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## The Relationship of Religious Involvement Indicators and Social Support to Current and Past Suicidality among Depressed Older Adults

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### Abstract

**Objectives**—Elderly people, particularly those with major depression, are at the highest risk for suicide than any other age group. Religious involvement is associated with a range of health outcomes including lower odds of death by suicide. However, not much is known about the effects of religious involvement on suicidal ideation in the elderly or which aspects of religiosity are beneficial. The current study examined the relative influence of various conceptualizations of religious involvement, above and beyond the protective effects of social support, on current and past suicidality among depressed older adults.

**Method**—Participants were 248 depressed patients 59 years and older enrolled in the Neurocognitive Outcomes of Depression in the Elderly (NCODE) study. A psychiatrist assessed current suicidal ideation using the suicidal thoughts item from the Montgomery-Asberg depression rating scale (MADRS). Past history of suicide attempts, four religious involvement indicators, social support indicators, and control variables were assessed via self-report.

**Results**—Church attendance, above and beyond importance of religion, private religious practices and social support, was associated with less suicidal ideation; perceived social support partially mediated this relationship. Current religious practices were not predictive of retrospective reports of past suicide attempts.

**Conclusion**—Church attendance, rather than other religious involvement indicators, has the strongest relationship to current suicidal ideation. Clinicians should consider public religious activity patterns and perceived social support when assessing for other known risk and protective factors for suicide and in developing treatment plans.

### Keywords

Religion; Suicide; Elderly; Depression

In 2007, there were a reported 11 deaths by suicide per every 100,000 people, but among older adults, deaths by suicide are higher than any other age group (Conwell & Thompson, 2008), with 16 deaths per every 100,000 adults age 75 and older (CDC, 2007). Risk for suicide has been shown to be particularly elevated among older adults with mood disorders such as depression (Conwell, Duberstein, & Caine, 2002), making this group an especially vulnerable population. Given their heightened risk for death by suicide, it is important to identify factors that are protective against suicidal ideation and suicide attempts for these individuals.

Religious involvement, in particular attendance of religious functions, has been shown to be beneficially related to a number of physical (e.g., Gillum & Ingram, 2006; Idler & Kasl, 1997; Martin & Levy, 2006) and mental health outcomes (e.g., Braam, et. al, 2004; Ellison, Boardman, Williams & Jackson, 2001; Herbert, Dang & Schulz, 2007), with some evidence that involvement reduces risk for mortality (McCullough, Hoyt, Larson, & Koenig, 2000) and protects against suicide (Robins & Fiske, 2009). For example, among younger adults, regular attendance at religious functions has been found to be associated with reduced suicide risk over and above the influence of social support (Rasic et al., 2009), and never attending church is associated with increased odds of lifetime suicidal ideation in a sample of Latino Americans (Fortuna, Perez, Canino, Sribney & Alegria, 2007). Interestingly, simply identifying oneself as “spiritual” has not been found to reduce risk for suicide after controlling for social support (Rasic et al., 2009).

Various theories have emerged in an attempt to explain the association between religiosity and suicide. Durkheim (1897) theorized that religion provides high levels of integration and regulation that deter suicidal behavior (“integration theory”), whereas Stack (1983) believed that being devoted to certain, core religious beliefs reduces risk for suicide (“religious commitment theory”), perhaps by providing a moral prohibition against suicide. Higher levels of religious involvement may also reduce suicide risk by buffering the effects of stressful life events on mental health (“stress buffering hypothesis”; for review, see Johnson, Wood, Gooding, Taylor, & Tarrier, 2011) or by providing opportunities for religious coping (Pargament et al., 1988). Still others suggest that religious participation and network contacts affect risk for suicide (“network theory”; for review, see Colucci & Martin, 2008) by encouraging social engagement and support. Indeed, strong social support is an important factor in the psychological well-being of older adults (Sachs-Ericsson, Plant, & Blazer, 2005) and even mortality (Mazella et al., 2010). Thus, religious involvement may reduce suicidal ideation and behavior through support the individual experiences while participating in religious activity. Despite these hypotheses, no single theory has received overwhelming support.

