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IS DEPRESSED AFFECT A FUNCTION OF ONE'S RELATIONSHIP WITH GOD?: FINDINGS FROM A STUDY OF PRIMARY CARE PATIENTS*

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ABSTRACT

Objective: This study examines the association between a self-reported loving relationship with God and the presence of depressed affect. Building on prior clinical and epidemiologic research on religious factors in mental health, it seeks to extend consideration to internal religious resources. *Method:* Data are from 205 primary care outpatients who completed a self-administered survey inquiring about their relationship with God, their mental and physical health, and various religious and psychosocial issues. The principal dependent construct is the depressed affect subscale of the General Well-Being Scale. The principal independent construct is a validated eight-item self-report measure of loving and being loved by God based on a theoretical taxonomy developed by Sorokin. *Results:* Hierarchical ordinary least squares regression was used to investigate the association between this construct, which Sorokin termed "religious love," and the measure of depressed affect. After controlling for sets of hypothesized mediating factors (multi-item measures of religious involvement, social resources, psychological resources, and physical health status) in five successive models, as well as several key sociodemographic variables, the statistically significant inverse association between these two constructs in the baseline model ($\beta = -.29$, $p < .01$) remained strong and statistically significant ($\beta = -.21$, $p < .05$). *Conclusions:* These findings raise the possibility that a loving relationship with God may exert a protective effect on psychological distress. One's relationship with

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God thus may represent an important personal resource for mitigating the emotional consequences of poor health and other deleterious life circumstances, as well as a marker for successful religious coping.

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INTRODUCTION

Over the past decade, increasing evidence has associated dimensions of religious involvement with lower rates of psychological distress and psychiatric morbidity [1]. This research has been part of a larger effort by clinicians, behavioral scientists, and psychosocial epidemiologists to investigate potentially protective effects of religious practice [2, 3]. Notable findings include links between regular religious participation and fewer depressive symptoms, less anxiety and dysthymia, and a lower rate of affective disorders in general [4].

It is typically inferred from this work that something intrinsic to one's spiritual state protects against psychological distress, and that nonreligiousness, broadly defined, is a risk factor for depressed affect. These conclusions may be overdrawn, as systematic reviews have found that this research relies predominantly upon simple measures of public religious behavior or affiliation [5, 6]. These variables can hardly serve as a source of valid inferences about the full nature of one's spirituality or perceived relationship with God. Measures of religious membership and attendance may be proxies, in part, for a variety of nonreligious characteristics, including an absence of functional limitations that prevent worship with others [7]. Among experts in religious and spiritual assessment, these variables are not considered meaningful or appropriate measures of the kinds of religious resources that potentially best protect against psychological distress [8]. Not surprisingly, even where existing studies identify statistically significant effects between public religious participation and measures of positive or negative well-being, rarely is more than a small fraction of variance explained.

A few studies have attempted to assess the impact of beliefs pertaining to God. A study of middle-aged adults found that high scores on a scale of "belief in God as a controlling, caring force" strongly predicted overall life satisfaction [9]. In national data from the General Social Survey, respondents who perceived God as a being or force that releases them from or resolves problems of living had higher levels of life satisfaction than those who perceived God as a ruler through metaphors of hierarchy [10]. Using North American data from the World Values Survey, individuals were asked to affirm statements characterizing the ideal relationship between humans and God and among humans, as captured by the Ten Commandments [11]. A high score on the resulting index was not significantly associated with life satisfaction.

These innovative studies are a good start at examining the effects on psychological well-being of what religious scholars term the "vertical relationship," but their findings are limited in several ways. First, they focus on beliefs—belief in God, beliefs about God, or beliefs about the relationship between humans and God. None directly inquires about the actual presence or nature of a perceived relationship with God. This would require assessment of emotional aspects of such a relationship, whether real or ideal. Second, the outcome measures are not explicitly clinical, nor are clinical samples used. Measures of happiness, congruence, or overall well-being may be acceptable for social research in population surveys, but do not necessarily assess clinically meaningful endpoints. Encouragingly, investigators in the religion and mental health field have begun using validated measures that directly assess dimensions of psychological distress, such as the Center for Epidemiologic Studies Depression Scale, Geriatric Depression Scale, Hamilton Rating Scale for Depression, and Diagnostic Interview Schedule [12-16]. Third, researchers rarely if ever ask about underlying mechanisms—the psychosocial and health-related factors that might explain or mediate an association between religiousness and psychological distress. Without addressing these concerns, research in this area will remain of limited value theoretically, clinically, and scientifically [1].

