
A Multifaith Spiritually Based Intervention for Generalized Anxiety Disorder: A Pilot Randomized Trial



Diana Koszycki
University of Ottawa



Kelley Raab
The Royal Ottawa Mental Health Centre



Fahad Aldosary
The Royal Ottawa Mental Health Centre



Jacques Bradwejn
University of Ottawa

This pilot trial evaluated the efficacy of a multifaith spiritually based intervention (SBI) for generalized anxiety disorder (GAD). Patients meeting DSM-IV criteria for GAD of at least moderate severity were randomized to either 12 sessions of the SBI ($n = 11$) delivered by a spiritual care counselor or 12 sessions of psychologist-administered cognitive-behavioral therapy (CBT; $n = 11$). Outcome measures were completed at baseline, post-treatment, and 3-month and 6-month follow-ups. Primary efficacy measures included the Hamilton Anxiety Rating Scale, Beck Anxiety Inventory, and Penn State Worry Questionnaire. Data analysis was performed on the intent-to-treat sample using the Last Observation Carried Forward method. Eighteen patients (82%) completed the study. The SBI produced robust and clinically significant reductions from baseline in psychic and somatic symptoms of GAD and was comparable in efficacy to CBT. A reduction in depressive symptoms and improvement in social adjustment was also observed. Treatment response occurred in 63.6% of SBI-treated and 72.3% of CBT-treated patients. Gains were

We are grateful to Paula Loja, BSc, Diana Al Sarakbi, BA, Gina Di Guilio, PhD, and Manon Bertrand, PhD for their participation in this study.

Correspondence concerning this article should be addressed to: Diana Koszycki, Faculty of Education, University of Ottawa, Lamoureux Hall, 145 Jean-Jacques Lussier, Ottawa, Ontario K1N 6N5; e-mail: dkoszyck@uottawa.ca

maintained at 3-month and 6-month follow-ups. These preliminary findings are encouraging and suggest that a multifaith SBI may be an effective treatment option for GAD. Further randomized controlled trials are needed to establish the efficacy of this intervention. © 2010 Wiley Periodicals, Inc. *J Clin Psychol*: 66(4):430–441, 2010.

Keywords: spirituality; generalized anxiety disorder; cognitive behavior therapy; randomized trial; spiritual psychotherapy

Introduction

In the past two decades, there has been increased interest in the influence of spirituality on mental health. On the whole, epidemiological and cross-sectional studies indicate that spiritual beliefs and practices are associated with better mental health, well-being, and life satisfaction (Koenig & Larson, 2001; Koenig, McCollough, Larson, 2001; Baetz, Griffin, Bowen, Koenig & Marcoux, 2004). There is also evidence that spiritual beliefs and practices can positively affect outcome in clinical populations, including patients with psychiatric disorders (Koenig, 2009). The pathways that mediate the salutary effect of spirituality on mental health are not fully understood and research in this area is complicated by the lack of agreement of how to define and measure the construct of spirituality. Nevertheless, available research suggests that a complex interplay among social, psychological, and biological factors likely mediate or modulate the relationships among spirituality and mental health and well-being (Baetz & Toews, 2009).

Suggestive evidence of a generally beneficial impact of spirituality on mental health has spurred interest in incorporating practices from spiritual traditions into psychotherapy. Further, there is growing empirical evidence that spiritual practices, used alone or as an adjunct to traditional psychotherapy, have therapeutic effects in treating psychological distress and some mental disorders (Pargament & Saunders, 2007; Post & Wade, 2009). In a recent meta-analysis of 31 studies that used a religious and spiritual adaptation to psychotherapy, the overall effect size was 0.56, suggesting moderately strong effects (Smith, Bartz, & Richards, 2007). Despite these promising findings, few studies have focused on patients with mental illnesses and there is limited empirical evidence that spiritually tailored interventions can reduce core symptoms of specific psychiatric disorders. Moreover, research on spiritual interventions has tended to focus on deeply religious patients or religiously homogeneous samples, which limits generalizability of findings.

The present study was designed as a pilot trial to evaluate the acceptability and efficacy of a spiritually based intervention (SBI) for generalized anxiety disorder (GAD). Although evidence-based treatments exist for GAD, few patients seek psychiatric care and recovery rates tend to be low (Bélanger, Ladoucer, & Morin, 2005; Bruce et al., 2005; Gould, Safren, O'Neill Washington, & Otto, 2004). Thus, there is a need to evaluate alternative forms of treatment. The spiritual intervention used in this study was multifaith and focused on core spiritual teachings found in many religious traditions rather than on the teachings of a specific denomination or faith group. This made the intervention suitable for individuals from diverse religious and spiritual pathways. The design was a randomized active comparator controlled study, with cognitive-behavioral therapy (CBT) as our active comparator. We also collected 3-month and 6-month follow-up data to evaluate maintenance of

treatment gains. Our primary hypothesis was that the SBI would result in significant improvement in core symptoms of GAD, with treatment gains persisting over time. We also hypothesized that the SBI would be non-inferior to CBT, a first-line psychological intervention for GAD.

