). Depressive symptoms severity was negatively associated with meaning in life ($\beta = -.37$, $p = .01$). However, the main effects of spirituality and depression symptom severity were qualified, as hypothesized, by a significant two-way interaction between depression symptom severity and spirituality ($\beta = .26$, $p = .02$; Table 2).

Figure 1 depicts the results of simple slopes analyses (Table 3) across the range of spirituality scores (8–48) in this sample. At lower levels of spirituality (STI = 8–38), there was a significant, inverse association between PHQ-9 and MIL. However, at the highest level of spirituality (STI = 48), there was a non-significant, inverse association between PHQ-9 and MIL. Participants who reported elevated depressive symptom severity and lower spirituality reported the lowest meaning in life. Participants who reported elevated depressive symptom severity, but also endorsed greater spirituality, reported relatively greater meaning in life compared to participants who reported lower spirituality.

Discussion

The current study supported the hypothesis that spirituality moderates the association between depression symptom severity and meaning in life among older adults in outpatient mental health treatment. At lower levels of spirituality, there was a robust association between depression symptom severity and feeling that life is meaningless. At high levels of spirituality, the relationship between depressive symptoms and feelings of meaninglessness is attenuated and non-significant. At lower levels of depression, meaning in life was high for most participants. However, at elevated levels of depression, levels of meaning in life varied, with those who reported high levels of spirituality reporting comparable levels of meaning in life to those without elevated depression. Although previous studies have reliably found a negative association between depression symptoms and meaning in life,

little attention has been given to factors that moderate this association. The present cross-sectional findings provide an empirical basis for hypotheses about the protective function of spirituality against loss of meaning in life in the presence of elevated depressive symptomatology. Prospective designs are needed to test whether spirituality protects against loss of meaning in life over time.

How might spirituality attenuate the relationship between depression symptom severity and meaning in life? First, social behaviors associated with spirituality may explain the moderation effect. For example, highly spiritual individuals report greater quality of perceived social support and greater social support seeking (Koenig & Larson, 2001). Social support is associated with greater meaning in life (Harris, Allen, Dunn, & Parmelee, 2013). Additionally, emotional support has been found to protect against loss of meaning in life in the context of stress in highly valued roles among older adults (Krause, 2004). Second, spirituality is associated with certain contemplative behaviors that relate to overall well-being, such as prayer, meditation, and worship that are inherently meaningful to many (Hill & Pargament, 2003).

Third, spirituality may influence cognitive appraisals that older adults with depression symptoms make about their experiences with depression, as well as other life events. For example, highly spiritual older adults may be less likely to attribute the cause of their depression to personal failure, but rather use their experiences of emotional suffering to create meaning and purpose in life (Park, 2010; Wittink et al., 2008).

These findings need to be considered in the context of the study's limitations. First, the study was cross-sectional; therefore, we were unable to determine the directionality of the findings. Second, the current sample was small. Future research with a larger sample of older adults seeking mental health treatment is required to elucidate the influence of spirituality on meaning in life in more diverse samples of older adults. Third, the current study did not measure particular spiritual behaviors, such as prayer or meditation. Such behaviors may differentially relate to meaning in life, or serve as the behavioral mechanism whereby spirituality is associated with greater meaning in life. Fourth, the assessment of cognitive functioning was limited to a brief screening instrument. Cognitive decline as measured by a neuropsychological battery is associated with decrements in well-being over time, particularly in purpose in life (Wilson et al., 2014). While the current study did not find a significant association between cognitive functioning, as measured by a screening instrument, and meaning in life, comprehensive assessment of cognitive functioning may be more likely to demonstrate a significant association. Fifth, information regarding the type of psychological and/or pharmacological treatment received by patients in the sample was not collected, therefore it is unknown whether type of treatment affected findings. Rate of change in depression symptomatology may differ based on treatment type, potentially influencing the association between depression symptom severity and meaning in life. In addition, psychological treatment is apt to incorporate personal values, such as spirituality into the intervention, which could theoretically lead to changes in the association between variables, as well as subjective levels of spirituality across treatment. Lastly, data on religiosity were unavailable. Assessment of religiosity, as well as spirituality would aid in

distinguishing similar or different functions each value system serves in relation to meaning in life.

Prospective research with a larger sample size is needed to test whether spirituality can protect against the erosion of meaning in life among distressed older adults. In addition, future studies could identify clinically meaningful mechanisms linking spirituality and meaning in life, such as social support and cognitive appraisals of stressful life events. Given the growing literature on the cognitive underpinnings of meaning or purpose in life (Wilson et al., 2013), future studies should include more sophisticated cognitive assessments such as measures of executive function. Prospective studies could also explore other outcomes of meaning erosion, such as suicide risk (Heisel & Flett, 2008) and impaired quality of life. Meaning in life is one of the few identified protective factors against suicide ideation in older adults (Heisel & Flett, 2008). The present results encourage the inclusion of religion and spiritual components into late life suicide prevention efforts.