The first limitation is more easily identified than resolved. Available measures for assessing one's perceived relationship with God are lacking [17]. Where present, measures are tied to doctrines of particular religious traditions, are too lengthy for use in certain settings, or never have been validated for clinical research [18]. Consider, for example, the question, "Since you have been an adult have you ever had a sense of being saved in Christ, and how sure are you that you had it?" from the 24-item Dimensions of Religious Commitment scale [19]. While an authoritative and well-respected instrument for use in social and behavioral research, this index and others like it contain items that may not be applicable to general patient populations representing a diversity of faith traditions.

A much different approach to capturing the relationship between humans and God derives from the work of the late sociologist, Pitirim Sorokin [20, 21]. Throughout the 1950s, he developed a complex, multidimensional theory of love, a principal dimension of which he termed "religious love." This he defined as a two-way loving relationship with God, or, more specifically, giving love to God or the Absolute and receiving it in return. According to Sorokin, this aspect or domain of love along with others (which he termed ethical, ontological, physical, biological, psychological, and social) are of considerable importance for health and well-being [22]. Moreover, he meant this literally, in terms of "physical and mental disorders" [21, p. 61]. While Sorokin spoke hypothetically and as a sociologist, psychiatrists since have affirmed the significance, in theory, of one's relationship with God for the onset or course of depressive symptoms [4, 23, 24]. This is an especially important issue for research on the role of religion in psychological distress, as estrangement from God may signify estrangement

"from all wellsprings of meaning, hope, and love" [24, p. 153]. These "classical sources of human strength," in turn, have been identified by psychologists as salient factors for mental health in general [25].

STUDY HYPOTHESES

The present study uses a measure of Sorokin's religious love (a) to examine the association between a self-reported loving relationship with God and the presence of depressed affect, and (b) to investigate potential mediating factors. This provides a logical follow-up to earlier studies that have identified protective effects of simple measures of religious behavior. The hope is that this new construct is capable of tapping into something more indicative of one's inner spiritual life and a rich source of comfort and emotional equilibrium.

In seeking to understand how and why loving and being loved by God might impact on depressed affect (whether positively or negatively), five hypotheses are proposed.

First, an inverse association between religious love and depressed affect may be explained by the mental health effects of *religious involvement*. Findings linking religious attendance, private religious practices, and self-rated religiousness to mental health are by now a staple of research in psychiatric epidemiology, geropsychiatry, and health psychology [26]. It is hypothesized that potentially salutary effects of religious love are due to its being an antecedent or correlate of high levels of religious involvement.

Second, an inverse association between religious love and depressed affect may be due to the presence of *socially supportive resources* provided by religion. The tangible and emotional supports provided by friends and family are widely known to be associated with positive mental health outcomes, such as absence of depressed affect [27]. These resources, in turn, are a sequela or function of active religious involvements [28, 29] that likely correlate with religious love. It is hypothesized that potentially salutary effects of religious love are due to the mediating effects of satisfactory support from family and friends.

Third, an inverse association between religious love and depressed affect may be due to high levels of health-enhancing *psychological traits* that reflect a strong relationship with God. Psychological resources such as self-esteem and mastery (i.e., personal efficacy) have religious determinants [30], and are believed to protect against emotional and physical distress [31, 32]. It is hypothesized that potentially salutary effects of religious love are due to its engendering health-promotive levels of these psychological resources.

Fourth, a positive association between religious love and depressed affect, if present, may be explained by the common observation that reports of greater religiousness may in part reflect poorer health according to objective indicators of *physical health status*. That is, chronically ill, functionally disabled, or highly symptomatic individuals may reach out to God or religion in response to their

physical condition [33]. A positive association between certain religious measures and an indicator of depressed affect thus may be an artifact of the former serving as a proxy or marker for physical pathology or decline [34], a known determinant of depressed affect [35]. It is hypothesized that a seemingly risk-inducing effect of religious love, if present, is an artifact of its elevation in the face of physical illness.

Fifth, an inverse association between religious love and depressed affect may be a function of shared *sociodemographic correlates* of religiousness and affective disorders. Social, behavioral, and epidemiologic research on both religion and depression has identified a common set of determinants, including age, race and ethnicity, sex, marital status, educational attainment, employment status, income, and urban residence [36, 37]. It is hypothesized that potentially salutary effects of religious love are due to confounding or antecedent effects of these factors.

METHOD

The Sample and Data Collection

The present study utilizes data collected as part of a clinical pilot study of love and health. The principal objectives of the original study were to develop a multidimensional instrument to assess the concept of love as described by Sorokin and to investigate its impact on mental and physical health. A longer-term goal was to encourage research on the "epidemiology of love" [22]. The study was conducted in the Tidewater area of Virginia, in 1997-98.