Method

Participants

The study was approved by the Research Ethics Board of the Royal Ottawa Health Care Group, Ottawa, Ontario. Patients were recruited through media advertisements or family physician referrals. At the screen visit, patients were provided with an explanation of the purpose of the study and study procedures and were evaluated for eligibility after providing written informed consent. To participate in the trial, patients had to meet criteria for GAD based on the Structured Clinical Interview for DSM-IV (SCID) (First, Spitzer, Williams, & Gibbons, 1997), have a total score ≥ 18 on the Hamilton Rating Scale for Anxiety (HAM-A; Hamilton, 1959), a rating of at least 2 (moderate) on the anxious mood and tension items at screen and baseline visits, and a score of <21 on the Montgomery Asberg Depression Rating Scale (Montgomery & Asberg, 1979) at the screen visit. Patients with a lifetime history of psychosis or bipolar disorder, a history of substance use disorders in the last 12 months, or other concurrent Axis I disorders, with the exception of depressive disorders, panic disorder, phobic disorders, eating disorders, or somatoform disorders, were excluded. For patients with concurrent disorders, the GAD had to be the primary diagnosis. Patients using psychotropic medication were included as long as the dose remained stable for 3 months prior to randomization. Adjustment of medication was not allowed during the acute phase of the study and medication use was recorded at each visit. Individuals from diverse religious/spiritual backgrounds and those with no religious/spiritual affiliation were eligible to participate.

Spiritual Intervention

Patients randomized to the SBI were provided with 12 50-minute individual sessions administered by a spiritual care counselor working in a mental health facility. The weekly sessions were administered in a standard fashion across patients and audiotaped to ensure adherence to the spiritual approach. The counselor (KR) is an ordained minister who also holds a doctoral degree in the psychology of religion. The intervention focused on spiritual well-being and growth and followed the spiritual teachings and exercises described in *Essential Spirituality*, written by psychiatrist Roger Walsh (1999). Walsh (1999) describes spirituality as a direct experience with the sacred. Although Walsh does not give a clear definition of "sacred," he posits the existence of a "sacred realm" and an "ordinary realm" and indicates that the goal of spiritual practices is a closer alignment of the two realms. The spiritual practices described in *Essential Spirituality* are derived from seven religious traditions (Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, and Taoism) and are designed to help one cultivate a calm and concentrated mind, emotional and spiritual wisdom, spiritual awakening, positive emotions, ethical living, and generosity and service. We considered many of the practices and exercises to be relevant for patients with GAD. For example, spiritual practices such as prayer, meditation, and expressing gratitude have been reported to

Table 1
Content of the Spiritual Intervention

Session	Main themes of session
1	Psychoeducation about generalized anxiety disorder and provide rationale for a spiritual intervention. Discuss goals of treatment.
2	Introduce meditation techniques. Discuss benefits of developing a calm and peaceful mind.
3	Responding skillfully to difficult emotions. Explore and learn from painful emotions. Release and transform painful emotions and use them appropriately.
4	The power of forgiveness in releasing emotional pain from the past. The connection between gratitude and positive emotions.
5	Being mindful. Understanding the benefits of awareness and the costs of living mindlessly.
6	Awaken spiritual vision by recognizing the sacred in people, things, and within ourselves. Understanding the transforming power of seeing the sacred in all things.
7	Attachment can be a source of suffering. Happiness lies in reducing and relinquishing attachments.
8	Cultivating higher motivation is a central goal of spiritual practice. Our deepest desires are healthy and altruistic.
9	Unethical living springs from and leads to negative emotional states. Ethical living and treating others as you wish to be treated improves emotional well-being.
10	Express spirit in action. Cultivate generosity and service to others.
11	Cultivate spiritual intelligence. Seek wisdom in nature, silence and solitude, and reflect on the nature of life and death. Importance of self-acceptance and relinquishing self-attack and condemnation.
12	Wrap up and Evaluation. Assessment of treatment goals.

Note. The spiritual intervention was based on the spiritual teachings described in *Essential Spirituality* (Walsh, 1999).

decrease anxiety and improve psychological well-being (McCullough, Tsang, & Emmons, 2004; Emmons & McCullough, 2003).