Moreover, not all studies have found religious involvement to be protective against suicide (Eshun, 2003; Lowenthal et al., 2003). These inconsistent findings may be due to lack of uniformity in how religious involvement and suicide are conceptualized and measured. For example, religiosity can be conceptualized as religious affiliation (e.g., Catholic versus Protestant), frequency of church attendance, or importance of religion in one’s life. However, it has been suggested that religiosity cannot be captured by a single construct, and indicators should be evaluated separately (John E. Fetzer Institute, 1999).

Several kinds of religious involvement indicators were examined in the current study. *Church attendance* (or *public religious activity*) has been consistently related to positive health outcomes (Gillum & Ingram, 2006; Idler & Kasl, 1997; Martin & Levy, 2006). *Private religious practices*, which are non-organizational, informal, and non-institutional forms of religiosity, have also been shown to be significantly associated with physical health

status and psychological well-being (Levin, 1989). *Religious importance* is often assessed by asking participants how important religion is to them and has been associated with improved mental health outcomes, though not as strongly as church attendance (Herbert, Dang, & Schulz, 2007). In a study by Robins and Fiske (2009), public religious activity, but not private religious practices, was associated with lower levels of suicidal ideation and lower likelihood of one or more suicide attempts in the past year in a sample of undergraduate students from a large university, suggesting that public religious activity is a more potent predictor of suicide. Important to the purposes of our study, there is a dearth of literature examining the relationship between various conceptualizations of religion and suicide among depressed older adults, who are at high risk for suicide.

Also unclear is whether religious involvement is a unique protective factor against suicide, above and beyond the opportunities for social engagement and support religion provides. Social support is an important factor thought to buffer stress and reduce suicide risk among older depressed adults (Blazer, 2005; Schlernitzauer, Reynolds & Szanto, 2010). An important source of heterogeneity in the social support literature revolves around the methods of understanding and measuring social support (Barrera, 1986; O'Reilly, 1988; Winemiller, Mitchell, Sutliff, & Cline, 1993). In general, researchers agree that social support measures should include both quality (satisfaction and closeness in relationships) and quantity of support (number of individuals in the social support network and frequency of contacts). Another category of social support measurement involves assessing frequency that specific supportive behaviors such as emotional and instrumental support have been provided to individuals.

While some may conceptualize religiosity as a form of social support, many studies do not control for multiple forms of social support when assessing the influence of religious involvement on suicidality. This is a serious short-coming in the literature. Robins and Fiske (2009) reported that general social support mediated the relationship between public religious attendance and suicidal ideation among college students; however, this relationship may differ among older depressed adults. Given that public religious activity, in particular, involves social contact and connectedness to others, controlling for other forms of social support is essential in assessing the potential unique influence of religious involvement on suicidality.

The current study examined whether four indicators of religious involvement (public religious activity, religious importance, private religious practices, and private religious media involvement) are associated with current suicidal ideation and past suicide attempts. Given previous findings regarding the relationship between church attendance and positive health outcomes, we hypothesized public religious activity would be the strongest predictor of reduced current suicidal ideation and reduced past suicide attempts. Because previous studies have largely been limited to non-clinical samples of younger adults, we tested our hypotheses in a sample of clinically depressed older adults, a group at higher risk for suicide. Our study will extend the findings of previous studies by including four non-church related social support subscales (size of social network, amount of social interaction, availability of instrumental aid, and amount of perceived social support), thereby allowing us to more specifically examine the aspects of social support that may be most important in explaining the relationship between public religious activity and current suicidal ideation and past suicide attempts. The inclusion of the four non-church related social support subscales in the model is, therefore, a very strict test of the model that religious activity serves as a protective factor beyond that which is provided by the other social support measures.

## Method

### Participants

Non-demented adults over age 59 who presented for inpatient or outpatient psychiatry services at Duke University Medical Center or at the Duke General Internal Medicine Clinic in Durham, North Carolina and met DSM-IV criteria for a current episode of Major Depression (N=248) were recruited into the Neurocognitive Outcomes of Depression in the Elderly (NCODE) study, a longitudinal study of geriatric depression supported by the National Institutes of Mental Health that began enrollment in 1994 and continues to the present. Here we describe the data collected at baseline. Participants were excluded from the NCODE study if they met criteria for another major psychiatric illness (schizophrenia, schizoaffective disorder, bipolar disorder, lifetime alcohol or substance dependence, and dementia). All participants provided written informed consent to participate, and the research protocol was reviewed and approved annually by the Duke University Internal Review Board.