The study sample was gathered through distribution of a self-administered survey to a sample recruited from the outpatient population of an academic medical-center-based family practice clinic. The sample was limited to primary care patients (excluding children and excluding patients presenting with acute illnesses which would interfere with survey completion), and the sampling frame comprised patients invited to participate over a period of approximately one academic year. Because the project was principally a psychometric validation study of an instrument intended for use with similar populations, a nonprobability sample of respondents was deemed satisfactory for these purposes [38] provided that exclusionary criteria were consistently applied, sampling recruitment occurred every day over the project period, and the final sample was representative of the overall clinic patient population. All of these conditions were met, including sample representativeness according to key sociodemographic variables. The final sample size was 205 respondents.

Respondents in the study sample averaged 37.8 years of age, 13.3 years of schooling, and 1.7 children; 43.7 percent were African Americans and 45.7 percent Caucasians; 78.8 percent were females, 44.7 percent were married, 59.0 percent were working full-time, 81.9 percent were urban dwellers, 64.2 percent grew up in the city; and, 5.1 percent had a gross annual household

income under $4,000, 15.7 percent earned $50,000 or above, and the modal category was $20,000-$24,999, at 17.3 percent.

Administration of the survey was conducted with informed consent. Surveys were distributed by a research assistant who approached potential respondents with study information and an Institutional-Review-Board-approved consent form and questionnaire packet. The research assistant underscored the anonymity of responses, and answered any questions. Upon completion, respondents placed their questionnaire in a sealed envelope and dropped it in a box on the intake registration table in the clinic waiting room. The survey was completed by most respondents in about 15–20 minutes, while waiting for their appointment. No names or any other forms of personal identification appeared anywhere on the questionnaire; all responses thus are completely anonymous.

Measures

Analyses were based on a set of items developed to assess what Sorokin termed *religious love*—or, more explicitly, a self-reported loving relationship with God [20, 21]. The resultant unidimensional scale comprises eight items, each with a factor loading of at least .85 (calculated using principal components analysis with the FACTOR procedure in SAS 6.12): "I love God"; "God loves all living beings"; "I feel loved by God (or a higher power)"; "When I experience God's love, I feel perfect contentment"; "God's love never fails"; "God's love helps me feel part of something bigger than myself"; "God always helps me when I help myself"; and, "God's love is eternal." These items were written to coincide, as closely as possible, with the exact words and phrases used in Sorokin's written descriptions of religious love. Each item was coded on a 5-point Likert index (1 = strongly disagree, 2 = disagree, 3 = undecided or no opinion, 4 = agree, 5 = strongly agree; scale range: 8–40). Results of psychometric analyses using the CORR procedure and ALPHA option in SAS 6.12 identified an extremely high internal-consistency reliability score for this scale ($\alpha = .96$) in the sample used in the present study.

The principal dependent variable, *depressed affect,* was assessed through the depressed affect subscale of the General Well-Being (GWB) Scale [39]. The GWB is a multidimensional, self-administered mental-health assessment inventory designed for use in community surveys and social and epidemiologic studies. Reliability and validity have been demonstrated in these settings [40] and population norms for the overall instrument have been identified [41]. Developed in the 1960s at the National Center for Health Statistics for inclusion in the initial National Health and Nutrition Examination Survey, the GWB is a scaled down and modified version of a much larger pool of items that has been combined and factored in various ways and that, in another form, evolved into the RAND Mental Health Index [39, 42]. The depressed affect subscale is not a diagnostic or screening tool nor validated for use as a formal inventory of depressive symptoms. While not a formal measure of depression, the GWB is equivalent in its internal

latent structure (i.e., dimensionality) to the Center for Epidemiologic Studies Depression Scale [39], and individual GWB depressed affect items are similar in content to those found in other validated measures of psychological distress, including the Zung Self-Rating Depression Scale, the Modified Beck Depression Inventory, the Hopkins Symptom Check List Depression Items, and the Philadelphia Geriatric Center Morale Scale [43].

