Journal of Cognitive Psychotherapy: An International Quarterly
Volume 20, Number 3 • 2006

Mindfulness: A Primrose Path for Therapists Using Manualized Treatments?

Sheila Stanley, MS
Lorraine R. Reitzel, PhD
LaRicka R. Wingate, MS
Kelly C. Cukrowicz, PhD
Elizabeth N. Lima, MS
Thomas E. Joiner, Jr., PhD
Florida State University, Tallahassee

During the past 2 decades, the popularity of mindfulness as a desirable patient characteristic has increased considerably. Described as the tendency to be attentive to and aware of what is occurring in the moment, mindfulness is incorporated into several established therapeutic techniques, with some impressive outcome data. To our knowledge, there have been no treatment studies investigating the effect of *therapist* mindfulness on therapy outcome. The current study examined the relation between therapist mindfulness and client treatment outcome in a university-affiliated clinic utilizing manualized, empirically supported treatments. Twenty-three doctoral-level trainees provided services to 144 adult clients. Results suggested that higher levels of therapist mindfulness predicted less reduction in client symptom severity at termination. Current findings suggest consideration of possible limitations regarding mindfulness in therapists utilizing manualized therapies.

Keywords: mindfulness; manualized treatment; therapist characteristics; Mindfulness Attention Awareness Scale (MAAS)

Mindfulness has been described as the combination of attention to and awareness of the momentary occurrence of events both internally and externally. An important aspect of this construct is that the awareness of events occurs without judgment and without any expectation for outcome or goal. Kabat-Zinn (2003) states that mindfulness practice is not about "getting anywhere else or fixing anything," rather it is the full experience of moment-to-moment events, in the absence of distortions by habitual thoughts and emotions. Bishop et al. (2004), in a consensus statement, proposed a two-component definition of mindfulness. They stated, "The first component involves the self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment. The second component involves adopting a particular orientation toward one's experiences in the present moment, an orientation that is characterized by curiosity, openness, and acceptance" (p. 232). Full awareness of moment-to-moment events, it should be noted, places demands on attention and working memory, as can orientations involving curiosity and openness.

During the past 2 decades, mindfulness practice has gained considerable popularity in the United States with hundreds of training centers in existence. Mindfulness practice has also made inroads into clinical arenas (e.g., exposure techniques, cognitive-behavioral analysis system of psychotherapy [CBASP], dialectical behavior therapy, and mindfulness-based cognitive therapy). For the most part, the literature in this area has focused on the effects of mindfulness training on patients. The results of several studies suggest a positive relationship between patient mindfulness training and a variety of disorders (e.g., chronic pain, stress management, anxiety, binge eating, depression relapse, and mood disturbance; cited from Baer, 2003). Only one previous study has examined the effect of mindfulness training on the health care provider and found that medical students participating in mindfulness training reported reduced anxiety and psychological distress, as well as increased empathy (Shapiro, Schwartz, & Bonner, 1998). Generally, the research appears to suggest that (1) with training, most often in the form of meditation, one's level of mindfulness can be increased, and (2) this heightened awareness of internal and external events is beneficial. Only recently, however, has a validated measure of mindfulness become available (e.g., Mindfulness Attention Awareness Scale [MAAS]); thus, previous researchers have had to infer that training led to an increase in the participant's mindfulness level and that this increase was beneficial.

As outlined above, the literature has shown a positive relation between treatment outcome and client mindfulness, however, how therapist mindfulness might affect treatment outcome has not been addressed. High levels of therapist mindfulness may affect the manner in which the therapist acquires and applies some forms of therapy, and unlike client mindfulness, may or may not predict positive treatment outcomes. This may be particularly apparent with highly structured forms of therapy, for example, empirically supported therapies that typically rely heavily on manuals to ensure treatment fidelity. Treatment manuals typically provide detailed instructions (often step-by-step) governing each session, as well as the rationale for these steps along with examples (Cukrowicz et al., 2005), and as such, place a considerable demand on attention resources. Highly mindful therapists may well have other salient internal and external stimuli simultaneously competing for these attention resources. It is well-established that competing tasks can lead to performance degradation (e.g., Kane & Engle, 2003), which suggests that highly mindful therapists may be less effective when implementing manualized treatment than are less mindful therapists. Backed by solid empirical evidence, manual-based therapy is increasingly accepted as the standard of psychological care (see Nathan & Gorman, 1998); thus, it is important to identify any potential obstacles to the efficacy of these treatments. The present study examined the nature of the relationship between therapists' inherent mindfulness and treatment outcome in a university-affiliated training clinic that mandates use of empirically supported, manual-based treatments.