### Procedure

Trained interviewers administered the Duke Depression Evaluation Schedule (DDES) to all patients to determine if the patient met diagnostic criteria for major depression. The DDES is a structured interview that includes sections on demographic information and social support. The DDES also included the Diagnostic Interview Survey (DIS) which allows for an assessment of DSM-IV current Major Depression. Items on the DIS paralleled symptom criteria for DSM-IV diagnosis of depression. It fully specified all questions and probes to be used, and its symptom scoring system indicated not only whether a symptom met criteria, but why it failed to, and it was accompanied by a set of computer programs that made diagnoses on the basis of analysis of symptom scores. The DIS has been used in a set of epidemiological studies sponsored by the National Institute of Mental Health Center for Epidemiological Studies. Its accuracy has been evaluated in a test-retest design comparing independent administrations by psychiatrists and lay interviewers with inpatients, outpatients, ex-patients, and non-patients (Robins et al., 1981). It has been found to have good validity and reliability participants of all ages (Eaton et al., 1987; Robins et al., 1981) and is widely used in research in aging populations.

### Measures

**Religion Indicators**—Four indicators of religious involvement were assessed during the baseline interview. To assess *public religious activity*, trained interviewers asked participants “How often do you attend church or other religious meetings?” As is consistent with previous studies, participants chose from several response options: 1 (more than once a week), 2 (once a week), 3 (a few times a month), 4 (a few times a year), 5 (once a year or less), 6 (never). *Religious importance* was assessed by asking the respondent, “Other than going to religious meetings, how important is religion to you?” and response options included 1 (very important), 2 (somewhat important), 3 (not important). *Private religious practices* were assessed by asking, “How often do you spend time in private religious activities, such as prayer, meditation, or bible study?” and response options included 1 (more than once a day), 2 (daily), 3 (two or more times a week), 4 (once a week), 5 (a few times a month), and 6 (rarely or never). Finally, participants were asked, “How often do you watch religious programs on TV or listen to religious programs on the radio?” to assess *private religious media involvement*. Responses ranged from 1 (daily) to 6 (rarely or never). Thus, lower scores on each question indicated higher religiosity.

The four religion indicators are assumed to measure separate but related constructs, and the intercorrelations ranged from .259 to .574. When two variables measure different constructs,

an  $r$  of .3 is considered a medium effect, whereas less than .3 indicates a small effect (Kraemer et al., 2003). Given our moderate correlations, we assessed for multicollinearity in our regression analyses. Multicollinearity is assumed to have impacted results if variance inflation factors (VIF) are greater than two.

**Current Suicidal Ideation**—Current suicidal ideation was assessed at baseline using the suicidal thoughts item (Item 10) from the Montgomery-Asberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979). Geriatric psychiatrists assessed participants' level of suicidal thoughts over the past seven days on a continuous scale ranging from 0–6. The following anchors were provided: 0 (Enjoys life or takes it as it comes), 2 (Weary of life. Only fleeting suicidal thoughts), 4 (Probably better off dead. Suicidal thoughts are common, and suicide is considered as a possible solution, but without specific plans or intention), 6 (Explicit plans for suicide when there is an opportunity. Active preparations for suicide). Therefore, higher scores indicated greater suicidal ideation.

**Past Suicide Attempts**—As part of the DIS, participants were asked whether they had attempted suicide in the past. We coded the variable used in the current analyses as follows: 0 (No history of suicide attempts), 1 (History of one or more suicide attempts).

**Social Support**—The social support scales adopted for the current study were based on four main constructs of support (Blazer, 2002; Cornoni-Huntley et al., 1990) used extensively in the literature and derived from a prior factor analysis of the 35-item Duke Social Support Index (Koenig et al., 1993; Landerman et al., 1989). These four scales included size of *social network* (number of family members, co-workers, and friends and household size, in-person contact with friends and family), amount of *social interaction* (family proximity, time spent with others, telephone contact with family and friends, and group affiliations), availability of *instrumental support* (e.g., care during illness and help with errands, chores, finances, transportation), and *perceived social support* (e.g., feeling useful, listened to, understood, satisfied with relationships). Higher scores on each scale indicated greater social support. In a prior study based on the same sample (Hays et al., 2001), Cronbach's alpha for the perceived social support subscale was 0.79. Measures of internal consistency were not calculated for the other social support scales because there was no reason to expect high inter-item correlations (e.g., between the number of family members and the number of co-workers; Hays et al., 2001).

