Belief in a Concerned God Predicts Response to Treatment for Adults With Clinical Depression

Patricia E. Murphy and George Fitchett
Rush University Medical Center

Belief in a concerned God has been shown to be associated with lower depression through the mediation of hopelessness. This study hypothesized that this relationship would also be true longitudinally. Shortly after admission to treatment and 8 weeks later, 136 adults with clinical depression completed the Beck Depression Inventory, the Beck Hopelessness Scale, and the Religious Well-Being Scale (RWB). Logistic regression models supported an association of baseline RWB, but not baseline hopelessness, with a 50% reduction in symptoms after 8 weeks. Persons in the upper third of RWB at admission were 75% more likely to have a response to treatment than persons in the lower third. Clinicians need to be aware of the role of religion for their clients. © 2009 Wiley Periodicals, Inc. J Clin Psychol 65:1000–1008, 2009.

Keywords: spirituality; religion; clinical depression; response to treatment; clinical sample

A reasonable body of evidence suggests that religiosity is protective for depressive symptoms and mental health in community samples (Koenig, McCullough, & Larson, 2001). In their meta-analysis of 147 studies, Smith, McCullough, and Poll (2003) found that, overall, higher levels of religiosity were related to fewer depressive symptoms (77% of studies). However, there was no association between religiousness and depression for 5% of the studies and a positive association for 18% showing the complexity of this relationship. Religious beliefs and practices have been shown to be associated with a decrease in depressive symptoms over time in the general population (Braam, Beekman, Deeg, Smit, & van Tilburg, 1997; Strawbridge, Shema, Cohen, & Kaplan, 2001) as well as in medical patients (Koenig, 2007; Koenig, George, & Peterson, 1998). Elderly patients in treatment for depression also

We thank Doctors Sushil Bagri and John Zajecka from the Department of Psychiatry at Rush University Medical Center who made it possible to gather information from patients. We appreciate the helpful comments and suggestions of Dr. Howard Kravitz, also from the Department of Psychiatry at Rush University Medical Center.

Correspondence concerning this article should be addressed to: Patricia E. Murphy, Department of Religion, Health and Human Value, Rush University Medical Center, 1653 West Congress Parkway, Chicago, IL 60612-3833; e-mail: Patricia_Murphy@rush.edu

 © 2009 Wiley Periodicals, Inc.
Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/jclp.20598

benefited from religious commitment (Bosworth, Park, McQuoid, Hays, & Steffans, 2003; Chen, Cheal, Herr, Zubritsky, & Levkoff, 2007).

There has been little study of the effects of religion for persons whose primary diagnosis is clinical depression in samples other than the elderly. There are reports that indicate turning to religion or spirituality is prevalent among persons diagnosed with mental illness (Fitchett, Burton, & Sivan, 1997; Tepper, Rogers, Coleman, & Malony, 2001). An open-ended survey (Russinova, Wwiorski, & Cash, 2002) asked persons with serious mental illness what alternative health care practices they used. The most frequent responses for those with major depression were religious or spiritual activities (56%). Our study was interested in whether or not turning to religious belief in a concerned God effects response to treatment for those diagnosed with clinical depression. The hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) provides a psychological approach to understanding cognitive precipitants of depression in the presence of a negative event. For persons who were already depressed, hopeless thoughts, including continuing to attribute stable causes and negative future consequences to stressful events, predicted an increase in depression over the period of one year (Abela, Aydin, & Auerbach, 2006). This suggests that hopelessness also impacts recovery from depression.

One of the few cross-sectional studies of the role of religion in nonelderly adults being treated for clinical depression found that belief in a concerned and caring God was related to lower levels of depression, a relationship that was mediated by hopelessness (Murphy et al., 2000). The stories and beliefs of many religious traditions include positive outcomes to difficulties and the supportive presence of a divine being in the midst of struggle. Such beliefs might temper the stress related to the depressive episode and continue to offset hopelessness.