The content of the 12 SBI sessions is described in Table 1. In the first session the spiritual care counselor discussed the patient's experience with anxiety and worry, provided psychoeducation about GAD, and explained the rationale of a spiritual approach to treatment. Treatment goals were discussed and questions and concerns about the intervention were addressed. Subsequent sessions focused on the patient's current experience with anxiety and worry and the use of spiritual tools to reduce symptoms and enhance coping resourcefulness and sense of well-being. In the final session, treatment gains were reviewed and patients were encouraged to continue with their spiritual practices. Patients were given a copy of *Essential Spirituality* and were assigned readings from the book each week. They were also asked to practice the spiritual exercises described in the book and to keep a journal about their experiences with the practices. At each session, the spiritual care counselor monitored compliance with homework by asking patients questions about their experience with the spiritual practices and to what extent the practices were helpful to reduce anxiety. Although the same general exercises were assigned to every patient, flexibility was permitted regarding how to practice them. For example, to calm and focus the mind, a Christian patient might choose to practice contemplative prayer, while an agnostic patient might prefer sustained concentration on the breath.

Cognitive-Behavioral Therapy

CBT followed the treatment manual *Mastery of Your Anxiety and Worry* by Zinbarg and colleagues (Zinbarg, Craske, & Barlow, 2006). Patients attended 12 50-minute

individual sessions delivered by experienced CBT therapists. Sessions were audiotaped to ensure adherence to the treatment protocol. The intervention focused on psychoeducation about anxiety and GAD, self-monitoring of symptoms, relaxation training, cognitive restructuring, worry exposure, and time management, goal setting, and problem solving. Patients were provided with a copy of the accompanying patient workbook (Craske & Barlow, 2006). Compliance with between-session homework was monitored by the therapist at each session.

Measures

Hamilton Rating Scale for Anxiety (HAM-A; Hamilton, 1959). The HAM-A is a 14-item, clinician-rated scale that provides an overall measure of global anxiety, including psychic (cognitive) and somatic symptoms. The scale has good psychometric properties and is widely used as a primary outcome measure in treatment outcome trials in GAD. The HAM-A was administered by an independent assessor who was blind to treatment assignment.

Clinical Global Impression-Severity (CGI-S; Guy, 1976). The CGI-S uses a 7-point scale to rate severity of the patient's illness. The CGI-S is a widely used outcome measure in clinical research and is a sensitive index of treatment response. Severity of illness is rated as 1 (*normal, not at all ill*), 2 (*borderline mentally ill*), 3 (*mildly ill*), 4 (*moderately ill*), 5 (*markedly ill*), 6 (*severely ill*), or 7 (*extremely ill*). The CGI-S was administered by an independent assessor who was blind to treatment assignment.

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, & Metzger, 1990). The PSWQ is a 16-item questionnaire that measures frequency and intensity of worry symptoms. Items are rated on a 1–5 scale, with total scores ranging from 16–80. The PSWQ has good psychometric properties and is widely used in research to measure pathological worry and change with treatment.

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). The BAI is a 21-item measure that assesses anxiety, with a focus on somatic symptoms. Symptoms are rated on a 0 to 3 scale and patients are required to report how much they have been bothered by each symptom during the past week. The BAI has good psychometric properties and is a reliable measure for measuring change with treatment.

Intolerance of Uncertainty Scale (IUS; Dugas, Gosselin, & Ladoucer, 2001). The IUS is a 21-item scale that targets how an individual responds to uncertainty on cognitive, emotional, and behavioral levels. Items are rated on a 1 (*not characteristic of me*) to 5 (*entirely characteristic of me*) scale. The scale has demonstrated good psychometric properties and has been found to be a sensitive measure of change with CBT.

Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996). The BDI is a 21-item self-report measure developed to determine the severity of depressive symptoms over a 2-week period. The scale is widely used in treatment outcome studies of anxiety. Each item is rated on a scale from 0 to 3 and added together to yield a total score. The scale has been shown to have good psychometric properties.

Social Adjustment Scale-Self Report Version (SAS-SR; Weissman & Bothwell, 1976). The SAS-SR is a 54-item scale that assesses functioning in several main areas

such as work, social, and leisure activities, extended family relationships, spousal relationship, parental and family unit, and financial status. The scale has good psychometric properties and is widely used in treatment outcome studies to evaluate the impact of treatment on functioning.