Regarding clinical implications, spirituality, for many older adults, may be viewed as more of a “way of being” than a specific coping strategy. Nonetheless, our findings suggest that reinforcing behaviors, such as prayer and meditation, may be important treatment goals. Among mental health treatment-seeking older adults, a majority reported a preference for incorporating spirituality into mental health treatment (Stanley et al., 2011). Not all mental health treatments can readily incorporate religion and spirituality, however. One particularly promising intervention in this regard is life review, which has been shown to reduce depression symptoms by enhancing meaning in life (Westerhof, Bohlmeijer, van Beljouw, & Pot, 2010). Life review specifically targets meaning in life through recollection of memories and reappraisal of positive and negative past events (Westerhof et al., 2010). Within the context of life review, spirituality can be incorporated, as appropriate, as a framework for creating meaning and purpose in life. As such, spirituality can serve in to foster identify development and death preparation depending on the individual case. As religion and spirituality has gained greater attention in recent years in the mental health field, clinicians must consider their level of competency in incorporating religious and spiritual issues into psychotherapy and explore their own personal biases (Gonsiorek, Richards, Pargament, & McMinn, 2009). The American Psychological Association’s (APA) Ethical Principles of Psychologists and Code of Conduct (originally adopted 2002, with amendments adopted 2010; APA, 2010) under Principle E: Respect for People’s Rights and Dignity states that psychologists should be aware of and consider religion and spirituality as an individual diversity factor. However, little guidance has been provided as to when and how to incorporate spirituality into evidenced-based treatments (Plante, 2007). Future studies examining evidenced-based psychosocial treatments for depression in older adults could consider integrating spiritual components to existing treatment modules. Given that depression is marked by behavioral deactivation, for some older adults this deactivation could manifest as a reduction in spiritual activity. In the service of fostering meaning in life, an early psychotherapeutic focus on re-engaging in spiritual activities could be beneficial for those older adults for whom spirituality is a primary value.

In conclusion, the aim of this current study was to examine whether spirituality moderated the association between depression symptoms severity and meaning in life among treatment-

seeking older adults. Depressive symptom severity was not significantly related to meaning in life among more highly spiritual older adults: in the presence of elevated depressive symptomatology, those participants who reported high levels of spirituality reported comparable levels of meaning in life to those without elevated depressive symptomatology. These findings generate important questions for future research, including examining possible behavioral and cognitive mediators of the spirituality effect observed such as social support, prayer, meditation, and cognitive appraisal of life events and the meaning of depression. Clinically, the findings suggest that when working with older adults with depressive symptoms, assessment of an individual's spiritual beliefs could be part of a comprehensive psychosocial history. On a case-by-case basis, an individual's spiritual beliefs can be discussed and incorporated into treatment strategies to target depressed mood and foster meaning in life.

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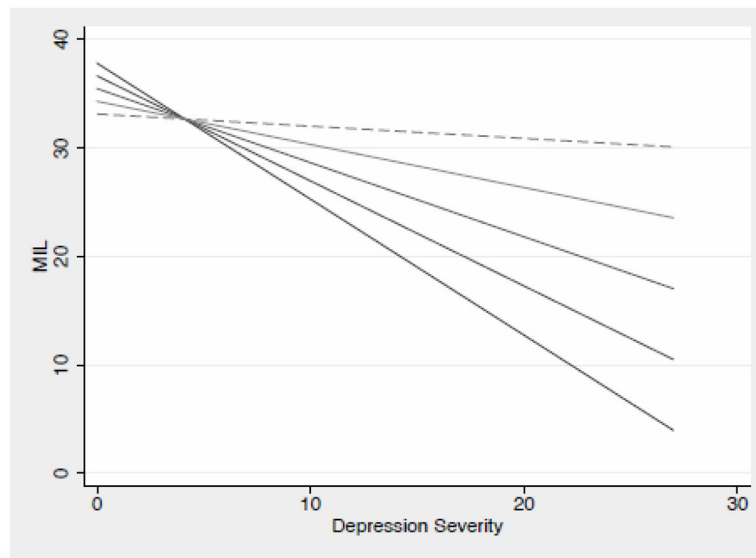


Figure 1.

Simple slope analyses depicting the interaction of depressive symptom severity and spirituality on meaning in life

Note. Lines represent spirituality, with the top line representing the highest level of spirituality (STI = 48) and subsequent lines representing lower levels of spirituality in 10 point intervals (48, 38, ...). Solid lines indicate statistically significant simple slopes, while dashed lines indicate non-significant simple slopes.

Table 1Descriptive Statistics and Pearson's Correlations ($n = 50$)

Measure	1	2	3	4	5
1 PHQ-9	-----				
2 STI	-.02	-----			
3 MIL	-.39**	.30*	-----		
4 MoCA	.10	-.25	.02	-----	
5 PSS-Family	-.33*	-.14	.30*	.04	-----
Mean	9.0	35.7	30.4	23.3	10.5
SD	6.0	10.6	6.1	4.2	4.9
Range	0-24	8-48	16-40	11-29	2-18
N	50	50	50	49	50

Note. STI, Spiritual Transcendence Index; PHQ-9, Patient Health Questionnaire-9; MIL, Geriatric Suicide Ideation, Meaning In Life Subscale; MoCA, Montreal Cognitive Assessment; PSS-Family, Perceived Social Support-Family Subscale.

* $p < .05$.

** $p < .01$

Table 2Linear Regression Analysis Predicting Meaning in Life ($n = 50$)

Predictor	f^2	B	SE	p
	.54			
PSS-family	.26	.16	.121	
PHQ-9	-.38	.13	.009	
STI	.16	.08	.047	
PHQ-9 x STI	.03	.01	.021	

Note. Perceived Social Support-Family Subscale; STI, Spiritual Transcendence Index; PHQ-9, Patient Health Questionnaire-9; STI, Spiritual Transcendence Index.

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Simple slopes of depressive symptom severity on meaning in life across the range of spirituality scores

Table 3

Spirituality score	Slope	Std error	z	p	95% CI
8	-1.253	0.452	-2.770	0.006	-2.139, -0.368
18	-.968	0.315	-3.070	0.002	-1.585, -0.351
28	-.683	0.190	-3.600	0.000	-1.055, -0.311
38	-.398	0.120	-3.310	0.001	-0.633, -0.162
48	-.112	0.186	-0.600	0.546	-0.477, 0.252