For the person with clinical depression, biological symptoms can often interfere with psychosocial resources and psychotherapy. Medication plays an important role in reducing these symptoms. At the same time, the person needs to take whatever steps possible to work against depressive thoughts and behaviors (Allen, 2006). Our study explores the psychological influence of religion and of hopelessness during a time when people were also in need of medication. In a recent study of patients in clinical trials, higher levels of hopelessness, predicted nonresponse to pharmacological treatment (Papakostas et al., 2007). If religion offsets hopelessness, it could be a useful resource for the person waiting for medication to take effect. Following our previous study (Murphy et al., 2000), we hypothesized that greater baseline belief in a concerned and supportive God would be positively associated with greater likelihood of response to treatment for depression. We also hypothesized that hopelessness would mediate the impact of these religious beliefs on response to treatment. In other words, the mechanism by which religious belief would relate to lower depression would be through the relation of religious beliefs to hopelessness.

Method

Participants

Participants were recruited from persons receiving treatment for depression. One group came from persons enrolled in clinical trials for antidepressant medication at an outpatient psychiatric clinic based at a midwestern tertiary care medical center. To capture information about those who were most depressed, we included a second group of persons from the medical center's inpatient psychiatry units. Inclusion in the outpatient sample was based on the Structured Clinical Interview for DSM-III-R

(Spitzer, Williams, Gibbon, & First, 1992) administered by trained interviewers and diagnosed by psychiatrists. Inpatients in the study met *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) criteria for major depression or bipolar depression as diagnosed by their attending psychiatrist. Patients with the following conditions were excluded: mood disorder due to general medical condition, dementia, bereavement, psychotic disorders, organic mood disorder, borderline personality disorder, a history of substance abuse within the past 12 months, or a current manic episode. The medical center's institutional review board approved the study.

Outpatients and inpatients who met the study criteria were invited to take part in the study. The first survey was administered shortly after admission to treatment. For outpatients, the second survey was included in the data collection at the clinic at the standard eight weeks that clinical trials allow for medication to take effect. For the inpatients, the second survey was mailed after the same eight week period.

Of the 271 respondents who completed baseline surveys, 136 (50%) provided information 8 weeks later. Among these study completers, 101 (74%) were female, 108 (79%) White, 51 (38%) inpatients, with an average age of 41.1 years ($SD = 11.0$). The breakdown of denomination in those providing data at 8 weeks (based on nonmissing data) was Protestant (28%), Catholic (44%), Jewish (10%), Other (12%), and None (15%). The median score for baseline frequency of attendance at worship was once or twice a year and the median baseline frequency of private prayer was once per month. Chi-square, *t* tests, and nonparametric tests showed no demographic, denominational, or religious practice differences between study completers and dropouts. Outpatients were more likely than inpatients to complete the study ($\chi^2 = 5.09$, $p = .02$). Study completers had significantly higher scores on the admission Beck Hopelessness Scale, than dropouts ($p < .01$). There was a trend for study completers to be more depressed at baseline as measured by the Beck Depression Inventory ($p < .06$) and to have lower baseline levels of religious beliefs measured by the Religious Well-Being Scale ($p < .06$).

Measures

Psychiatric treatment includes pharmacological interventions. Persons respond to medications differentially and some do not respond at all. To accommodate the medical component of improvement, we used the common outcome measure for clinical trials, "response to treatment," which is defined as at least a 50% reduction in symptoms (Nierenberg & DeCocco, 2001). The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) measured the depth of depressive symptoms with 21 items rated from 0 to 3, with 63 indicating the strongest presence of symptoms. For this group, the alpha reliability was .87 (inpatients, $\alpha = .88$, outpatients, $\alpha = .81$), which is in the range for other psychiatric patients, $\alpha = .76$ to .95 (Beck, Steer, & Garbin, 1988) and similar to a nonclinical sample, $\alpha = .86$ (Endler, Rutherford, & Denisoff, 1999). To avoid an inflated correlation between BDI and the Hopelessness Scale, we used modified BDI scores (BDI-M) eliminating BDI item 2, which measures hopelessness. The ratio of the change in BDI-M at admission and BDI-M at 8 weeks to BDI-M at admission determined whether or not a participant had a response to treatment (coded 1) or not (coded 0).