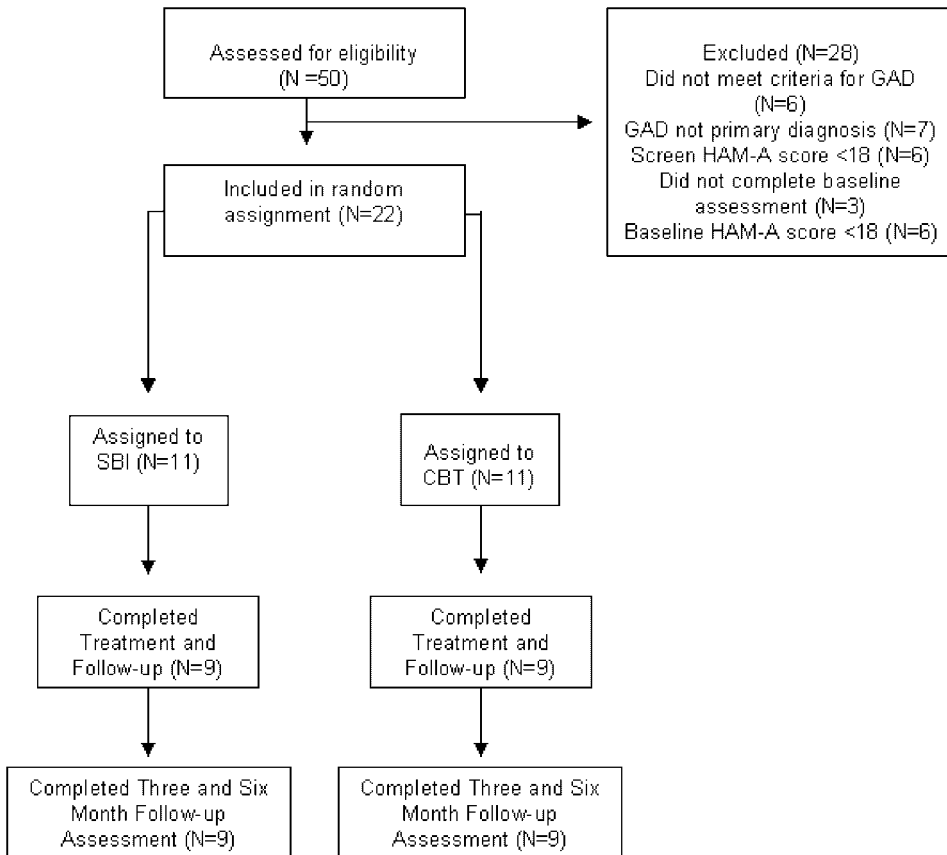
Data Analysis

Statistical analysis was performed on the intent-to-treat sample using the Last Observation Carried Forward method. Primary outcomes were the HAM-A ratings, PSWQ, and BAI. Secondary outcomes were the CGI-S, IUS, BDI, and SAS-SR. Analysis of variance (ANOVA) and chi-square were used to assess demographic characteristics and baseline outcome measures. We used repeated measures ANOVA to analyze treatment effects on continuous measures. Time of assessment (baseline, post-treatment, and 3-month and 6-month follow-ups) was the within-subject factor, and treatment (SBI versus CBT) was the between subject factor. The repeated measures and interaction effects were adjusted by the Greenhouse-Geisser correction. The main interest in the repeated measures ANOVA was whether improvement in outcome varied as a function of treatment. This would be reflected by a time-by-treatment interaction. Significant interactions were followed with post-hoc pair-wise comparisons. Effect sizes were also calculated for each treatment condition to evaluate the magnitude of change from baseline to post-treatment and follow-up periods (baseline–post-treatment/follow-up mean/pooled standard deviation [SD]). Effect sizes ≥ 0.80 are considered large (Cohen, 1988). Treatment response was defined a priori as a 50% reduction in scores on the HAM-A. Remission was defined as a HAM-A score ≤ 10 (Pollack et al., 2008). Significance was established at $p < 0.05$, two tailed tests.

Results

Patient Characteristics

Figure 1 displays the flow of participants during the trial. A total of 50 patients (30 women, 20 men) were evaluated with the SCID. Of these, 31 were eligible for baseline assessment. Three patients did not complete baseline assessments and six were not eligible for randomization because their baseline HAM-A score was < 18 . A total of 22 patients were randomized to either CBT (seven men; four women, mean age = 48.36 ± 12.1 years) for the SBI (2 men; 9 women, mean age = 38.54 ± 15.4 years). Eight patients had at least one comorbid Axis I disorder (CBT = 4, SBI = 4) and 15 were taking psychotropic medications (CBT = 7, SBI = 8). Fourteen patients described themselves as Christian (CBT = 6, SBI = 8), one as Jewish (SBI = 1), and seven as having no religious orientation (CBT = 5, SBI = 2). The Duke Religion Index (Koenig, Parkerson, & Meador, 1997) revealed that overall few patients were actively involved in organized or non-organized religious practices. Six patients (27.3%; CBT = 2, SBI = 4) reported that they attended religious services at least a few times a month and eight patients (36.4%; CBT = 3, SBI = 5) reported that they engaged in private religious/spiritual activities such as prayer or meditation at least once a week. Scores on the intrinsic religiosity subscale were 7.18 ± 3.0 for CBT and 9.09 ± 2.7 for SBI. There was no significant difference between groups with respect to age, comorbid diagnosis, use of psychotropic medication, or religious/spiritual orientation or practices. However, gender was not evenly distributed among the two groups (Fisher's exact $P = 0.058$), with more women being assigned to the SBI.