**Control Variables**—Several control variables that are associated with suicidality or religiosity were entered in the regression analyses. These included the following: sex 1 (male) 2 (female); race 1 (Caucasian) 0 (other); marital status 1 (married) 0 (single, divorced, separated, widowed); age in years. We also controlled for self-rated physical health, which participants rated on a 4-point scale, 1 (excellent), 2 (good), 3 (fair), 4 (poor).

## Data Analytic Plan

We first ran descriptive statistics to determine the distribution of variables in our sample. Next, to determine the impact of the four religious indicators on current suicidal ideation, we ran a hierarchical linear regression analysis. On the first step, we entered the demographic variables sex, race, marital status, age, and self-rated physical health to assess their relationship to current ideation. We then entered the four religious indicators on step two, and the four social support scales on step three. To determine the impact of the four religious indicators on past suicide attempts, we ran a hierarchical logistic regression analyses including all above covariates entered in the same fashion. Based on previous research, we predicted the social support indicators would attenuate the effects of public religious activity on suicidal ideation and attempts, so we also planned to run mediation analyses.



## Results

### Descriptive Statistics

Descriptive statistics are displayed in Table 1. Of the 248 depressed participants, 87% were white, and 68% were female. They were 70 years old on average ( $SD = 7.5$ ) and had a relatively high level of education ( $M = 13.6$  years,  $SD = 3.0$ ). Twenty-three (9.3%) had attempted suicide in the past, and participants' current suicidal ideation on the MADRS item was rated by the psychiatrist as 1.5 on average ( $SD = 1.3$ , range = 0–6), with 72.8% endorsing at least some suicidal thoughts (i.e., MADRS > 0).

### Prediction of Current Suicidal Ideation

See Table 2 for results of the hierarchical linear regression analysis in which religious indicators predicted current suicidal ideation on the MADRS. It is important to note that on all steps of the model, none of the variance inflation factors (VIF) exceeded two; therefore, multicollinearity does not appear to have impacted the results. In the first step, the only control or demographic variable that was a significant predictor of current ideation was self-rated physical health such that worse self-rated physical health was associated with increased ideation. In step two, consistent with our hypothesis, greater church attendance (public religious activity) was significantly related to decreased ideation. However, none of the other religious indicators was related. In the final step containing the social support scales, we found lower church attendance, lower perceived social support, and poorer self-rated physical health were significant predictors of current suicidal ideation. None of the other social support scales predicted current ideation. Because the relationship between church attendance and ideation was attenuated (although still significant) with the addition of the social support variables, we ran additional analyses to determine whether perceived social support partially mediated this relationship while controlling for demographic variables and other indicators of religiosity.

### Mediation Analysis

Several conditions must be met in order to establish mediation (Baron & Kenny, 1986). First, the independent variable (church attendance) must predict the dependent variable (current ideation) in absence of the mediator, which was indeed the case,  $B = 0.167$ ,  $t(244) = 3.188$ ,  $p = .002$ . Second, the independent variable must predict the mediator. In a second linear regression analysis, we determined that greater church attendance was associated with increased social support,  $B = -0.421$ ,  $t(240) = -2.539$ ,  $p = .012$ . Third, the potential mediator (perceived social support) must predict the dependent variable (current ideation), a condition that held in an additional regression analysis,  $B = -0.075$ ,  $t(240) = -3.668$ ,  $p < .001$ . Fourth, when both the mediator and the independent variable are included in the regression equation, the effect of the independent variable on the dependent variable,  $B = 0.131$ ,  $t(240) = 2.490$ ,  $p = .013$ , should be significantly reduced, which was assessed for significance with a Sobel test (Sobel, 1982). The Sobel test indicated that perceived social support partially mediated the relationship between church attendance and current suicidal ideation,  $z = 2.068$ ,  $SE = .015$ ,  $p = .039$ .

### Prediction of Suicide Attempt History

Results from the logistic regression analysis are displayed in Table 3. Interestingly, the only significant predictor of suicide attempt history (yes/no) was age, such that decreasing age was associated with increased probability of past suicide attempts,  $B = -0.085$ , Wald = 4.51,  $p < .001$ , OR = .919.