For religious belief in a concerned and caring God, we used the Religious Well-Being (RWB) Scale, a 10-item subscale of the Spiritual Well-Being Scale (Paloutzian & Ellison, 1982). Respondents were invited to use their own definition of "God."

The RWB provides information about the respondent's belief in a caring God with items like, "I believe that God is concerned about my problems." Items are rated from *strongly disagree* (1) to *strongly agree* (6). Scores range from 10 to 60; higher scores indicate a higher level of religious well-being. Among the study completers, RWB had an alpha reliability of .94 (inpatients, $\alpha = .92$, outpatients, $\alpha = .94$), which is slightly higher than the average alpha of .88 from nonclinical samples (Paloutzian & Kirkpatrick, 1995). The validity of RWB was demonstrated by a positive correlation with intrinsic religious orientation, $r = .79$, and a negative association with a loneliness scale (*r*s range from $-.19$ to $-.48$; Ellison, 1983) in nonclinical samples.

An important covariate of depression, which we had used in our cross-sectional study, is hopelessness, which we measured with the Beck Hopelessness Scale (HS). Developed by Beck, Weissman, Lester, and Trexler (1974), this 20-item, true–false measure indicates the degree of hopelessness; scores can range from 0 to 20 and higher values represent more hopelessness. The alpha reliability for this sample was .89 (inpatients, $\alpha = .91$; outpatients, $\alpha = .86$), which is slightly less than alpha of .97 for psychiatric patients and higher than nonpsychiatric controls with alpha of .79 (Bouvard, Charles, Guerin, Aimard, & Cottraux, 1992). In addition, to characterize the sample, we collected demographic information for age, gender, race (White vs. other), and medical status (inpatient vs. outpatient). We also included information about frequency of attendance at worship, frequency of private prayer, and religious affiliation. None of these religious variables had been predictive in our prior study and were not included in our analysis (Murphy et al., 2000).

Data Analyses

After exploring differences between study completers and dropouts, we examined differences between those who responded to treatment and those who did not. To control for expected change in baseline scores for RWB and HS, we created residualized change scores for each by regressing the baseline scores on the follow-up scores (Cohen, Cohen, West, & Aiken, 2003).

We used logistic regression to model our hypotheses that baseline RWB would predict response to treatment with HS mediating the effect. To test whether RWB met the criteria for mediation we first predicted response to treatment using only RWB (Model 1). We tested the second condition for mediation by determining the significance of baseline HS as the only predictor of response to treatment. To meet the third criteria for mediation, we assessed the correlation of baseline RWB and baseline HS (Baron & Kenny, 1986). In Model 2, we added HS to RWB. In subsequent models we added residualized change scores in RWB (ΔRWB) followed by residualized change scores in HS (ΔHS). To not overfit the model (Babyak, 2004), we restricted demographic variables to those that were associated with response to treatment.

Results

Characteristics of the sample and differences between those with and without response to treatment are given in Table 1.

In our test to assess mediation, using logistic regression, RWB predicted response to treatment. The second step to evaluate mediation failed because baseline HS, with no controls, was not a predictor of response to treatment.

Table 1
Sample Characteristics

Variable	Total sample $n = 136$	Response to treatment $n = 42$ (31%)	Nonresponse to treatment $n = 94$ (69%)	Significance
Age (Mean, *SD*)	41.1 (11)	40.7 (12.0)	41.2 (10.6)	ns
Sex				
Female	101 (74%)	32 (32%)	69 (68%)	ns
Male	35 (26%)	10 (29%)	25 (71%)	
Race				
White	108 (79%)	29 (27%)	79 (73%)	$\chi^2 = 4.00, p < .05$
Other	28 (21%)	13 (46%)	15 (54%)	
Medical status				
Inpatient	51 (38%)	17 (33%)	34 (67%)	ns
Outpatient	85 (63%)	25 (29%)	60 (71%)	
Admission BDI (Mean, *SD*)	28.3 (9.8)	27.5 (8.8)	28.7 (10.3)	ns
Admission hopelessness (Mean, *SD*)	11.7 (5.1)	10.4 (5.3)	12.2 (4.9)	$t = 2.0$, $p < .05$
Admission RWB (Mean, *SD*)	34.8 (14.5)	40.0 (11.9)	32.4 (15.0)	$t = -3.1$, $p < .01$
Raw change in HS admission to 8 weeks (Mean, *SD*)	−1.7 (4.6)	−4.4 (3.8)	−0.4 (4.5)	$t = 5.0$, $p < .001$
Raw change in RWB admission to 8 weeks (Mean, *SD*)	0.2 (8.1)	2.1 (7.9)	−0.6 (8.1)	ns