This GWB depressed affect instrument comprises four questions addressing feelings occurring over the past month, each measured by a six-category scale of magnitude or frequency which differs across items. Questions include, "Have you felt so sad, hopeless, discouraged, or had so many problems that you wondered if anything was worthwhile?" (coded: 1 = not at all, 2 = a little bit, 3 = some—enough to bother me, 4 = quite a bit, 5 = very much so, 6 = extremely so—to the point that I have just about given up); "Have you been under or felt you were under any strain, stress, or pressure?" (coded: 1 = not at all, 2 = yes—a little, 3 = yes—some, but about usual, 4 = yes—some, more than usual, 5 = yes—quite a bit of pressure, 6 = yes—almost more than I could bear or stand); "Have you been anxious, worried, or upset?" (1 = not at all, 2 = a little bit, 3 = some—enough to bother me, 4 = quite a bit, 5 = very much so, 6 = extremely so—to the point of being sick or almost sick); and, "Have you felt downhearted and blue?" (coded: 1 = none of the time, 2 = a little of the time, 3 = some of the time, 4 = a good bit of the time, 5 = most of the time, 6 = all of the time). For this study, all items were coded such that high scores denoted greater depressed affect (scale range: 4–24). The scale exhibited excellent internal-consistency reliability in this sample ($\alpha = .82$).

Variables assessing physical health status were used as covariates. These include *activity limitation* ("In general, about how much of the time does bad health, sickness, or pain stop you from doing the things you would have liked to be doing?"; coded: 1 = never or almost never, 2 = once in awhile, 3 = most of the time, 4 = all the time), *current prevalence of chronic disease* (self-report of a list of 11 physician-diagnosed health problems: arthritis or rheumatism, ulcers, cancer, high blood pressure, diabetes, emphysema, kidney disease, stroke, cirrhosis of the liver, hepatitis, heart condition; coded: 1 = yes, 0 = no [scale range: 0–11]), and the *enervation* subscale of the GWB [39]. The latter measure, which assesses lack of physical energy, consists of a combination of three items of different metrics ("Have you been waking up fresh and rested?"; "Have you felt tired, worn out, used-up, or exhausted?"; "How much energy, pep, vitality have you felt?") recoded so that all were equally weighted and high scores represented greater enervation (α in this sample = .70; scale range: 3–18).

Religious covariates included *religious attendance* ("How often do you attend religious services?"; coded: 1 = never, 2 = about once per year, 3 = several times per year, 4 = about once per month, 5 = 2-3 times per month, 6 = once a week, 7 = more than once a week), *prayer* ("About how often do you pray?"; coded: 1 = never, 2 = less than once per month, 3 = about 2-3 times per month, 4 = about once per week, 5 = several times per week, 6 = once a day, 7 = more than once a

day), and *self-rated religiosity* ("How religious would you say you are?"; coded: 1 = not religious at all, 2 = not too religious, 3 = fairly religious, 4 = very religious).

Psychosocial and sociodemographic constructs, also used as covariates, were assessed through validated scales or standard items. *Self-esteem* was measured by the 10-item short version of the Rosenberg scale, using a 4-point Likert agreement metric (α in this sample = .86; scale range: 10–40) [44]. *Mastery* was measured by the 7-item Pearlin scale, using an identical metric (α in this sample = .75; scale range: 7-28) [45]. *Social support* was measured by the two-dimensional APGAR scale, which assesses satisfaction with support from family and friends through respective 5-item scales with three response categories (α's in this sample = .90 [family] and .91 [friends]; scale ranges: 5–15) [46]. Other variables included *age, race/ethnicity* (5 categories recoded to 1 = Caucasian, 0 = non-Caucasian), *sex* (1 = female, 0 = male), *marital status* (5 categories recoded to 1 = married and living together, 0 = non-married), *education* (years of schooling), *current employment* (4 categories recoded to 1 = currently employed, 0 = not currently employed), *annual gross household income* (11 categories from "under $4,000" to "$50,000 or above"), and *current residence* (4 categories recoded to 1 = urban, 0 = non-urban).

Analysis

This study used a strategy of hierarchical ordinary least squares (OLS) regression to examine the association between self-reported religious love and depressed affect net of the effects of the hypothesized mediating factors. Model I represents the baseline bivariate association. Each successive model introduces respective covariates in order to test a particular hypothesis. Model II controls for effects of three measures of religious involvement (a test of the first hypothesis), Model III adds controls for effects of two scales assessing social resources (second hypothesis), Model IV adds controls for effects of two scales of psychological resources (third hypothesis), Model V adds controls for effects of three measures of physical health status (fourth hypothesis), and Model VI adds controls for effects of eight sociodemographic variables (fifth hypothesis). All analyses were conducted using SAS 6.12. Descriptive statistics (means and standard deviations) were calculated using the UNIVARIATE procedure, bivariate correlations (r's) were calculated using the CORR procedure, and hierarchical regression analyses (b's, se's, and β's) were conducted using the REG procedure.