## Discussion

In the current study of older, clinically depressed patients, a population that is at an increased risk for suicide, we found greater church attendance, (i.e., public religious activity) above and beyond religious importance, private religious practices and measures of social support, was associated with less current suicidal ideation. Perceived social support was also associated with lower levels current suicidal ideation and partially mediated the relationship between public religious activity and suicidal ideation. None of the religious indicators, however, was associated with retrospective reports of past suicide attempts.

A strength of the current study is our evaluation of four indicators of religiosity, which allowed us to determine that public religious activity was the only indicator associated with lower levels of suicidal ideation. While it has been suggested that public religious activity is associated with lower levels of suicide risk because regular church attendance may serve to reinforce religious beliefs that morally prohibit suicide in times of crisis (John E. Fetzer Institute, 1999), our findings do not support this view, as ratings of importance of religion were unrelated to suicidality. Rather, the findings of the present study provide evidence that opportunities for social support that church attendance provides, at least in part, account for the relationship between religiosity and lower suicide risk. Our results, therefore, lend some support to the “network theory,” which suggests that religious participation and network contacts affect risk for suicide by encouraging social engagement and support.

Another strength of the current study was the careful assessment of constructs identified in the literature as distinct components of social support in older adults in relation to suicidality. We found that perceived social support, above and beyond instrumental support, size of social network, and social interaction, was related to lower levels of suicidal ideation. Even further, perceived social support was found to partially mediate the relationship between public religious activity and lower levels of suicidal ideation in a sample of depressed older adults. These findings are consistent with Robins and Fiske (2009), which found that social support mediated the relationship between public religious activity and suicide risk in a sample of undergraduates and are also consistent with what would be predicted based on the interpersonal-psychological theory of suicidal behavior (Joiner, 2005; Van Orden et al., 2010). According to Joiner’s theory, thwarted belongingness is a key contributor to suicidal ideation and behavior. Importantly, the theory suggests that an individual’s actual level of belongingness and connectedness (i.e., size of social network) is not as crucial as an individual’s subjective perception of belongingness in the development of suicidal ideation and behavior. Therefore, Joiner’s theory would predict that increasing individuals’ perceptions of belongingness and social connectedness should contribute to decreased suicide risk. The results of the present study provide support for this prediction; perceived social support, but not size of social network, was related to decreased suicidal ideation. Future studies should administer measures of belongingness in addition to perceived social support.

Other researchers have attempted to identify the social support indicators that are most important for health outcomes. Consistent with our findings, perceived social support, but not other aspects of social support, appears to be related to decreasing mental distress (Koenig, Westlund, George et al., 1993) and suicidal ideation (Rowe, Conwell, Schulberg, & Bruce, 2006) among older adults. An older adult’s perception of adequate social support may be particularly protective during stressful life events (Rowe et al., 2006) such as depression.

Although public religious activity was related to current suicidal ideation, interestingly, it was unrelated to history of past suicide attempts. This finding is inconsistent with previous

studies that have found a relationship between public religious activity and suicide attempts (Rasic et al., 2009). This may be due in part to the low number of past suicide attempts in the population ( $n=23$ ). Another explanation for the lack of association is that we assessed current public religious activity rather than activity at the time of the past suicide attempts.

Interestingly, we found that “young” elderly were more likely than “old” elderly to have endorsed a history of past suicide attempts. This relationship has been found in previous studies predicting current suicidal ideation (Lynch, Johnson, Mendelson et al., 1999). If the “young” elderly were more severe (i.e., endorsed higher levels of depression) compared to the “old” elderly, one would expect them to be more likely to endorse a history of past suicide attempts. However, follow-up analyses revealed no correlation between age and depressive symptoms on the MADRS or number of lifetime depressive episodes. Additionally, if the “old” elderly in the present sample were healthier because they had not died as a result of serious physical or mental illness, they would be at less risk for suicidal ideation and attempts (e.g., Rasic, Belik, Bolton, Chochinov, & Sareen, 2008; Cavanagh, Carson, Sharpe, & Lawrie, 2003). Contrary to these expectations, in follow-up analyses we found that older participants had worse self-rated physical health. A further possibility is that we only examined one portion of the age range representing elderly individuals, and thus, our “old” elderly in our sample may not have actually represented the high end of the age range.