Note. BDI = Beck Depression Inventory; RWB = Religious Well-Being Scale; HS = Hopelessness Scale.

In our logistic regression analysis to test our hypothesis about RWB, persons with higher belief (RWB) scores at baseline had increased likelihood of responding to treatment (see Table 2). Religious Well-Being Scale score remained a significant predictor of response to treatment with the addition of covariates in successive models. There is a 15-point difference between the upper third and the lower third on RWB in this sample. The odds ratio for RWB from Model 5 indicates that for a unit increase in RWB, there is a 5% greater likelihood of responding to treatment. Compared to those with scores in the lower third for RWB, persons in the upper third of RWB were 75% more likely to respond to treatment.

Discussion

Consistent with our hypothesis, those with strong beliefs in a personal and concerned God have an increased likelihood of response to treatment for depression. Bennett (2001) described how belief in a God who listens to and knows our deepest thoughts is at the core of many different religions. Perhaps this belief in an understanding being who accepts us unconditionally provides healing and support for those locked in the isolation of depression.

There is evidence that symptoms of depression are related to social support (cf., Tsuru et al., 2008). The measure of religious belief in our current study includes an aspect of support from a concerned God. In other studies, this divine relation has predicted greater well-being (Pollner, 1989) and lower levels of depressive symptoms (Levin, 2002; Maton, 1989).

Contrary to our hypothesis, baseline hopelessness did not mediate belief in a caring God because it was not a significant predictor of response to treatment. This is inconsistent with the results of a study of 312 outpatients in an 8-week

Table 2
Logistic Regression of RWB and HS on Response to Treatment

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B *SE B*	OR 95% CI	*B* *SE B*	OR 95% CI	*B* *SE B*	OR 95% CI	*B* *SE B*	OR 95% CI	*B* *SE B*	OR 95% CI
RWB	0.04**	1.04	0.03*	1.03	0.04*	1.04	0.04*	1.04	0.05*	1.05
	.01	1.01, 1.07	.02	1.00, 1.07	.02	1.00, 1.07	.02	1.01, 1.08	.02	1.01, 1.09
HS			−0.03	.97	−0.03	.98	−0.04	.97	−0.02	.98
			.04	.90, 1.06	.04	.89, 1.06	.05	.88, 1.06	.05	.89, 1.08
Residualized Δ RWB					0.07**	1.07	0.05	1.05	0.04	1.05
					.03	1.02, 1.13	.03	.99, 1.11	.03	.98, 1.11
Residualized Δ HS							−0.30***	.74	−0.32***	.73
							.07	.65, .85	.07	.64, .84
White									−1.37*	.25
									.57	.08, .78

Note. RWB = Religious Well-Being Scale; HS = Hopelessness Scale. *$p < .05$. **p.01. ***$p < .001$.

pharmacological trial (Papakostas et al., 2007), where baseline HS was a significant predictor of response to treatment ($p = .04$). It is notable that in the study by Papakostas and colleagues (2007), for those who had a response to treatment versus those who did not, the mean admission scores for HS and standard deviations were almost identical to our study, 10.9 (4.9) and 12.5 (5.1), respectively. This suggests that, with a larger sample, HS might have been a significant predictor of response to treatment in our study.