RESULTS

In Table 1, descriptive statistics and bivariate correlations are shown for all study variables. Statistically significant correlates of religious love include religious attendance ($r = .34, p < .001$), prayer ($r = .59, p < .001$), self-rated religiosity

Table 1. Descriptive Statistics and Bivariate Correlations[a] of Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Religious Love																				
2 Depressed Affect	-24[b]																			
3 Religious Attendance	34[c]	-15[a]																		
4 Prayer	59[c]	-10	53[c]																	
5 Self-Rated Religiosity	46[c]	-12	52[c]	56[c]																
6 Family Support	14	-30[c]	04	06	10															
7 Friends Support	15	-20[b]	05	06	01	40[c]														
8 Self-Esteem	30[c]	-57[c]	16[a]	14	14	36[c]	42[c]													
9 Mastery	19[a]	-51[c]	08	-02	-04	26[c]	25[b]	64[c]												
10 Activity Limitation	-21[b]	30[c]	-05	-05	-01	-32[c]	-19[a]	-43[c]	-28[c]											
11 Chronic Disease	14	26[b]	08	00	07	-16	-04	-17	-05	02										
12 Enervation	03	56[c]	-21[b]	02	01	-16[a]	-15[a]	-25[c]	-29[c]	-14	21[a]									
13 Age	05	-02	10	20[b]	22[b]	08	-08	01	-02	-04	12	-02								
14 Caucasian	-13	-02	-31[c]	-21[b]	-15[a]	10	25[c]	03	01	-03	-04	07	11							
15 Female	-01	17[a]	13	09	02	05	26[c]	04	-07	-04	08	03	-13	05						
16 Married	10	-14	-03	07	13	15[a]	-06	-02	-01	-10	16	-02	26[c]	08	-10					
17 Education	-10	00	-03	-07	-11	13	13	05	10	-05	-08	00	02	15[a]	-02	08				
18 Employed	-14	-21[b]	04	00	01	-00	01	15[a]	11	-01	-12	-13	11	-02	-16[a]	07	34[c]			
19 Income	06	-31[c]	06	02	15[a]	14	08	16[a]	08	-18[a]	-01	-10	24[c]	16[a]	-20[b]	46[c]	30[c]	34[c]		
20 Urban Residence	03	15[a]	07	01	09	00	-06	-04	-06	01	08	13	01	-11	29[c]	-05	-16[a]	-06	-22[b]	
Mean	33.0	12.7	3.64	4.71	2.51	11.4	11.7	32.0	21.7	1.82	0.72	9.46	37.8	0.46	0.79	0.45	13.3	0.59	7.32	0.82
sd	8.68	4.50	2.03	2.06	0.87	3.12	3.03	6.04	3.77	0.79	2.11	2.82	12.6	0.50	0.41	0.50	2.42	0.49	2.83	0.39

Note: Decimal points were deleted in order to simplify the presentation of findings in this table.
[a] $p < .05$ (2-tailed). [b] $p < .01$. [c] $p < .001$.

($r = .46, p < .001$), self-esteem ($r = .30, p < .001$), mastery ($r = .19, p < 05$), activity limitation ($r = -.21, p < .01$), and depressed affect ($r = -.24, p < .01$).

In Table 2, results are shown for the hierarchical OLS regression of depressed affect onto religious love. Model I contains gross findings from the baseline bivariate regression. The standardized regression coefficient indicates a strong and statistically significant inverse association ($\beta = -.29$, $p < .01$) between religious love and depressed affect. In each successive model, variables are added that prove important in explaining the variance of depressed affect (R^2 increases from .09 to .66). Yet despite these comprehensive controls, religious love maintains a moderately strong and statistically significant inverse association with depressed affect.

Models II through VI contain net findings from multivariable regression analyses. Model II controls for effects of religiousness; the effects of religious love remain strong and statistically significant ($\beta = -.38$, $p < .001$). Model III adds controls for effects of family and friends support, with similar results ($\beta = -.33, p < .01$). Model IV adds controls for effects of self-esteem and mastery; this time an effect for religious love fails to attain statistical significance ($\beta = -.16$, n.s.). Model V adds controls for measures of physical health status; once again, strong and significant effects of religious love emerge ($\beta = -.21, p < .05$). Finally, Model VI adds controls for effects of eight sociodemographic variables. The effect size of religious love is unchanged, and remains strong and statistically significant ($\beta = -.21, p < .05$).