HAM-A= Hamilton Anxiety Rating Scale

Figure 1. Flow of patients during the study.

Attrition

Of the 22 randomized patients, 18 (81.8%) completed treatment. The drop out rate was similar for both interventions. Reasons for early termination with the SBI included medical illness requiring hospitalization ($n = 1$) and withdrawal from the study because of patient non-compliance ($n = 1$). For CBT, early termination was because of lack of transportation to attend weekly sessions ($n = 1$) and dissatisfaction with being randomized to CBT ($n = 1$).

Follow-Up Phase

All of the patients who completed acute treatment also completed the 3-month and 6-month follow-up assessments. At the 3-month follow-up, three patients (CBT = 2, SBI = 1) reported that their medication had changed since completing treatment. This included changing the type of medication (CBT = 1), adding another medication to current drug therapy (CBT = 1) and discontinuing medication (SBI = 1). At the 6-month follow-up, five patients (CBT = 2, SBI = 3) reported a change in their medication since completing treatment and one SBI-treated patient started group CBT for anxiety. Change in medication included restarting medication (SBI = 1), changing type of medication (SBI = 1), adding another medication to

current drug therapy (SBI = 1), decreasing dose of medication (CBT = 1), and discontinuing medication (CBT = 1).

Efficacy Analyses

Mean scores and standard deviations for primary and secondary outcome measures for the intent-to-treat sample appear in Table 2. There were no group differences for any of the baseline measures. Significant Time main effects were found for the primary measures of HAM-A ($F = 39.62$, $df = 3, 60$, $p < 0.001$), BAI ($F = 18.67$, $df = 3, 60$, $p < 0.001$), and PSWQ ($F = 15.50$, $df = 3, 60$, $p < 0.001$). The time-by-treatment interactions were not significant (smallest $p = .27$), suggesting no difference in treatment outcome between the two interventions. Both CBT and SBI produced significant post-treatment improvements, with scores remaining lower than baseline at 3-month and 6-month follow-ups. Baseline-to-post-treatment effect sizes (Cohen's d) for the HAM-A, PSWQ, and BAI were 1.84, 1.32, and 0.73, respectively, for CBT and 1.87, 0.82, and 1.24, respectively, for the SBI. Baseline-to-follow-up effect sizes for the HAM-A, PSWQ, and BAI were 2.05, 1.29, and 0.97, respectively, for CBT and 1.82, 1.08, and 1.22, respectively, for the SBI at 3-month follow-up, and 1.96, 1.19, and 0.92, respectively, for CBT and 1.43, 0.82, and 1.00,

Table 2

Means and SD for Primary and Secondary Outcomes at Pretreatment, Post-treatment, and Follow-Up

Measure	Pretreatment		Post-treatment		3-month follow-up		6-month follow-up	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
HAM-A								
CBT	23.36	5.8	8.91	9.5 ^c	8.45	8.5 ^c	9.00	8.6 ^c
SBI	23.63	4.7	10.09	9.1 ^c	10.82	8.9 ^c	12.27	10.2 ^c
BAI								
CBT	22.45	11.7	13.00	14.0 ^b	10.91	12.0 ^c	12.82	11.7 ^b
SBI	23.73	8.6	11.73	10.7 ^c	11.82	10.7 ^c	13.64	11.3 ^b
PSWQ								
CBT	71.91	13.6	52.73	15.3 ^c	54.54	13.3 ^c	55.91	13.1 ^c
SBI	68.36	9.1	59.00	13.4 ^a	56.27	12.9 ^b	59.18	13.0 ^a
CGI-S								
CBT	4.54	0.7	2.18	1.3 ^c	2.09	1.1 ^c	2.36	1.2 ^c
SBI	4.82	0.7	2.64	1.6 ^c	2.73	1.7 ^c	3.00	1.9 ^c
BDI								
CBT	24.36	8.4	10.72	12.7 ^c	10.64	13.0 ^c	11.73	12.6 ^c
SBI	21.82	10.2	10.91	9.7 ^c	10.45	8.3 ^c	12.09	10.2 ^b
IUS								
CBT	94.91	25.5	65.54	25.3 ^c	64.91	25.6 ^c	65.54	22.5 ^c
SBI	78.64	20.5	70.18	17.9	66.18	18.3	65.82	24.4
SAS-SR								
CBT	71.91	11.2	63.36	15.9 ^a	61.18	15.0 ^c	61.73	15.8 ^b
SBI	70.09	7.3	62.54	14.0 ^a	63.54	12.9 ^a	62.64	15.4 ^a

