

Incorporating Spiritual Beliefs Into a Cognitive Model of Worry*

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Cognitive theory and research have traditionally highlighted the relevance of the core beliefs about oneself, the world, and the future to human emotions. For some individuals, however, core beliefs may also explicitly involve spiritual themes. In this article, we propose a cognitive model of worry, in which positive/negative beliefs about the Divine affect symptoms through the mechanism of intolerance of uncertainty. Using mediation analyses, we found support for our model across two studies, in particular, with regards to negative spiritual beliefs. These findings highlight the importance of assessing for spiritual alongside secular convictions when creating cognitive-behavioral case formulations in the treatment of religious individuals. © 2011 Wiley Periodicals, Inc. *J Clin Psychol* 67:691–700, 2011.

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Cognitive theory posits that underlying beliefs and thoughts lie at the root of human affect. More specifically, core beliefs influence perceptions and engender situation-specific automatic thoughts, which, in turn, lead to emotional states (Beck, 1995). This model has enhanced our understanding of anxiety (Clark & Beck, 2010), depression (Hollon & Dimidjian, 2009), personality disorders (Davidson, 2008), and even psychosis (Beck, Rector, Stolar, & Grant, 2009). Further, although the necessity of working directly with cognitions has been questioned (Longmore & Worrell, 2007), the widespread use of cognitive techniques (e.g., thought records, cognitive restructuring, guided imagery) underscores the broad utility and theoretical validity of the cognitive model. To date, cognitive behavioral research and theory have primarily examined the cognitive triad, involving beliefs about oneself, the world, and the future (Beck). For some individuals, however, beliefs may also involve explicit spiritual themes. Furthermore, spiritual beliefs can directly influence how individuals perceive themselves, the world, and their future. Thus, while the parsimony of cognitive models renders them capable of integrating spiritual themes, the relevance of spirituality and religion remains unclear without specific, testable, theoretical models.

In recognition of the relevance of spirituality to some individuals, several clinical protocols have successfully integrated religious/spiritual content into a cognitive behavioral framework (e.g., Johnson & Ridley, 1992; Propst, Ostrom, Watkins, Dean, & Mashburn, 1992; see Paukert et al., 2009, for a review). Because many religious communities fail to access conventional psychological services out of preference for spiritually integrated care (Puchalski, Larson, & Lu, 2001), spiritually integrated treatments are an important dissemination effort (Rosmarin, Pargament, & Robb, 2010). However, the mechanisms, by which spirituality may shape emotional states, and the place of spiritual beliefs within the cognitive model remain under-researched and ambiguous. Consequently, most practitioners are unprepared to conceptualize how spiritual beliefs may contribute to affective states, and thus many struggle to integrate such

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themes into treatment in a spiritually sensitive manner. To address this gap, we sought to examine how spiritual core beliefs can be integrated into a cognitive model of worry.

One spiritual construct that appears to have relevance to human worry is trust/mistrust in God. Trust in God has its origins in traditional Jewish thought (Ibn Pakuda, 1996) but is nevertheless applicable to all monotheistic traditions. Principally, trust in God involves the notion that God, or a Higher Power, is taking care of one's best interests. In particular, it involves the beliefs that the Divine (a) has regard for all worldly affairs (omniscience), (b) is greater than other powers/forces (omnipotence), and (c) is merciful and generous (omnibenevolence). By contrast, some religious individuals may veer from traditional perspectives and come to believe that the Divine is intentionally ignorant or malevolent. This may result in mistrust in God, which involves a sense that God is deliberately *not* providing for one's well-being. Thus, although trust in God reflects the presence or absence of basic faith, mistrust in God appears to be connected to Divine spiritual struggles (Pargament, Murray-Swank, Magyar, & Ano, 2005). It is important to note that although trust and mistrust in God are not orthogonal, as they tend to be collinear (negatively correlated), factor analyses have suggested that they are disparate constructs that can be both present or absent for some individuals (see Rosmarin, Pargament, & Mahoney, 2009, for a discussion). Previous research has connected trust in God to lower depression, anxiety, and worry, and mistrust in God to higher levels of these symptoms in religious communities (Rosmarin, Pargament et al., 2009; Rosmarin, Krumrei, & Andersson, 2009). However, the extant research has been cross-sectional in design and has not involved mediation or pathway analyses. The specific links between these variables thus require further theoretical explanation and analysis.