Another perspective on the results of our study is that low RWB scores might indicate a loss of belief or religious struggle (Fitchett et al., 2004) in the face of symptoms, which would add to a patient's distress. If this is true, it is important for clinicians to assess for religious struggle in persons with depressive symptoms.

The strength of our study is that it is one of a few studies with participants diagnosed with clinical depression with a longitudinal outcome indicating the impact of religion. Lack of information at follow-up on the dropouts reduces the strength of our conclusions by eliminating persons for whom BDI and HS were highly correlated (.71). Other study limitations could be addressed in future studies. For example, a larger sample would provide power for a more adequate test of the role of hopelessness in this association. Attrition in our study was high (50%). In future studies, better follow-up might reduce attrition and provide a better balance between outpatients and inpatients at follow-up. Collecting data at several time points, particularly over a longer period of time, would provide stronger evidence about the RWB-response to treatment relationship. Including other mediators, such as self-esteem or social support, would permit tests of their possible role in the RWB-response to treatment relationship. Future studies should also include an assessment of negative religious coping (Pargament, Smith, Koenig, & Perez, 1998) to clarify the possible role of religious struggle in low RWB scores.

The present study is observational; these results support, but do not prove that belief in a caring and concerned God plays a role in response to treatment for people diagnosed with depression. Persons with depression often describe using religion to cope. The results of the present study suggest that when treating persons diagnosed with depression, clinicians should consider inquiring about and providing support for this important resource.

References

Abela, J.R.Z., Aydin, C., & Auerbach, R.P. (2006). Operationalizing the "vulnerability" and "stress" components of the hopelessness theory of depression: A multi-wave longitudinal study. Behaviour Research and Therapy, 44, 1565–1583.

Abramson, L.Y., Metalsky, G.I., & Alloy, L.B. (1989). Hopelessness depression: A theory-based subtype of depression. Psychological Review, 96, 358–372.

Allen, J.G. (2006). Coping with depression: From catch-22 to hope. Arlington, VA: American Psychiatric Publishing.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Babyak, M.A. (2004). What you see may not be what you get: A brief, nontechnical introduction to overfitting in regression-type models. Psychosomatic Medicine, 66, 411–421.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173–1182.

Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford Press.

Beck, A.T., Steer, R., & Garbin, M. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8, 77–110.

Beck, A.T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. Journal of Consulting and Clinical Psychology, 42, 861–865.

Bennett, M.J. (2001). The empathic healer: An endangered species? San Diego, CA: Academic Press.

Bosworth, H.B., Park, K., McQuoid, D.R., Hays, J.C., & Steffans, D.C. (2003). The impact of religious practice and religious coping on geriatric depression. International Journal of Geriatric Psychiatry, 18, 905–914.

Bouvard, M., Charles, S., Guerin, J., Aimard, G., & Cottraux, J. (1992). Étude de l'échelle de désespoir de Beck (Hopelessness Scale): Validation et analyse factorielle [Study of the Hopelessness Scale: Validation and factorial analysis]. L'Encephale, 18, 237–240.

Braam, A.W., Beekman, A.T.F., Deeg, D.J.H., Smit, J.H., & van Tilburg, W. (1997). Religiosity as a protective or prognostic factor of depression in later life: Results from a community survey in The Netherlands. Acta Psychiatrica Scandinavika, 96, 199–205.

Chen, H., Cheal, K., Herr, E.C.M., Zubritsky, C., & Levkoff, S.E. (2007). Religious participation as a predictor of mental health status and treatment outcomes in older persons. International Journal of Geriatric Psychiatry, 22, 144–153.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.). Mahwah, NJ: Erlbaum.

Ellison, C.W. (1983). Spiritual well-being: Conceptualization and measurement. Journal of Psychology and Theology, 11, 330–340.

Endler, N.S., Rutherford, A., & Denisoff, E. (1999). Beck Depression Inventory: Exploring its dimensionality in a nonclinical population. Journal of Clinical Psychology, 55, 1307–1312.

Fitchett, G., Burton, L.A., & Sivan, A.B. (1997). The religious needs and resources of psychiatric inpatients. Journal of Nervous and Mental Disorders, 185, 320–326.