Note. SD = standard deviation; CBT = cognitive-behavioral therapy; SBI = spiritually based intervention; HAM-A = Hamilton Anxiety Rating Scale; CGI-S = Clinical Global Impression-Severity; BAI = Beck Anxiety Inventory; PSWQ = Penn State Worry Questionnaire; BDI = Beck Depression Inventory; IUS = Intolerance of Uncertainty Scale; SAS-SR = Social Adjustment Scale-Self Report (T score). Compared to baseline. ^a $p < 0.05$, ^b $p \leq 0.01$, ^c $p \leq 0.001$.

respectively, for the SBI at 6-month follow-up. Analysis of differences between 3-month and 6-month follow-ups failed to reveal any further changes.

Significant Time main effects were also found for secondary measures of depression ($F = 26.18$, $df = 3, 60$, $p < 0.001$), clinician-rated severity of illness ($F = 30.13$, $df = 3, 60$, $p < 0.001$), and social adjustment ($F = 9.01$, $df = 3, 60$, $p < 0.001$). There were no significant time-by-treatment interactions (smallest $p = .71$). Both treatments produced a significant improvement on these measures at post-treatment, with patients maintaining treatment gains at the follow-up assessments. Baseline-to-post-treatment effect sizes were moderate for the SAS-SR (0.62 for CBT and 0.67 for SBI) and large for the BDI (1.26 for CBT and 1.10 for SBI) and CGI-S (2.22 for CBT and 1.72 for SBI). Baseline-to-follow-up effect sizes for the SAS-SR, BDI, and CGI-S were 0.81, 1.26, and 2.61, respectively, for CBT and 0.62, 1.22 and 1.61, respectively, for SBI at 3-month follow-up, and 0.74, 1.18 and 2.22, respectively, for CBT, and 0.62, 0.95 and 1.25, respectively, for the SBI, at 6-month follow-up.

The time main effect was significant for intolerance of uncertainty ($F = 15.09$, $df = 3, 60$, $p < 0.001$) and the time-by-treatment interaction approached significance ($F = 3.14$, $df = 3, 60$, $p = 0.055$). Although post-hoc tests revealed that CBT but not the SBI significantly reduced intolerance of uncertainty (see Table 2), we did not detect differences between the groups at endpoint ($p = 0.62$) or at the 3-month ($p = 0.89$) and the 6-month ($p = 0.98$) follow-up. Effect sizes for the IUS at post-treatment and 3-month and 6-month follow-ups were large for CBT (1.16, 1.17, and 1.22, respectively) and moderate for the SBI (0.44, 0.64, and 0.57, respectively). Analysis of differences between 3-month and 6-month follow-ups failed to reveal any further changes in secondary outcome measures.

Response rates at post-treatment and 3-month and 6-month follow-up were, respectively, 8/11 (72.7%), 9/11 (81.8%), and 9/11 (81.8%) for CBT and 7/11 (63.6%), 8/11 (72.7%), and 6/11 (54.5%) for the SBI. Remission rates at post-treatment and 3-month and 6-month follow-ups were, 8/11 (72.7%), 8/11 (72.7%), and 7/11 (63.6%), respectively, for CBT, and 7/11 (63.6%), 7/11 (63.6%), and 5/11 (45.4%), respectively, for the SBI. Treatment differences in response and remission rates were not statistically significant.

Discussion

This study suggests that a multifaith spiritually focused intervention compares well to a first-line psychological intervention for GAD. Both SBI and CBT produced robust and clinically significant reductions from baseline in symptoms of GAD, including pathological worry, the core feature of the disorder. Both treatments were also effective in decreasing self-report depressive symptoms and improving social adjustment. The only efficacy measure that was not improved with the SBI was intolerance for uncertainty. Attrition in the SBI group was low, suggesting that the intervention was well-tolerated and accepted by patients. Self-report compliance with spiritual exercises was good. The majority of patients established regular meditation/prayer/quiet time and completed most of the other prescribed spiritual exercises. Analysis of follow-up data revealed that overall the effects of the SBI was durable. Within-group changes in primary outcomes from baseline to follow-up remained strong, although the percentage of patients with a HAM-A score ≤ 10 decreased slightly over time.

Our findings are broadly consistent with other studies that have found that religious or spiritually tailored psychotherapies are beneficial in patients with GAD. In devout Muslim patients, religiously accommodative psychotherapy produced a more rapid improvement in anxiety than standard supportive psychotherapy (Azhar, Varma, & Dharap, 1994; Razali, Amenah & Shan, 2002), suggesting that the spiritual intervention may have effects over and beyond what is provided in a supportive therapeutic relationship. Among patients with a Buddhist orientation, Buddhist counseling, which emphasized mindfulness meditation, produced significant reductions in self-report anxiety (Rungreangkulkij & Wongtakee, 2008). Secular forms of mindfulness meditation training have also been reported to reduce symptoms of anxiety and depression in patients with GAD (Evans et al., 2008), and a recent study suggests that enhancement of spiritual well-being is a possible mechanism by which secular meditation reduces psychological distress (Carmody, Reed, Fristeller, & Merriam, 2008).

