



# The Relevance of Religious Core Beliefs to the Cognitive Model of Worry

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## Background

While cognitive theorists have highlighted the salience of core beliefs about oneself, others, and the future to emotional states (e.g., Beck, 1995), religious beliefs have been all but ignored. In this study, we investigated possible causal links between trust/mistrust in God (TIG/MIG) and worry in the context of a randomized controlled trial of a spirituality-integrated cognitive-behavioral treatment program. We further explored the relationship between TIG/MIG and intolerance to uncertainty (IU), which has been proposed to play a central role in the development, maintenance, and exacerbation of generalized anxiety disorder (Dugas, Gagnon, Ladouceur, & Freeston, 1998). We hypothesized that changes in TIG/MIG during treatment would lead to changes in IU, and thereby facilitate changes in reported worry.

## Participants, Procedure & Measures

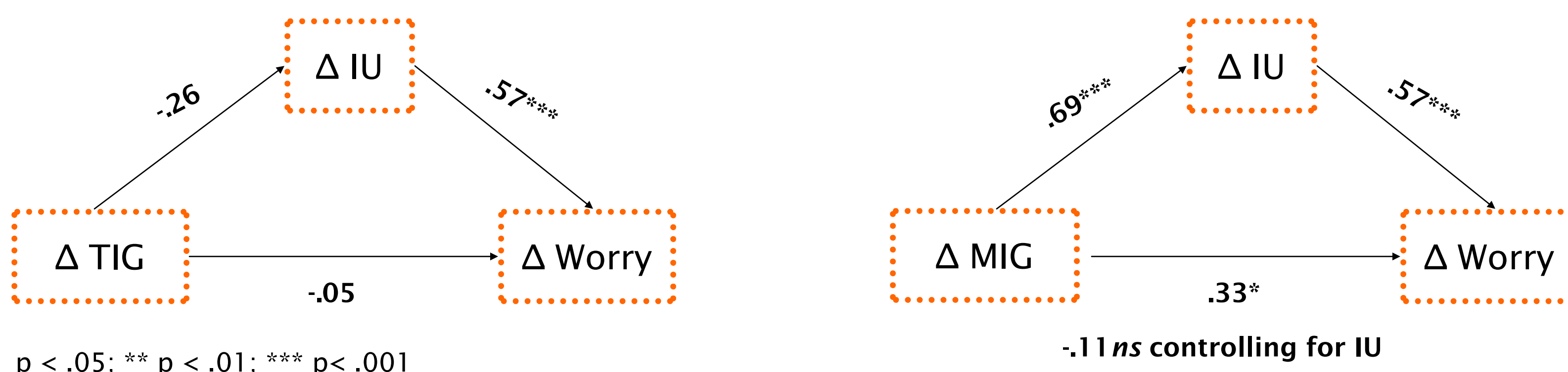
Forty-eight Jewish individuals (58.3% Female; 66.7% Orthodox; 87.5% College Graduates; Age range 20-69 years,  $M = 39$ ,  $SD = 14$ ) suffering from elevated levels of worry (1  $SD$  above mean of community norms) received a spiritually-integrated cognitive behavioral treatment program (SI-CBT) in an on-line format, on a daily basis for a period of 2-weeks. Participants completed self-report measures of worry (Penn State Worry Questionnaire) IU (Intolerance of Uncertainty Scale), and TIG/MIG at pre- and post-treatment.

## Results

Over the treatment period, participants reported increased levels of TIG ( $t(38) = 3.53$ ,  $p = .001$ ), and lower levels of MIG ( $t(38) = 4.06$ ,  $p < .001$ ), IU ( $t(38) = 7.17$ ,  $p < .001$ ) and worry ( $t(38) = 8.15$ ,  $p < .001$ ). An analysis of change scores indicated that reductions in worry correlated with both reductions in MIG ( $r(39) = .33$ ,  $p = .04$ ) and IU ( $r(39) = .57$ ,  $p < .001$ ), but not with increases in TIG ( $r(39) = 1.05$ ,  $p = .78$ ). A mediation analysis (Baron and Kenny, 1986) found that the relationship between changes in MIG and anxiety was fully mediated by changes in IU. This was confirmed by both a Sobel test ( $z = 2.98$ ,  $p < .01$ ) and a bootstrapping method (Preacher & Hays, 2004).

*SI-CBT Pre-treatment and Post-Treatment Variables and Effect Sizes*

	Time 1	Time 2
<b>Worry</b>	66.9 (8.0)	52.3 (10.3) $d = -1.83$
<b>IU</b>	30.0 (8.1)	19.0 (7.6) $d = -1.36$
<b>TIG</b>	30.4 (11.4)	37.3 (7.9) $d = 0.61$
<b>MIG</b>	7.6 (6.7)	4.1 (4.3) $d = -0.52$



## Discussion

Previously we have found that positive and negative core beliefs about God (trust & mistrust in God) differentially predict levels of anxiety cross-sectionally in multiple international samples of Jews and Christians (Rosmarin, Pargament & Mahoney, 2009; Rosmarin, Krumrei, & Andersson, 2009; Rosmarin, Pirutinsky, Pargament, & Krumrei, 2009). The results of this study support and extend our previous research by indicating that there may be a causal relationship between core beliefs about the nature of God (trust/mistrust in God), intolerance of uncertainty, and worry. Findings further provide initial support for the efficacy of SI-CBT in religious communities and thus highlight the importance of paying attention to religious beliefs, both positive and negative, when providing cognitive behavioral treatment to religious individuals.

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