DISCUSSION

These findings point to a strong, statistically significant inverse association between a self-reported loving relationship with God and the presence of depressed affect. Moreover, this association withstands controlling for effects of all hypothesized mediating factors, including multiple dimensions of religious involvement, satisfaction with social support, self-esteem and mastery, and several measures of physical health status, as well as a variety of sociodemographic variables. Throughout the tested models, certain covariates exhibited more or less salience depending upon which other constructs were also present. For example, self-esteem and mastery had the greatest mitigating impact on the association between religious love and depressed affect, and elsewhere there were indications of mild to moderate suppressor effects. Overall, in the final model, these covariates together (18 scales or variables in all) accounted for 57 percent of the variance in depressed affect, yet reduced the structural effect of religious love on depressed affect only marginally (from $\beta = -.29, p < .01$, to $\beta = -.21, p < .05$).

It should be noted that these findings could represent a methodological artifact of a prevalence study design. Because data were collected cross-sectionally, it could be that higher levels of depressed affect led to weaker affirmations of a loving relationship with God. On the other hand, the recent (past-month) time

Table 2. Results of Hierarchical OLS Regression of Depressed Affect on Religious Love

	Model I			Model II			Model III			Model IV			Model V			Model VI		
Variable	b	se	β	b	se	β	b	se	β	b	se	β	b	se	β	b	se	β
Religious Love	−.16	.05	−.29[b]	−.21	.06	−.38[c]	−.18	.06	−.33[b]	−.09	.05	−.16	−.12	.05	−.21[a]	−.11	.05	−.21[a]
Religious Attendance				−.56	.24	−.25[a]	−.51	.24	−.23[a]	−.31	.21	−.14	−.14	.18	−.06	−.16	.18	−.07
Prayer				.44	.25	.20	.37	.25	.17	.26	.22	.12	.22	.18	.10	.10	.18	.04
Self-Rated Religiosity				.60	.61	.11	.54	.61	.10	.06	.53	.01	.17	.45	.03	.45	.46	.08
Family Support							−.20	.14	−.14	−.06	.12	−.04	.02	.11	.01	.01	.11	.01
Friends Support							−.17	.14	−.11	.10	.13	.06	.10	.11	.07	.03	.12	.02
Self-Esteem										−.23	.08	−.31[b]	−.16	.07	−.22[a]	−.14	.07	−.18
Mastery										−.35	.12	−.31[b]	−.28	.10	−.24[b]	−.26	.10	−.23[b]
Activity Limitation													−.06	.41	−.01	.01	.41	.00
Chronic Disease													.39	.33	.08	.36	.35	.07
Enervation													.70	.11	.45[c]	.64	.11	.42[c]
Age																.01	.03	.03
Caucasian																−.25	.63	−.03
Female																1.4	.83	.12
Married																.41	.71	.04
Education																.11	.15	.05
Employed																−.81	.66	−.09
Income																−.35	.13	−.23[b]
Urban Residence																−.46	.77	−.04
R^2		.09			.14			.18			.41			.60			.66	

Key: b = unstandardized regression coefficient; se = standard error; β = standardized regression coefficient.
[a]$p < .05$ (2-tailed). [b]$p < .01$. [c]$p < .001$.

referent of the GWB depressed affect subscale combined with inquiry about the nature of one's relationship with God presumably over the course of one's life, regardless of (i.e., controlling for) one's current level of religious participation, suggests that these findings are substantive.

In epidemiologic terms, these results may point to a protective effect of a loving relationship with God. This is quite intriguing. The hypothesized mediating factors, physical health, especially, are consistently strong determinants of affective disorders in general. Nonetheless, net of these effects, loving and being loved by God still exhibited a strong inverse association with depressed affect. Remarkably, it persisted even after controlling for mental health effects of public, private, and subjective religious expression. Further, as depicted in Model I, this construct by itself explained nearly 10 percent of the variance in depressed affect. This mirrors the explanatory power of this construct for physical health status [47]. The magnitude of these findings is near the high end of effect sizes observed in the literature for a religious factor in relation to a health- or well-being-related outcome.

For psychiatric epidemiology and clinical mental health research, the results of this study underscore the value of extending consideration to previously underinvestigated domains of religiousness. Evidence identifying indicators of exoteric religion—public religious behavior, religious affiliation, private religious practices, prayer—as protective factors for psychological distress has begun to accumulate. The present findings, though, reveal that continued exploration of concepts related to more esoteric religious expression—unitive or transcendent experiences, spiritually transformative events, loving and being loved by God—may identify more salient resources for mental health and psychological well-being. Yet moreso even than exoteric religion, the reputation of inner or personal religiousness has suffered "[i]n the face of psychiatry's longstanding tendency either to ignore or pathologize the religious and spiritual dimensions of human existence" [48, p. 443].