Our results have important implications for suicide prevention strategies and the assessment of suicide risk in clinical practice. Although reports of church attendance do not offer complete assurance of protection from suicide, clinicians may consider inquiring about clients’ level of attendance of religious services and activities. Indeed, some researchers have suggested that questions regarding religion should be incorporated into suicide risk assessment (Gearing & Lizardi, 2009). Clinicians may particularly consider assessing for changes in levels of public religious participation among depressed clients. Depressed individuals often lose interest or pleasure in a variety of activities as a result of their depression (i.e., anhedonia). Clinicians may consider encouraging depressed clients to resume pleasurable activities in which they have disengaged as part of the treatment for depression (i.e. behavioral activation). Indeed, behavioral activation has received empirical support for the treatment of major depression (Cuijpers, van Straten, & Warmerdam, 2007). If church attendance has been affected by depression, clinicians should emphasize reengagement with religious organizations and activities for the treatment of depression. Moreover, reengagement in activities more generally may allow increased opportunities for social engagement and social support, which may buffer against suicidal ideation.

Gearing and Lizardi (2009) recommend specific clinical guidelines for the assessment of client’s religiosity when assessing suicide risk. In particular, the authors recommend assessing 1) the importance of religion to the client and his/her identity, 2) the role of religiosity during previous times of stress and difficulties, 3) how suicide is conceptualized and perceived in the client’s religion, and 4) the value of strengthening the client’s religiosity and participation in his/her religion. Our results suggest that the most critical question to ask a client is about level of public religious activity currently and in the past.

There are a few limitations of the current study that should be considered. First, data were collected at a single time point, and no causal claims can be made about the sequence of effects. Longitudinal studies should be conducted to assess whether public religious activity at baseline is protective against future suicide attempts. Furthermore, we examined this relationship among a sample of older, depressed adults residing in North Carolina, where religion is an important part of cultural activities. Therefore, these individuals may engage in religious activities to a greater extent than persons in other regions, which affects the



generalizability of these results. In addition, because our sample consisted of highly educated, mainly Caucasian, treatment-seeking depressed older adults, our results may not generalize to non-depressed elderly, more diverse samples, or less severely depressed patients. Future studies may wish to replicate these findings among other samples.

Additionally, religious involvement was measured in our study based in part on frequency of attendance of religious meetings. Religious involvement as a construct can be conceptualized not only by *frequency* of attendance but also *degree* of participation while at religious meetings or subjective experience of religious involvement. Future research should consider use of a better measure of religious involvement.

For example, examination of participants' subjective reasons for religious attendance may have helped to illuminate individuals' motivations for attending religious meetings and how these motivations may be related to suicidal ideation. Specifically, Allport (1967) distinguishes between extrinsic and intrinsic motivations for religious attendance. Extrinsic motivation involves using religion for one's own ends (e.g., provide security and solace, sociability and distraction, status and self-justification) whereas intrinsic motivation involves a sense of living one's religion, with beliefs that affect one's entire approach to life through genuine faith. Therefore, intrinsic or extrinsic religious motivations may be important contributory factors to examine when considering mechanisms by which greater religious attendance is associated with less suicidal ideation. For instance, one may predict that religious attendance is related to less suicidal ideation because it offers distraction and security. One may also predict that religious attendance is related to less suicidal ideation because it affects an individual's entire approach to life.

Moreover, our measure of social support was not specific to social support within the context of a religious organization. Pargament (2004) has suggested that the effects of religious involvement on health are directly linked to religious coping. One aspect of religious coping is seeking support from the clergy or congregation, but there are other positive aspects of coping, as well as "negative" aspects of coping that can be considered (i.e., pleading for direct intercession; Pargament, 2004). Future research should consider examining both the general effect of social support within any institutional setting and the specific effect of social support and coping within a religious institution on suicidal ideation.

In sum, we found that church attendance was associated with less current suicidal ideation and that this relationship was partially mediated by perceived social support. This suggests that the role of both facets of social support contribute to lowering suicidal ideation. These findings have important implications for the assessment of current suicide risk and treatment of depressed older adults. Clinicians can have the flexibility of multiple social contexts from which the individual derives benefits to consider in treatment planning.