It is possible, for example, that trust and mistrust in God may affect worry through the mechanism of intolerance of uncertainty. Intolerance of uncertainty is a cognitive vulnerability for the development of pathological worry involving the tendency to be greatly bothered by even a small possibility of a negative event occurring (Dugas, Freeston, & Ladouceur, 1997). Recent cognitive models have postulated that worry and its associated behavioral responses (e.g., reassurance-seeking, double-checking, procrastination) are primarily associated with uncertain and ambiguous situations (Dugas et al., 2007), and several studies have suggested that intolerance of uncertainty is an important contributing factor to the etiology and maintenance of worry (see Behar, Dobrow-DiMarco, Hekler, Mohlman, & Staples, 2009, for a discussion and review). However, a trust in a God worldview in which God is seen to be knowledgeable, powerful, and good may engender positive appraisals of events and thus decrease the need for certainty and predictability. Trust in God may also promote positive spiritual emotions, religious coping, and a sense of connectedness with transcendence, thus increasing tolerance for uncertain life situations. Mistrust in God, on the other hand, may exacerbate intolerance of uncertainty by promoting fundamental questions, doubts, conflicts, and struggles with the Divine during stressful periods of life (Pargament et al., 2005). Mistrust in God may further create a sense of urgency when faced with ambiguity, thus leading to decreased tolerance of uncertainty and increased worry.

The present article therefore reports results from two studies examining how trust/mistrust in God may affect worry through the medium of intolerance of uncertainty. In Study 1, a large religious community sample of Jewish and Christian believers completed measures of trust/mistrust in God, intolerance of uncertainty, and worry. Analyses examined our hypothesized mediation model and ascertained the direction of effect between each of our variables of interest. In Study 2, we report secondary analyses from a randomized clinical trial of a spiritually integrated treatment, to examine whether changes in trust/mistrust in God over time were associated with changes in intolerance of uncertainty and worry.

Study 1

Method

Procedure and participants. Participants were recruited to participate in an Internet-based survey on "the relationship between religiousness and well-being/distress" via web-based advertising on religious community websites, e-mails sent to distribution lists of religious organizations, and a "snowball" sampling, whereby participants were asked to

inform their friends and associates about the study to aid in recruitment. No monetary or other compensation was given for participation. The sample comprised 332 self-reported believers (117 Christian [35%] and 216 Jewish [65%]; 205 women [60%], 126 men [38%], and two participants who did not report gender), with a mean age of 36.2 years (standard deviation $SD = 14.1$). Of Christian participants, the majority were Protestant ($n = 95$; 81%), and of Jewish participants, the majority were Orthodox ($n = 139$; 64%). The sample was considerably religious in that 88% ($n = 296$) of participants reported that religion is “very important” in their life, and 88% ($n = 293$) reported engaging in prayer on a weekly or greater basis. The majority of participants were from the United States ($n = 187$) and Canada ($n = 90$), but a sizable portion was from Israel ($n = 25$), Europe ($n = 15$), and elsewhere ($n = 15$) (e.g. South America, South Africa, and Australia).

Measures

Trust/mistrust in God. We used a previous measure of trust/mistrust in God (TIG/MIG; Rosmarin, Pargament, Pirutinsky, & Mahoney, 2010) that comprised 20 attitudinal statements about the nature of the Divine. Items are divided across two subscales comprising 11 positive items (e.g., God is compassionate towards human suffering) and nine negative items (e.g., Sometimes God is unkind to me for no reason), and participants rate their agreement with items on a 5-point Likert-type scale. Previous research has suggested a stable two-factor structure and good predictive and convergent validity and internal reliability (Rosmarin, Krumrei et al., 2009; Rosmarin, Pargament et al., 2009). In the current sample, both subscales displayed adequate internal consistency (trust $\alpha = .95$, mistrust $\alpha = .69$).