Method

Participants

Clients. One hundred forty-four adult clients (age 17 or older at the time of admission) were included in the current study. All clients received services at Florida State University (FSU) Psychology Clinic, an outpatient community mental health center. Upon application, clients understood and agreed to the research and training nature of the clinic. Comprehensive data for each client (e.g., demographic information, treatment history, objective questionnaires) were routinely collected upon admission. The clients in this study represented all adult therapy cases admitted over the course of the years 1999 through 2003 that were seen for at least one session beyond intake.

The client sample was comprised of 68 men and 76 women. The average age of the sample was 26.7 years, with ages ranging from 17–59 (SD = 9.0), and the ethnic composition of this sample was generally representative of clients admitted to the FSU Psychology Clinic and the community of Tallahassee, FL: 75.7% White, 12.7% African American, 5.8% Hispanic, and 2.4% Other. Diagnostic information was gathered by the therapist during the intake process. Ninety-five clients were identified as having one diagnosis on either Axis I or Axis II, 31 clients had two or more diagnoses on Axis I or Axis II, 6 clients had other conditions that warranted clinical attention (i.e., V-codes), and 12 clients did not meet diagnostic threshold for any disorder or condition (DSM-IV, American Psychiatric Association, 1994). Areas of diagnosis were represented in the following proportions: 39% mood disorder, 14.6% anxiety disorder, 4.2% substance use disorder, 25% personality disorder, 10.4% adjustment disorder, and 18% other disorder.

Although the FSU Psychology Clinic is university affiliated, it primarily services nonstudents who present with clinical disorders that are typical of a community mental health outpatient clinic. The minimal exclusionary criteria used by the clinic are that actively psychotic or manic persons are not seen unless they are first stabilized on medications, and those who represent an extreme danger to self or others are referred to inpatient hospitalization. Because the FSU Psychology Clinic has a low and sliding fee scale, a relatively low SES sample that can be more difficult to treat than higher SES populations is present.

Therapists. There were a total of 23 trainees who were conducting treatment services for the clients in this sample. The FSU Psychology Clinic is the first clinical placement for doctoral students in clinical psychology at FSU. During the summer semester prior to entering the clinic, trainees receive a 13-week, 3-hour prepracticum course. The course covers basic therapeutic techniques such as clinical interviewing, and establishing and maintaining a therapeutic alliance, as well as emphasizing specific techniques (e.g., suicide risk assessment, and CBASP). Upon entering the clinic, each trainee receives approximately 3 to 4 hours per week of supervision with a licensed clinical psychologist; in addition, 2 hours per week are spent in staff conferences devoted to case presentations and intensive instruction regarding diagnostic differentiation and treatment techniques. Specific instruction on the following empirically supported therapies is provided during clinic staffing; the number of clients receiving each form of therapy in the present study is noted in parenthesis following the technique: CBASP (67), interpersonal therapy (9), motivational interviewing (2), cognitive processing therapy (3), exposure and response prevention (2), and dialectical behavior therapy (2). In addition, cognitive-behavioral therapy (CBT) and/or cognitive therapy other than CBASP (13), relaxation training (6), and other treatment (11) were used. For 26 clients, no form of treatment was entered. At the time of termination for the average client, therapist trainees had an average of 10.8 (SD = 7.9) months of experience in the clinic and 113.1 hours (SD = 62.0) of client contact.[1]

Measures and Procedures

Mindful Attention Awareness Scale (MAAS). The therapists' mindfulness was assessed by the MAAS (Brown & Ryan, 2003), a 15-item self-report scale. The MAAS allows respondents to indicate how often they have experienced the event described in each statement/item. Each item was rated on a 6-point Likert scale ranging from "almost always" to "almost never." Higher scores on the scale reflect more mindfulness. All items contributed to a possible total score that ranged from 15 to 90. The reliability and validity of the MAAS have been well-supported (Brown & Ryan, 2003).

As a control for social desirability, Brown and Ryan (2003) asked respondents to answer according to what "really reflects" their experience rather than what their experience should be.

It is noteworthy that in scale construction, items reflecting high mindfulness were eliminated by both item raters and factor analysis, and items reflecting low mindfulness were retained. As Brown and Ryan noted, this has advantages, because "it is relatively easy (if incorrect) to endorse being attentive and aware" and "statements reflecting less mindlessness are likely more accessible to most individuals, given that mindless states are much more common than mindful states." Crucial to the present study, Brown and Ryan demonstrated that this indirect approach to mindfulness measurement has the same conceptual meaning as a direct approach.