Fitchett, G., Murphy, P.E., Kim, J., Gibbons, J., Cameron, J.R., & Davis, J.A. (2004). Religious struggle: Prevalence, correlates and mental health risks in diabetic, congestive heart failure, and oncology patients. International Journal of Psychiatry in Medicine, 34, 179–196.

Koenig, H.G. (2007). Religion and remission of depression in medical inpatients with heart failure/pulmonary disease. Journal of Nervous and Mental Disease, 195, 389–395.

Koenig, H., George, L.K., & Peterson, B.L. (1998). Religiosity and remission of depression in medically ill older patients. American Journal of Psychiatry, 155, 536–542.

Koenig, H.G., McCullough, M.E., & Larson, D.B. (2001). Handbook of religion and health. New York: Oxford University Press.

Levin, J. (2002). Is depressed affect a function of one's relationship with God?: Findings from a study of primary care patients. International Journal of Psychiatry in Medicine, 32, 379–393.

Maton, K.I. (1989). The stress-buffering role of spiritual support: Cross-sectional and prospective investigations. Journal for the Scientific Study of Religion, 28, 310–323.

Murphy, P.E., Ciarrocchi, J.W., Piedmont, R.L., Cheston, S., Peyrot, M., & Fitchett, G. (2000). The relation of religious belief and practices, depression, and hopelessness in persons with clinical depression. Journal of Consulting and Clinical Psychology, 68, 1102–1106.

Nierenberg, A.A., & DeCocco, L.M. (2001). Definitions of antidepressant treatment response, remission, nonresponse, partial response, and other relevant outcomes: A focus on treatment-resistant depression. Journal of Clinical Psychiatry, 62(Suppl.), 5–9.

Paloutzian, R.F., & Ellison, C.W. (1982). Loneliness, spiritual well-being and the quality of life. In L.A. Peplau & D. Perlman (Eds.), Loneliness: A sourcebook of current theory, research and therapy (pp. 224–236). New York: Wiley.

Paloutzian, R., & Kirkpatrick, L. (1995). The scope of religious influences on personal and societal well-being. Journal of Social Issues, 51(2), 1–11.

Papakostas, G.I., Petersen, T., Homberger, C.H., Green, C.H., Smith, J., Alpert, J.E., et al. (2007). Hopelessness as a predictor of non-response to Fluoxetine in major depressive disorder. Annals of Clinical Psychiatry, 19, 5–8.

Pargament, K.I., Smith, B.W., Koenig, H.G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. Journal for the Scientific Study of Religion, 37, 10–724.

Pollner, M. (1989). Divine relations, social relations, and well-being. Journal of Health and Social Behavior, 30, 92–104.

Russinova, Z., Wwiorski, N.J., & Cash, D. (2002). Use of alternative health care practices by persons with serious mental illness: Perceived benefits. American Journal of Public Health, 92, 1600–1603.

Smith, T.B., McCullough, M.E., & Poll, J. (2003). Religiousness and depression: Evidence for a main effect and the moderating influence of stressful life events. Psychological Bulletin, 129, 614–636.

Spitzer, R.L., Williams, J.B., Gibbon, M., & First, M.B. (1992). The Structured Clinical Interview for DSM-III-R (SCID). I: History, rationale, and description. Archives of General Psychiatry, 49, 624–629.

Strawbridge, W.J., Shema, S.J., Cohen, R.D., & Kaplan, G.A. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. Annals of Behavioral Medicine, 23, 68–74.

Tepper, L., Rogers, S.A., Coleman, E.M., & Malony, H.N. (2001). The prevalence of religious coping among persons with persistent mental illness. Psychiatric Services, 52, 660–665.

Tsuru, J., Akiyoshi, J., Tanaka, Y., Matsushita, H., Hanada, H., Kodama, K., et al. (2008). Social support and enhanced suppression of adrenocorticotropic hormone and cortisol responses to hypothalamic–pituitary–adrenal function and thyrotropin-releasing hormone tests in patients with major depressive disorder. Biological Psychology, 78, 159–163.