Intolerance of uncertainty. Intolerance of uncertainty was measured with the short-version of the Intolerance of Uncertainty Scale (Carleton, Norton, & Asmundson, 2007), which comprises 12 statements reflecting this construct (e.g., Unforeseen events upset me greatly). This measure asks respondents to rate the degree to which items are characteristic of them using a 5-point Likert-type scale. Previous research has shown strong support for the validity and reliability of this brief measure (Carleton et al.), making this measure a suitable alternative to its longer parent form (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994). Internal consistency in the current sample was high ($\alpha = .89$).

Worry. Worry was assessed with the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990). This measure comprises 16 items assessing for pathological worry (e.g., my worries overwhelm me), which respondents rate the degree to which items are generally characteristic of them using a 5-point Likert-type scale. The PSWQ has well-established psychometric properties (Brown, 2003). Internal consistency in the current sample was adequate ($\alpha = .78$).

Statistical Analysis

To examine the relevance of trust/mistrust in God to intolerance of uncertainty and worry, we conducted mediation analyses. Trust and mistrust were evaluated separately because of the collinear nature of these constructs ($r = -.54$ in the present study). We hypothesized that TIG would correlate with less worry, MIG would predict greater worry, and that both relationships would be mediated by intolerance of uncertainty (see Fig. 1). Using Baron and Kenny’s (1986) step-by-step mediation approach, we examined whether (a) TIG/MIG were significantly correlated with worry, (b) TIG/MIG were significantly correlated with intolerance of uncertainty, (c) intolerance of uncertainty was significantly correlated with worry after controlling for TIG/MIG, and (d) the correlation between TIG/MIG and worry was attenuated once intolerance of uncertainty was controlled for. Additionally, we utilized the Sobel test (1990) to further evaluate whether reductions in associations were statistically significant.

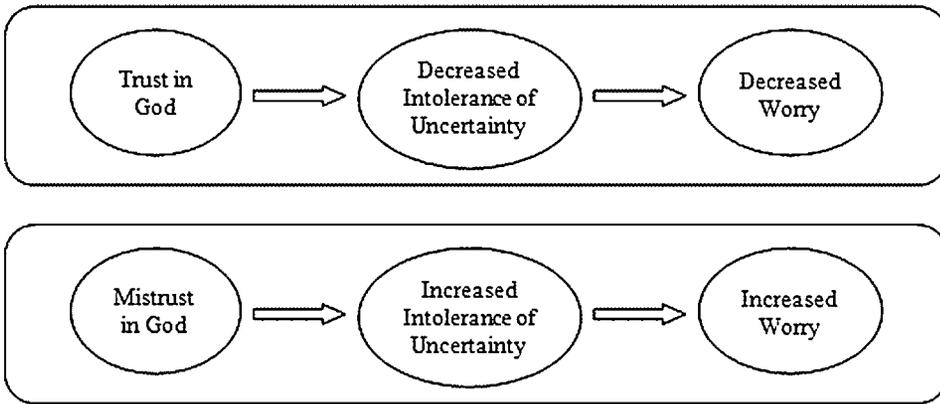


Figure 1. A proposed cognitive model of spiritual beliefs and worry.

Results

Descriptive values and zero-order correlations between each of the study variables can be found in Table 1. Separate analyses were conducted for TIG and MIG, respectively, involving four steps corresponding to the above-mentioned criteria for mediation. With regards to trust in God, higher TIG was significantly correlated with lower levels of worry in step 1 ($r = -.20$, $p = .001$). In step 2, higher TIG was correlated with lower intolerance of uncertainty ($r = -.15$, $p = .009$). In step 3, the partial correlation between intolerance of uncertainty and worry controlling for TIG was significant ($pr = .63$, $p < .001$). Finally, in step 4, the partial correlation between TIG and worry was partially attenuated once intolerance of uncertainty was controlled for ($pr = -.13$, $p = .04$). Findings were confirmed using a Sobel test ($z = -2.84$, $p = .004$), which indicated that the reduction in the association between TIG and worry was statistically significant. With regards to mistrust in God, higher MIG significantly correlated with greater worry ($r = .17$, $p = .003$; step 1) and intolerance of uncertainty ($r = .12$, $p < .05$; step 2). In addition, intolerance of uncertainty and worry remained significantly correlated when controlling for MIG ($pr = .62$, $p < .001$; step 3). Finally, the correlation between MIG and worry was significantly (partially) reduced once intolerance of uncertainty was controlled for ($pr = .13$, $p < .05$; Sobel test $z = 1.97$, $p < .05$; step 4). Thus, both proposed models met all four criteria for mediation, indicating that the relationship of both TIG and MIG to worry was partially mediated through the mechanism of intolerance of uncertainty.