The results of this study also demonstrate that spiritual care professionals working in a mental health facility could play an important role in the delivery of care to individuals with GAD. If future studies confirm that spiritually focused interventions, delivered by suitably trained spiritual care counselors, is as effective as psychologist delivered CBT, then this could expand the pool of treatment providers, improve access to care, and foster fruitful collaboration between clergy and mental health professionals in the delivery of mental health care. The SBI may also offer patients with an alternative treatment option that may be more appealing and perceived as more holistic or less stigmatizing than conventional treatment for psychiatric disorders. Community studies suggest that the use of complementary and alternative therapies is increasing in people who suffer from anxiety (Kessler et al., 2001) and that a substantial number of people seek clergy for mental health problems (Farrell & Goebert, 2008; Aten & Worthington, 2009). Further, with growing public interest in spirituality many patients are requesting spiritually integrated care from mental health professionals (Phillips, Lakin, & Pargament, 2002; Post & Wade, 2009). In view of this trend, rigorous evaluation of spiritual interventions that are delivered by appropriately trained spiritual care and mental health professionals is of paramount importance.

Limitations of this pilot study must be acknowledged. First, the sample size was small and gender was not evenly distributed between the two groups, which may have biased the results. Second, because of limited resources, one spiritual care counselor delivered the SBI and one psychologist saw the majority of patients assigned to CBT. Thus, it is unclear to what extent improvement was due to therapist factors than to the intervention itself. Third, we did not include a “placebo” psychotherapy group and cannot ascertain the extent to which response to the treatments was influenced by non-specific therapeutic factors such as therapist attention and expectation of improvement. Fourth, although the intervention was multifaith and suitable for patients from diverse religious/spiritual backgrounds, the patients in this trial were of Judeo-Christian background or had no religious affiliation. Thus, we cannot generalize these findings to patients from other religious orientations. Despite these limitations, this pilot trial has a number of strengths, including the use of a randomized active comparator design, manualized interventions, well-established scales that measure core symptoms of GAD, and blind clinical ratings of symptoms.

In summary, these preliminary findings provide additional support that promoting spiritual growth and well-being has therapeutic benefit. Our results are encouraging and ongoing research of this multifaith spiritual intervention is warranted.

References

- Aten, J.D., & Worthington, E. (2009). Next steps for clinicians in religious and spiritual therapy: An endpiece. *Journal of Clinical Psychology*, 65, 224–229.
- Azhar, M., Varma, S.L., & Dharap, A.S. (1994). Religious psychotherapy in anxiety disorder patients. *Acta Psychiatrica Scandinavica*, 90, 1–3.
- Baetz, M., Griffin, R., Bowen, R., Koenig, H.G., & Marcoux, E. (2004). The association between spiritual and religious involvement and depressive symptoms in a Canadian population. *The Journal of Nervous and Mental Disease*, 192, 818–822.
- Baetz, M., & Toews, J. (2009). Clinical implications of research on religion, spiritual, and mental health. *Canadian Journal of Psychiatry*, 54, 292–301.
- Beck, A.T., Epstein, N., Brown, G., & Steer, R.A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56, 893–897.
- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Beck Depression Inventory manual* (2nd ed.). San Antonio, TX, Psychological Corporation.
- Bélanger, L., Ladoucer, R., & Morin, C.M. (2005). Generalized anxiety disorder and health care use. *Canadian Family Physician*, 51, 1362–1363.
- Bruce, S.E., Yonkers, K.A., Otto, M.W., Eisen, J.L., Weisberg, R.B., Pagano, M., et al. (2005). Influence of psychiatric comorbidity on recovery and recurrence of generalized anxiety disorder, social phobia, and panic disorder: A 12-year prospective study. *American Journal of Psychiatry*, 162, 1179–1187.
- Carmody, J., Reed, G., Fristeller, J., & Merriam, P. (2008). Mindfulness, spirituality, and health-related symptoms. *Journal of Psychosomatic Research*, 64, 393–403.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Craske, M.G., & Barlow, D.H. (2006). *Mastery of your anxiety and worry: Client workbook* (2nd ed.). New York: Oxford University Press.
- Dugas, M.J., Gosselin, P., & Ladoucer, R. (2001). Intolerance of uncertainty and worry: Investigating specificity in a nonclinical sample. *Cognitive Therapy and Research*, 25, 551–558.
- Emmons, R.A., & McCullough, M.E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84, 377–389.
- Evans, S., Ferrando, S., Findler, M., Stowell, C., Smart, C., & Haglin, D. (2008). Mindfulness-based cognitive therapy for generalized anxiety disorder. *Journal of Anxiety Disorders*, 22, 716–721.
- Farrell, J.L., & Goebert, D.A. (2008). Collaboration between psychiatrists and clergy in recognizing and treating serious mental illness. *Psychiatric Services*, 58, 437–440.
- First, M., Spitzer, R.L., Williams, J.B.W., & Gibbons, M. (1997). *Structured Clinical Interview for DSM-IV*. New York: Biometrics Research Department, New York State Psychiatric Institute.
- Gould, R.A., Safren, S.A., O'Neill Washington, D., & Otto, M.W. (2004). Cognitive-behavioural treatments: a meta-analytic review. In R.G. Heimberg, C.L. Turk, & D.S. Mennin (Eds.), *Generalized anxiety disorder: Advances in research and practice* (pp. 248–264). New York: Guildford Press.
- Guy, W. (1976). *ECDEU Assessment Manual for Psychopharmacology*, Revised. National Institute of Mental Health, Rockville, MD.
- Hamilton, M. (1959). The assessment of anxiety states by rating. *British Journal of Medical Psychology*, 32, 50–55.
- Kessler, R.C., Soukup, J., Davis, R.B., Foster, D.F., Wilkey, S.A., Van Rompay, M.I., et al. (2001). The use of complementary and alternative therapies to treat anxiety and depression in the United States. *American Journal of Psychiatry*, 158, 289–294.