Clinical Global Impressions (CGI) (Guy, 1976). The CGI gives an index of overall symptom severity and symptom improvement, and is useful for situations, like the present one, in which outcome is rated across diagnoses. At intake, the therapist rated the client's illness severity along a 7-point Likert scale as follows: 1—normal, not at all ill, 2—borderline mentally ill, 3—mildly ill, 4—moderately ill, 5—markedly ill, 6—severely ill, and 7—among the most extremely ill patients. At termination, both the therapist and the client gave separate ratings of the client's symptom amelioration, indexed along a 7-point Likert scale as follows: 1—very much improved, 2—moderately improved, 3—minimally improved, 4—no change, 5—minimally worse, 6—moderately worse, 7—very much worse. One hundred and one clients had complete therapist CGI ratings for intake and termination. Fifty-three clients completed self-ratings of improvement at termination. The CGI has been shown to have acceptable internal consistency validity across diverse populations, disorders, and settings (Leon, Shear, Klerman, & Portera, 1993; Mattison, Bagnao, Mayes, & Felix, 1990; Stern et al., 1998). In addition, the reliability and concurrent validity of the CGI has been supported in the current study's setting, the FSU Psychology Clinic (e.g., good agreement between a first rater and a blind second rater's CGI ratings [alpha = 0.84]; Lyons-Reardon, Cukrowicz, Reeves, & Joiner, 2002).

Global Assessment of Functioning (GAF). (DSM-IV; American Psychiatric Association, 1994). The GAF is a scale allowing the therapist to rate the client's overall symptom severity and/or general functioning in interpersonal, occupational, or educational settings (APA, 1994). Again, a global rating like GAF is useful in situations in which outcome is rated across diagnoses. All 144 patients from the total sample had complete data for the GAF, which was assessed at both intake and at termination. The GAF score ranges from 0 to 100 and was used as an estimate of symptom severity in this study, with a lower GAF score indicating greater symptom severity. The GAF ratings are reliably associated with clinical diagnosis, psychiatric symptoms, and other clinical outcome ratings (Friis, Melle, Opjordsmoen, & Retterstol, 1993; Moos, McCoy, & Moos, 2000). The reliability and concurrent validity of the GAF has been supported in this study's setting, the FSU Psychology Clinic (Lyons-Reardon et al., 2002). In our sample the mean GAF score at intake was 62.1 (SD = 13.1), and at termination 67.1 (SD = 13.6).

Results

Prior to the analyses, all variables were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis. No outliers were identified based on the inspection of the therapist mindfulness, intake CGI and GAF, and termination CGI and GAF data.

Descriptive statistics, including means, standard deviations, and bivariate correlations for the study variables, are presented in Table 1. As illustrated, therapists' and clients' CGI improvement ratings showed a significant and positive relation. This strong association indicates that therapists and clients mostly agreed about outcome. The significant negative correlation between mindfulness and termination GAF indicates that clients of therapists with low mindfulness scores show greater global functioning at termination. In addition, the significant correlation between therapist-rated improvement on the CGI and mindfulness converges on this

finding. The correlation between patient-rated improvement on the CGI and mindfulness is similar in magnitude to that for therapist-rated improvement. This .21 correlation is not significant, however, due to the low number of clients who completed termination CGI ratings ($N = 53$).

Four regression analyses were conducted; in no case was there support for therapist mindfulness as a significant predictor of positive client outcome. On the contrary, in every case, the direction of results was such that greater therapist mindfulness was associated with worse client outcome. In two of four analyses this association achieved statistical significance. Specifically, multiple regression analyses were conducted to determine if therapist mindfulness was predictive of client outcome (as measured by termination CGI and GAF) after controlling for intake CGI and GAF. The first regression analysis included intake CGI in step one and therapist mindfulness in step two as predictor variables, and CGI symptom severity at termination as the dependent variable. This model did not account for a significant proportion of the variance in outcome, though the direction of the effect was such that less therapist mindfulness related to better treatment outcome. Therapist mindfulness was also examined as a predictor of therapist-rated CGI improvement. This model accounted for a significant proportion of variance in outcome, $F\ (124) = 5.68$, $p < .05$, such that less therapist mindfulness significantly predicted better treatment outcome. A similar analysis examined therapist mindfulness as a predictor of client-rated CGI improvement. This model did not account for a significant proportion of variance in outcome, though the direction of the effect was such that less therapist mindfulness related to better treatment outcome. An additional regression analysis included intake GAF in step one and therapist mindfulness in step two as predictor variables for termination GAF. Therapist mindfulness significantly predicted termination GAF ($F\ [142] = 229.48$, $p < .001$), such that less therapist mindfulness significantly predicted better treatment outcome, consistent with the zero-order correlation between therapist mindfulness and termination GAF, $r = -.24$, $p < .01$. Table 2 displays the results of the regression analyses.