As the variables in this study were assessed contemporaneously, we conducted additional analyses to examine reverse models in which intolerance of uncertainty's association with worry was mediated by TIG and MIG. Neither of these models was significant, suggesting that our proposed models are unidirectional. To further evaluate our results, we conducted a series of moderated mediation analyses (see Muller, Judd, & Yzerbyt, 2005) examining whether the relationships between TIG/MIG, intolerance of uncertainty, and worry differed for Jewish and Christian participants. Results indicated that correlations between TIG and intolerance of uncertainty did not differ significantly between groups, $\Delta r^2 = .01$, $F(1, 289) = 2.63$, $p = .11$. TIG and worry differed, $\Delta r^2 = .02$, $F(1, 267) = 4.46$, $p = .04$, such that among Jews, TIG was only weakly associated with worry ($r = -.14$, $p = .05$; step 1); however, these findings were not significant after Bonferroni correction. Correlations between MIG and intolerance of uncertainty, $\Delta r^2 = .004$, $F(1, 293) = 1.15$, $p = .28$, and MIG and worry, $\Delta r^2 = .001$, $F(1, 276) = .02$, $p = .99$, did not significantly differ between Jews and Christians. These findings indicate that Jewish/Christian affiliation did not moderate the mediation effects found in this study.

Discussion

The results of this study offer preliminary support for the proposed integration of spiritual beliefs about the Divine into a cognitive model of worry. The associations between both trust

Table 1
 Study 1: Descriptive Statistics and Zero-Order Correlations for Study Variables

	<i>TIG</i>	<i>MIG</i>	<i>IU</i>	<i>W</i>
Trust in God (<i>TIG</i>)	–			
Mistrust in God (<i>MIG</i>)	–.54***	–		
Intolerance of Uncertainty (<i>IU</i>)	–.15**	.12*	–	
Worry (<i>W</i>)	–.20**	.16**	.64***	–
<i>M</i>	44.01	15.51	26.38	41.90
<i>SD</i>	11.52	5.26	8.23	13.65
Range	11–55	13–52	12–55	17–80

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

in God with less worry and mistrust in God with greater worry were found to be partially mediated by intolerance of uncertainty. Further, we did not find support for reverse models in which associations between intolerance of uncertainty were mediated by trust or mistrust in God. It should be noted, however, that the majority of the sample was considerably religious and these results may not hold for all believers. Furthermore, the correlations between the variables of interest in this study were relatively small, and further, causal relationships cannot be determined because of the cross-sectional nature of this investigation. Thus, in Study 2 we sought to replicate and further investigate the relationship between these variables in the context of a randomized clinical trial of a spiritually integrated treatment (SIT) program for anxiety symptoms.

Study 2

Method

This study involves secondary analyses of results from a randomized controlled trial of a SIT for subclinical anxiety among religious Jews. A brief description of the methods and intervention is provided below as pertinent to the present analyses, and a complete description of study procedures is reported elsewhere (Rosmarin, Pargament, Pirutinsky et al., 2010). We proposed that during the course of spiritually integrated treatment, changes in trust/mistrust in God (*TIG/MIG*) would be associated with changes in worry, and that this relationship would be mediated by changes in intolerance of uncertainty.