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**Table 1**

## Descriptive Statistics

	<i>M (SD) or f (%)</i>
Marital Status	
1=Married,	143 (57.7% )
0=Not Married	105 (42.3% )
Sex	80 (32/3% )
1=Male	168 (67.7% )
2=Female	
Age (years)	70.0 (7.5), range = 59–96
Race	
1=Caucasian	215 (86.7% )
0=Other	33 (13.3% )
Years of Education	13.6 (3.0), range = 0–17
Self-rated Physical Health (1–4, 1=excellent)	2.5 (0.9), range = 1–4
Public Religious Activity (1–6, 1=more than once a week)	3.4 (1.8), range = 1–6
Private Religious Media Involvement (1–6, 1=daily)	4.2 (1.9), range = 1–6
Private Religious Practices (1–6, 1=more than once a week)	3.0 (1.8), range = 1–6
Religious Importance (1–3, 1=very important)	1.4 (0.6), range = 1–3
Social Network Scale	2.0 (2.1), range = 0–10
Social Interaction Scale	5.8 (2.6), range = 0–13
Instrumental Social Support Scale	9.2 (2.2), range = 2–11
Perceived Social Support Scale	23.0 (4.1), range = 10–28



**Table 2**

Hierarchical Linear Regression Analysis Predicting Current Suicidal Ideation

Step		Standard				t	p-value
		B*	Error	Beta**			
1	(Constant)	1.968	.885		2.223	.027	
R <sup>2</sup> = 0.065	Marital status	-.027	.049	-.038	-.558	.578	
	Sex	.347	.184	.125	1.887	.060	
	Age	-.022	.012	-.122	-1.819	.070	
	Race	-.167	.245	-.044	-.679	.498	
	Self-rated physical health	.279	.098	.187	2.850	.005	
2	(Constant)	1.816	.954		1.904	.058	
	Marital status	-.036	.049	-.051	-.738	.461	
R <sup>2</sup> = 0.103	Sex	.295	.187	.106	1.572	.117	
	Age	-.019	.012	-.106	-1.584	.115	
	Race	-.257	.248	-.068	-1.036	.301	
	Self-rated physical health	.237	.102	.159	2.328	.021	
	Religious attendance	.145	.054	.201	2.709	.007	
	Private religious TV/radio	.058	.051	.086	1.144	.254	
	Private religious activities	-.068	.060	-.097	-1.137	.257	
	Religious importance	-.215	.163	-.109	-1.316	.190	
3	(Constant)	3.191	1.064		3.000	.003	
R <sup>2</sup> = 0.146	Marital status	-.068	.050	-.096	-1.362	.174	
	Sex	.294	.185	.106	1.587	.114	
	Age	-.013	.012	-.075	-1.103	.271	
	Race	-.202	.249	-.054	-.810	.419	
	Self-rated physical health	.220	.102	.147	2.159	.032	
	Religious attendance	.124	.058	.171	2.125	.035	
	Private religious TV/radio	.066	.051	.097	1.292	.198	
	Private religious activities	-.081	.059	-.116	-1.372	.171	
	Religious importance	-.197	.163	-.100	-1.207	.229	

Step	Standard				t	p-value
	B*	Error	Beta**	Beta		
Social network scale	.012	.042	.019	.019	.293	.770
Social interaction scale	.017	.041	.034	.034	.427	.670
Perceived social support scale	-.063	.025	-.198	-.198	-2.508	.013
Instrumental social support scale	-.035	.043	-.058	-.058	-.800	.425

\* Unstandardized B

\*\* Standardized Beta

Table 3

## Logistic Regression Analysis Predicting Suicide Attempt History

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>p</i> -value	Odds Ratio
Marital status	.149	.152	.963	1	.327	1.160
Sex	.386	.582	.439	1	.508	1.470
Age	-.085	.040	4.511	1	.034	.919
Race	.869	.873	.992	1	.319	2.385
Self-rated physical health	.073	.297	.060	1	.807	1.075
Religious attendance	.109	.165	.436	1	.509	1.115
Private religious TV/radio	-.118	.149	.629	1	.428	.888
Private religious activities	.103	.170	.362	1	.547	1.108
Religious importance	-.479	.538	.792	1	.373	.619
Social network scale	.057	.111	.263	1	.608	1.059
Social interaction scale	.060	.121	.244	1	.621	1.061
Perceived social support scale	-.103	.074	1.912	1	.167	.902
Instrumental social support scale	.103	.125	.677	1	.411	1.108
Constant	2.838	3.395	.699	1	.403	17.084