Discussion

Mindfulness, or the dispositional tendency to be attentive to and aware of what is occurring in the moment, has been regarded as a desirable characteristic of therapists in as much as it has

TABLE 1. Means, Standard Deviations, and Bivariate Correlations for All Variables of Interest

	1.	2.	3.	4.	5.	6.	7.
1. Mindfulness	—						
2. Intake CGI	-.09	—					
3. Intake GAF	-.17*	-.73***	—				
4. Termination CGI	.06	.02	-.64***	—			
5. Termination CGI Therapist Improvement	.23*	.03	-.20	.51*	—		
6. Termination CGI Client Improvement	.21	.13	-.17	.40*	.73***	—	
7. Termination GAF	-.24**	-.62***	.82***	-.78***	-.51***	-.49**	—
Mean	4.03	4.43	62.12	3.99	2.99	2.21	67.65
Standard Deviation	.68	7.21	13.08	6.79	1.14	1.15	13.93

Note. $N = 101$ for Mindfulness and CGI variables, 144 for Mindfulness and GAF variables, 53 for Client Improvement on the CGI, and 87 for CGI and GAF variables.
*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 2. Results of Regression Analyses of Therapist Mindfulness as a Predictor of Indices of Client Outcome

Predictor	B[a]	*SE* B[a]	*B*[b]	R^2	*T*
DV = Termination GAF					
Step 1 Intake GAF	0.84	0.06	0.79	.62***	15.15
Step 2 Therapist Mindfulness	-2.33	1.06	-0.11	.63***	-2.20
DV = Termination CGI					
Step 1 Intake CGI	0.00	0.09	0.02	.00	0.85
Step 1 Therapist Mindfulness	0.56	0.93	0.06	.00	0.53
DV = Termination Therapist Rated CGI Improvement					
Step 1 Intake CGI	0.00	0.02	0.04	.00	-0.85
Step 1 Therapist Mindfulness	0.44	0.15	0.29	.09*	2.86
DV = Termination Client Rated CGI Improvement					
Step 1 Intake CGI	0.00	0.02	0.13	.02	0.80
Step 1 Therapist Mindfulness	0.35	0.24	0.23	.07	0.15

*$p < .05$. ***$p < .001$.
[a]Unstandardized regression coefficient.
[b]Standardized regression coefficient.

been explicitly encouraged as a component of a number of modern therapies (e.g., DBT; Linehan, 1993). However, although mindfulness has been associated with increased health and well-being in clients (Baer, 2003) and health professionals (cf. Shapiro et al., 1998) alike, the effect of therapist mindfulness on treatment outcome has not been explored previously. This study explored the association between therapist mindfulness and client treatment outcome in a community clinic utilizing manual-based, empirically supported therapies.

Results indicated that therapist mindfulness significantly predicted the global functioning of the client at the time of termination from therapy. The association between therapist mindfulness and client GAF score at termination was negative: Therapist mindfulness predicted relatively lower client functioning at termination. This relationship was not accounted for by initial symptom severity, as the global functioning of the client at intake was controlled for in the analysis. In addition, these results were replicated with an alternative, albeit less specific and detailed, therapist-rated measure of treatment outcome (CGI improvement). The association between therapist mindfulness and therapist-rated client improvement at termination was such that therapist mindfulness predicted less amelioration of symptomatology at the end of treatment. Two other analyses on CGI (symptom severity) and client-rated CGI (symptom improvement) did not yield significant findings, though their direction was similar to the significant results (i.e., more therapist mindfulness associated with worse outcome). No analysis gave any support to the possibility that therapist mindfulness facilitates better outcome. In sum, results of these analyses indicated that clients generally experienced higher global functioning and a reduction in symptom severity by therapy termination; however, the level of improvement, or degree of positive treatment outcome, was not as great for the clients of the more mindful therapists.