Procedure and participants. Jewish individuals age 18 years or older were recruited via Jewish mental health organizations, community organizations, and Internet websites to participate in an online treatment study for worry and stress. No monetary compensation was given for participation, however treatment was provided for free. All study procedures (informed consent, participant screening, randomization of participants, administration of assessments, participation in treatment, tracking of treatment completion, and communication with study participants) were conducted online between September 2008 and June 2009. A total of 125 individuals were randomized to one of three groups: SIT, progressive muscle relaxation (PMR), or a waitlist control, condition in which they received no treatment. SIT and PMR participants were provided with access to self-administered treatment for approximately 30-minutes each day for a period of 2 weeks (14 days).

Analyses in the present study were conducted with $n = 39$ ¹ individuals in the SIT group. All participants in this study completed pretreatment and posttreatment assessments. SIT participants did not differ on primary, secondary or spiritual outcomes, or demographic factors to other study groups. Participants ranged in age from 20 to 68 years (mean

¹In our initial report (Rosmarin, Pargament, Pirutinsky, & Mahoney, 2010), we presented findings from $n = 36$ individuals presenting with elevated levels of worry and stress who received SIT. Given the focus on worry in the present paper, we analyzed data from all individuals suffering from elevated worry (regardless of stress), resulting in the inclusion of an addition three participants.

[M] = 41.40, SD = 13.81) and 66.7% were female. Most participants (87.2%) reported having a college degree or higher education, and the majority was American (64%), with additional participants from Israel, Canada, and Australia. Religious affiliation in the sample was distributed as follows: 25.6% Hassidic (n = 10); 38.5% Yeshiva Orthodox (n = 15); 15.4% Modern Orthodox (n = 6); 7.7% Conservative (n = 3); 10.3% Reform (n = 4); and 2.6% other Jewish affiliation (n = 1). Thus, 64.1% of the sample reported affiliation with Orthodox Judaism. Mean levels of worry in the sample were 1.7 SD above the mean of community norms (Gillis, Haaga, & Ford, 1995), indicating near-clinical levels of symptoms.

Spiritually integrated treatment. We worked in conjunction with ultra-Orthodox Jewish community leaders to develop a SIT program designed to increase trust in God, decrease mistrust in God, and thus target symptoms of stress and worry in this unique population. The 30-minute self-guided audio-video program included four components: (a) an introduction informing participants that the purpose of the program was to strengthen trust and decrease mistrust in God; (b) stories and teachings adapted from classic Jewish sources and modern anecdotes intended to reinforce the beliefs involved in trust in God and challenge the negative beliefs associated with mistrust; (c) a series of spiritual visualization exercises with similar goals; and (d) encouraging participants to pray briefly for increased trust in God using their own words. During the treatment period, participants were asked to complete the SIT program once each calendar day.

Measures

The same measures were utilized as those in Study 1. All scales demonstrated moderate to high levels of internal consistency in the sample (Trust in God α = .92; Mistrust in God α = .73; Intolerance of Uncertainty α = .87; and Penn State Worry Questionnaire α = .88). All measures were completed both pretreatment and posttreatment.

Statistical analyses

Analyses began with a series of repeated measures t tests to examine differences in TIG/MIG, intolerance of uncertainty, and worry from pretreatment to posttreatment. We subsequently calculated change scores (posttreatment/pretreatment) and effect sizes for each outcome variable. Then, to test the hypothesized links, we conducted mediation analyses using change scores following the methodology outlined by Hollon and DeRubeis' (2009) adaptation of the Baron and Kenny (1986) criteria for mediation. Mediation could thus be established if: (a) TIG/MIG change scores significantly correlate with worry change scores; (b) TIG/MIG change scores significantly correlate with intolerance of uncertainty change scores; (c) changes in intolerance of uncertainty correlate with changes in worry even after controlling for changes in TIG/MIG; and (d) changes in TIG/MIG are no longer related to changes in worry after controlling for changes in intolerance of uncertainty. As in Study 1, the statistical significance of the mediation model was examined directly with the Sobel (1990) test.