- Koenig, H.G. (2009). Research on religion, spirituality, and mental health: A review. *Canadian Journal of Psychiatry*, 54, 283–291.
- Koenig, H.G., & Larson, D.K. (2001). Religions and mental health. Evidence for an association. *International Review of Psychiatry*, 12, 67–78.
- Koenig, H.G., McCullough, M.E., & Larson, D.B. (2001). *Handbook of religion and health*. New York: Oxford University Press.
- Koenig, H.G., Parkerson, G.R., & Meader, K.G. (1997). Religion index for psychiatric research. *American Journal of Psychiatry*, 154, 885–886.
- McCullough, M.E., Tsang, J., & Emmons, R.A. (2004). Gratitude in intermediate affective terrain: Links of grateful moods to individual differences and daily emotional experience. *Journal of Personality and Social Psychology*, 86, 295–309.
- Montgomery, S., & Asberg, M. (1979). A new depression scale designed to be sensitive to change. *British Journal of Psychiatry*, 134, 382–389.
- Meyer, T.J., Miller, M.L., Metzger, R.L., & Borkovec, T.D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28, 487–495.
- Pargament, K.I., & Saunders, S.M. (2007). Introduction to the special issue on spirituality and psychotherapy. *Journal of Clinical Psychology*, 63, 903–907.
- PhillipsIII, R.E., Lakin, R., & Pargament, K.I. (2002). The development of a psychospiritual intervention for people with serious mental illness. *Community Mental Health Journal*, 38, 487–495.
- Pollack, M.H., Endicott, J., Liebowitz, M., Russell, J., Detke, M., Spann, M., et al. (2008). Examining quality of life in patients with generalized anxiety disorder: Clinical relevance and response to duloxetine treatment. *Journal of Psychiatric Research*, 42, 1042–1049.
- Post, B.C., & Wade, N.G. (2009). Religion and spirituality in psychotherapy: A practice-friendly review of research. *Journal of Clinical Psychology*, 65, 131–146.
- Razali, S.M., Aminah, K., & Shan, U.A. (2002). Religious-cultural psychotherapy in the management of anxiety patients. *Transcultural Psychiatry*, 39, 130–136.
- Rungreangkulkij, S., & Wongtakee, W. (2008). The psychological impact of Buddhist counseling for patients suffering from symptoms of anxiety. *Archives of Psychiatric Nursing*, 22, 127–134.
- Smith, T.B., Bartz, J., Richards, P.S. (2007). Outcomes of religious and spiritual adaptations to psychotherapy: A meta-analytic review. *Psychotherapy Research*, 17, 643–655.
- Walsh, R. (1999). *Essential spirituality: The 7 central practices to awaken heart and mind*. New York: John Wiley & Sons, Inc.
- Weissman, M.M., & Bothwell, S. (1976). Assessment of social adjustment by patient self-report. *Archives of General Psychiatry*, 33, 1111–1115.
- Zinbarg, R.E., Craske, M.G., & Barlow, D.H. (2006). *Mastery of your anxiety and worry* (2nd ed.). New York: Oxford University Press.