The results of the present study echo those of other recent investigations. For example, significantly higher absorption scores have been found among more intrinsically religious subjects [49]. Absorption is a normally distributed, stable personality trait linked to reports of altered states of consciousness and is possibly a component of hypnotic ability. This interesting finding led researchers to conclude that "[o]ne's underlying religious outlook or worldview thus may serve as a Rosetta stone for psychophysiologists, helping to suggest pathways for health-related research and intervention" [49, p. 75]. Like intrinsic religiosity, a self-perceived satisfactory relationship with God may marshal internal resources that facilitate coping with stressful life situations, such as poor health and other circumstances that are antecedent to the manifestation of depressive symptoms. A loving relationship with God thus may prove a vital and principal marker of successful religious coping [50]. Continued exploration of the apparently protective effect of this and related religious constructs for affective disorders and psychological distress in general is strongly warranted.

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REFERENCES

1. Levin JS, Chatters LM. Research on religion and mental health: An overview of empirical findings and theoretical issues. In: Koenig HG, ed., *Handbook of religion and mental health*. New York, NY: Academic Press; 1998:33-50.
2. Koenig HG. *The healing power of faith: Science explores medicine's last great frontier*. New York, NY: Simon & Schuster; 1999.
3. Levin JS, ed. *Religion in aging and health: Theoretical foundations and methodological frontiers*. Thousand Oaks, CA: Sage Publications; 1994.
4. Koenig HG. *Aging and God: Spiritual pathways to mental health in midlife and later years*. New York, NY: Haworth Press; 1994.
5. Larson DB, Pattison EM, Blazer DG, Omran AR, Kaplan BH. Systematic analysis of research on religious variables in four major psychiatric journals, 1978-1982. *American Journal of Psychiatry* 1986;143:329-334.
6. Larson DB, Sherrill KA, Lyons JS, Craigie FC, Thielman SB, Greenwold MA, Larson SS. Associations between dimensions of religious commitment and mental health reported in the *American Journal of Psychiatry* and *Archives of General Psychiatry*: 1978-1989. *American Journal of Psychiatry* 1992;149:557-559.
7. Levin JS, Vanderpool HY. Is frequent religious attendance *really* conducive to better health?: Toward an epidemiology of religion. *Social Science and Medicine* 1987; 24:589-600.
8. Idler EL, George LK. What sociology can help us understand about religion and mental health. In: Koenig HG, ed., *Handbook of religion and mental health*. New York, NY: Academic Press; 1998:51-62.
9. Willits FK, Crider DM. Religion and well-being: Men and women in the middle years. *Review of Religious Research* 1998;29:281-294.
10. Pollner M. Divine relations, social relations, and well-being. *Journal of Health and Social Behavior* 1989;30:92-104.
11. Krause N. Measuring religiosity in later life. *Research on Aging* 1993;15:170-197.
12. Koenig HG, George LK, Meador KG, Blazer DG, Dyck PB. Religious affiliation and psychiatric disorder among Protestant baby boomers. *Hospital and Community Psychiatry* 1994;45:586-596.
13. Brown DR, Ahmed F, Gary LE, Milburn NG. Major depression in a community sample of African Americans. *American Journal of Psychiatry* 1995;152:373-378.
14. Koenig HG, Cohen HJ, Blazer DG, Pieper C, Meador KG, Shelp F, Goli V, DiPasquale B. Religious coping and depression among elderly, hospitalized medically ill men. *American Journal of Psychiatry* 1992;149:1693-1700.
15. Kennedy GJ, Kelman HR, Thomas C, Chen J. The relation of religious preference and practice to depressive symptoms among 1,855 older adults. *Journal of Gerontology: Social Sciences* 1996;51B:P301-P308.
16. Koenig HG, Hays JC, George LK, Blazer DG, Larson DB, Landerman LR. Modeling the cross-sectional relationships between religion, physical health, social