Results

Pretreatment and posttreatment values, indices of change (t -test statistics), and change scores (Cohen's d statistics) are presented in Table 2, and zero-order correlations of change scores are presented in Table 3. Participants reported significant increases in TIG and significant decreases in MIG, intolerance of uncertainty and worry during the course of the 2-week treatment period. Separate analyses were conducted for TIG and MIG, respectively (because of colinearity), to test each of the criteria for mediation. Changes in TIG were not significantly correlated with changes in worry (r = -.05, p = .78) or intolerance of uncertainty (r = -.26, p = .11). Thus, criteria for mediation could not be established for TIG and additional analyses focused only on MIG. To determine whether intolerance of uncertainty mediated the relationship between MIG and worry, the following steps were examined.

Table 2
Study 2: Pre-treatment vs. Post-treatment Values and Changes in Trust/Mistrust in God, Intolerance of Uncertainty, and Worry

	Pre-Treatment	Post-Treatment	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M (SD)</i>	<i>M (SD)</i>			
Trust in God	32.89 (9.69)	36.79 (8.35)	3.53	.001	.40
Mistrust in God	6.38 (5.18)	4.10 (4.16)	4.06	<.001	.44
Intolerance of Uncertainty	26.15 (9.16)	17.23 (7.74)	7.17	<.001	.97
Worry	61.05 (10.99)	48.54 (11.61)	8.15	<.001	1.14

Note: Means, *t*-values, *p*-values and effect sizes (Cohen’s *d* statistics) were calculated based on the current sample of *n* = 39 participants.

Table 3
Study 2: Zero-order Correlations for Change Scores (Post-treatment–Pre-treatment)

	<i>TIG</i>	<i>MIG</i>	<i>IU</i>	<i>W</i>
Trust in God (<i>TIG</i>)	–			
Mistrust in God (<i>MIG</i>)	–.44**	–		
Intolerance of Uncertainty (<i>IU</i>)	–.26	.69**	–	
Worry (<i>W</i>)	–.05	.33*	.57***	–

Note: **p* < .05; ***p* < .01; ****p* < .001.

First, *MIG* change scores were positively correlated with worry change scores (*r* = .33, *p* < .05). Second, changes in *MIG* were correlated with changes in intolerance of uncertainty (*r* = .69, *p* < .001). Third, controlling for *MIG* change scores, intolerance of uncertainty change scores were positively correlated with worry change scores (*pr* = .51, *p* = .001). Last, the partial correlation between change scores in *MIG* and worry controlling for intolerance of uncertainty change scores was not significant (*pr* = –.11, *p* = .49), suggesting that the relationship between change in *MIG* and worry was fully mediated by change in intolerance of uncertainty. A Sobel test was also significant (*z* = 2.98, *p* < .01), providing direct evidence for mediation. As in Study 1, an alternative reverse model in which intolerance of uncertainty’s association with worry was mediated by *MIG* was also tested, and did not meet criteria for mediation suggesting that our model was unidirectional.

Discussion

Consistent with results from Study 1, the present findings suggest that the relationship between mistrust in God and worry was mediated by intolerance of uncertainty. Specifically, during the course of a 2-week treatment period targeting trust and mistrust in God, decreases in mistrust in God appeared to facilitate changes in worry through the mechanism of decreasing intolerance of uncertainty. Although this model could not be replicated for trust in God, these findings nevertheless suggest that certain spiritual beliefs are tied to intolerance of uncertainty and worry for some individuals.

These results further have general implications for the provision of spiritually sensitive treatments for anxiety symptoms among to religious individuals. Although most mental health professionals receive little to no training in how to assess for or address salient spiritual issues in treatment (Schulte, Skinner, & Claiborn, 2002), considerable evidence suggests that religious individuals prefer to discuss spirituality directly in treatment (Puchalski et al., 2001). Through extensive consultation with religious community leaders, we incorporated culturally relevant themes into a self-administered skills-based program, thus providing a viable and

easy-to-administer alternative to other self-directed secular treatments (e.g., progressive muscle relaxation).

General Discussion

During the past several decades, the science of clinical psychology has been greatly enhanced by the promulgation of cognitive models of emotion. In addition to providing flexible, theoretically based frameworks for understanding the etiology of symptoms, cognitive models are essential for the provision of psychoeducation and the selection of appropriate evidence-based treatment strategies in the context of psychotherapy (Clark, 2004). In this article, we sought to support and extend one prominent cognitive model of worry through the incorporation of spiritual core beliefs. We further investigated the empirical bases for our model in two separate studies. In Study 1, conducted within a community sample of religious Jewish and Christian individuals, we found that the positive beliefs of trust in God were associated with less worry and that this relationship was partially mediated by lower levels of intolerance of uncertainty. Conversely, the negative beliefs of mistrust in God correlated with higher worry and intolerance of uncertainty also partially mediated this effect. In Study 2, we examined associations between trust/mistrust in God, intolerance of uncertainty and worry in the context of a randomized clinical trial of a SIT for anxiety in a religious Jewish sample. We found that reductions in mistrust in God over time were associated with decreases in worry, and that this relationship was fully mediated by reductions in intolerance of uncertainty. These findings support our proposed model, in particular, with regards to negative spiritual beliefs.

The incorporation of spiritual beliefs into the cognitive model of worry has a number of important implications for clinical practice. In the United States, spirituality and religion are widespread in the general population. National surveys have found that 93% of Americans believe in God or a higher power and that 50% of them say that religion is *very important* in their lives (Gallup Poll, 2007/2008). Furthermore, existing evidence indicates that many areas of spirituality and religion are salient predictors of psychological functioning (see Koenig, McCullough, & Larson, 2001, for a review). However, the mechanisms by which these factors affect symptoms are often unclear, as findings in this area of study have not provided sufficient theoretical bases to explain how and why spirituality may relate to symptoms. As a result, many clinicians remain ill-equipped to identify relevant religious or spiritual themes in practice. A lack of theoretically driven research in this area is thus a barrier to the dissemination of empirically supported treatments to religious communities (Rosmarin, Pargament, & Robb, 2010), and may contribute to the poorer treatment outcomes associated with specific religious symptoms (see Nelson, Abramowitz, Whiteside, & Deacon, 2006). Research on the integration of spiritual beliefs into existing conceptual models is therefore an important endeavor to facilitate clinically relevant research on religion and spirituality (see Pargament, 2007). It is further a vital step towards enabling the assessment of spiritual/religious factors in clinical work and their integration into evidence-based treatments. Along these lines, it is encouraging that, in Study 2, maladaptive negative beliefs associated with mistrust in God were successfully targeted in a religious Jewish sample in a relatively short time span (2 weeks), and that this change was associated with robust decreases in anxiety symptoms. These results highlight the salience of religious and spiritual factors to symptoms in religious communities.

A number of important limitations of this article should be noted. First, both studies relied solely on self-report measures. Although behavioral measures of faith may not be viable, future research could utilize implicit measures of spirituality such as the emotional Stroop task. Second, although recent findings indicate that Internet use is becoming increasingly accepted in some religious communities (Hack, 2007), reliance on web-based assessments may have precluded more cloistered factions from participating in this research. Third, the generalizability of findings to non-Jewish/Christian populations is not known. Although the results in this report (Study 1) suggest that specific affiliational/cultural factors did not predict the relationships between spiritual beliefs and symptoms, research into non-Judeo-Christian notions communities may reveal different findings. As well, although the core beliefs

associated with trust/mistrust in God are central to all monotheistic traditions (e.g., Judaism, Christianity, Islam), they are nevertheless *not* universally applicable. Future research should seek to replicate these findings in more diverse samples and using additional spiritual constructs. Future research should also seek to examine the relevance of spiritual beliefs to a broader set of cognitive vulnerabilities and symptoms, such as selective processing of information in depression (e.g., selective abstraction of negative stimuli from the environment). Another important area for further study is the relationship of spiritual practices to safety behaviors in the context of emotional disorders and behavioral treatments. Nevertheless, this report offers one framework for including spiritual beliefs when applying cognitive models to religious individuals.

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