support, and depressive symptoms. *American Journal of Geriatric Psychiatry* 1997; 5:131-144.
17. Fetzer Institute. *Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging Working Group*. Kalamazoo, MI: John E. Fetzer Institute; 1999.
18. George LK. Religious/spiritual history. In: Fetzer Institute. *Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging Working Group*. Kalamazoo, MI: John E. Fetzer Institute; 1999:65-69.
19. Glock C, Stark R. *Christian beliefs and anti-semitism*. New York, NY: Harper and Row; 1966.
20. Sorokin PA. Love: Its aspects, production, transformation, and accumulation. In: Sorokin PA, ed., *Explorations in altruistic love and behavior*. Boston, MA: The Beacon Press; 1950:3-73.
21. Sorokin PA. *The ways and power of love: Types, factors, and techniques of moral transformation*. Boston, MA: The Beacon Press; 1954.
22. Levin J. A prolegomenon to an epidemiology of love: Theory, measurement, and health outcomes. *Journal of Social and Clinical Psychology* 2000;19:117-136.
23. Wilson WP. Mental health benefits of religious salvation. *Diseases of the Nervous System* 1972;33:382-386.
24. Andreasen NJC. The role of religion in depression. *Journal of Religion and Health* 1972;11:153-166.
25. McCullough ME, Synder CR. Classical sources of human strength: Revisiting an old home and building a new one. *Journal of Social and Clinical Psychology* 2000;19:1-10.
26. Larson DB, Swyers JP, McCullough ME, ed. *Scientific research on spirituality and health: A consensus report. A report based on the Scientific Progress in Spirituality Conferences*. Rockville, MD: National Institute for Healthcare Research; 1998.
27. George LK. Social factors and the onset and outcome of depression. In: Schaie KW, Blazer D, House JS, eds., *Aging, health behaviors, and health outcomes*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1992:137-159.
28. Ellison CG. Religion, the life stress paradigm, and the study of depression. In: Levin JS, ed., *Religion in aging and health: Theoretical foundations and methodological frontiers*. Thousand Oaks, CA: Sage Publications; 1994:78-121.
29. Ellison CG, George LK. Religious involvement, social ties, and social support in a southeastern community. *Journal for the Scientific Study of Religion* 1994;33:46-61.
30. Krause N, Tran TV. Stress and religious involvement among older Blacks. *Journal of Gerontology: Social Sciences* 1989;44:S4-S13.
31. Lin N, Ensel WM. Life stress and health: Stressors and resources. *American Sociological Review* 1989;54:382-399.
32. Mirowsky J, Ross CE. Social patterns of distress. *Annual Review of Sociology* 1986; 12:23-45.
33. Tobin SS. Preserving the self through religion. Chapter 6 in: *Personhood in advanced old age: Implications for practice*. New York, NY: Springer Publishing Company; 1991:119-133.

34. Levin JS. Religious factors in aging, adjustment, and health: A theoretical overview. In: Clements WM, ed., *Religion, aging, and health: A global perspective*. Compiled by the World Health Organization. New York, NY: Haworth Press; 1989:133-146.
35. Koenig HG, Blazer DG. Epidemiology of geriatric affective disorders. *Clinics in Geriatric Medicine* 1992;8(2):235-251.
36. Taylor RJ. Structural determinants of religious participation among Black Americans. *Review of Religious Research* 1988;30:114-125.
37. Horwath E, Weissman MM. Epidemiology of depression and anxiety disorders. In: Tsuang MT, Tohen M, Zahner GEP, eds., *Textbook of psychiatric epidemiology*. New York, NY: Wiley-Liss; 1995:317-344.
38. Bailey KD. *Methods of social research*, second edition. New York, NY: Free Press; 1982.
39. Levin JS. Dimensions and correlates of general well-being among older adults. *Journal of Aging and Health* 1994;6:489-506.
40. McDowell I, Newell C. *Measuring health: A guide to rating scales and questionnaires*, second edition. New York, NY: Oxford University Press; 1996.
41. Bowling A. *Measuring health: A review of quality of life measurement scales*, second edition. Buckingham, U.K.: Open University Press; 1977.
42. Ware JE Jr., Johnston SA, Davies-Avery A, Brook RH. *Conceptualization and measurement of health for adults in the Health Insurance Study: Vol. III, mental health*. R-1987/3-HEW. Santa Monica, CA: RAND; 1979.
43. Kane RA, Kane RL. *Assessing the elderly: A practical guide to measurement*. Lexington, MA: Lexington Books; 1981.
44. Rosenberg M. *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press; 1965.
45. Pearlin LI, Menaghan EG, Lieberman MA, Mullan JT. The stress process. *Journal of Health and Social Behavior* 1981;22:337-356.
46. Smilkstein G, Ashworth C, Monantano D. Validity and reliability of the Family APGAR as a test of family function. *Journal of Family Practice* 1982;15:303-311.
47. Levin J. God, love, and health: Findings from a clinical study. *Review of Religious Research* 2001;42:277-293.
48. Turner RP, Lukoff D, Barnhouse RT, Lu FG. Religious or spiritual problem: A culturally sensitive diagnostic category in the DSM-IV. *Journal of Nervous and Mental Disease* 1995;183:435-444.
49. Levin JS, Wickramasekera IE, Hirshberg C. Is religiousness a correlate of absorption?: Implications for psychophysiology, coping, and morbidity. *Alternative Therapies in Health and Medicine* 1998;4(6):72-76.
50. Pargament KI. *The psychology of religion and coping: Theory, research, practice*. New York, NY: Guilford Press; 1997.

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