A main implication of these findings is that, although mindfulness may have benefits for personal well-being, it is possible that it interferes with some therapists' effectiveness in some settings. It is possible that enhanced mindfulness, or awareness of internal and external cues, interferes with treatment outcome in that it distracts from the greater agenda of adherence to manual-based, empirically supported therapies. When the manual-based therapy is not being

followed, the client may not show maximum symptom amelioration. Although less mindful therapists may be missing out on the personal well-being that is associated with higher mindfulness, their effectiveness as therapists may be enhanced when using manual-based, empirically supported therapies, as they may be better able to adhere to the treatment manuals.

One plausible explanation for our findings is found in the literature on expertise, which has supported that too much mindfulness, at least of a sort, can be counterproductive to the performance of a learned task. For example, previous research on attention and skill acquisition has demonstrated that as expertise at a task increases, less overt attention is paid to the step-by-step execution of that skill (Beilock, Carr, MacMahon, & Starkes, 2002). Once expertise is established, forced attending to the detailed aspects of skill task disrupted performance (Beilock et al., 2002). This may be because as a skill becomes learned, procedural memory begins to govern its application (Beilock et al., 2002) resulting in greater availability of attention resources for other stimuli or task demands without detriment to performance of the skilled task. However, increased attention to the moment-by-moment aspects of task performance (i.e., bringing the learned task back into working memory) may slow down or even derail the performance of a skill controlled by procedural memory (Beilock et al., 2002).

We view excellence at providing manual-based treatments as a learned, high-level skill. It may be that manual-based treatments are particularly difficult for very mindful therapists to utilize because they are generally less inclined to allow procedural memory to take over when performing a task. Indeed, part of the definition of being mindful is to resist behaving in an automatic fashion, or at least being deliberate about when to behave automatically (Brown & Ryan, 2003). Thus, the very mindful therapist may be more easily derailed from manual-based treatment at various points in the session due to the limitations of working memory to deal with both attention to the delivery of manual-based therapy and attention to the moment-to-moment statements and behaviors of the client and to moment-to-moment internal experience.

Although results of this study indicated that therapist mindfulness predicted relatively lower client functioning at termination at a level of statistical significance in some analyses, it should be noted that the variance in treatment outcome accounted for on the basis of therapist mindfulness was limited. In addition, there are a number of reasons to think that therapist mindfulness, at least at moderate levels or under other conditions, would be helpful to the therapeutic process. For example, therapist mindfulness could directly enhance the therapeutic relationship, as it has been associated with increased empathy (cf. Shapiro et al., 1998) and could also help to avert premature termination from therapy by enhancing attention to client cues of dissatisfaction (cf. Richmond, 1992). In addition, therapist mindfulness may be indirectly helpful to the therapeutic process by helping to maintain the therapist's well-being and mental health (Shapiro et al., 1998), which would in turn allow the therapist to be more effective at helping the client do the same. Therefore, we do not suggest that therapist mindfulness, per se, is always a detriment to therapeutic outcome. Perhaps it is the degree of therapist mindfulness or the ability to suspend attention to moment-to-moment experience under certain conditions in manualized treatment administration that is most important in predicting client treatment outcome. Additionally, effective therapists may consider differential allocation of their mindfulness—they may be more mindful with regard to the details and processes of the therapeutic relationship, and automatize regarding the techniques of manualized treatments. Future research on the effect of therapist mindfulness on client treatment outcome should explore these areas.

It is notable that although therapist mindfulness predicted less symptom amelioration at termination as rated by the therapist, the relationship between therapist mindfulness and symptom change at termination as rated by the *client* was not significant. However, it should be noted that both client and therapist ratings of improvement on the CGI were correlated for the sample as a whole ($r = .73$, $p < .001$), and that the association between therapist mindfulness and client-rated symptom improvement was in the same direction and of similar magnitude as

significant effects. Future research may seek to replicate these results for clarification about any meaning of differences in therapist and client ratings of treatment outcome.

One potential limitation of this study is that its measure of mindfulness, the MAAS, was not designed specifically to measure therapist mindfulness, but rather was created for all individuals, regardless of their occupation or status as a patient or nonpatient. One might argue that the MAAS is not a valid indicator of mindfulness in therapists because: (1) the manifestations of therapeutic mindfulness, specifically, are different than the manifestations of mindfulness generally, or (2) therapists who are mindful in their general lives may become less so in a therapeutic setting, or vice versa. However, we believe that the MAAS was an appropriate measure of therapist mindfulness in this study despite these potential criticisms. First, because the MAAS did not specifically ask about mindfulness in a therapeutic context and the therapists were blind to its purpose of evaluating mindfulness in the therapeutic context, the threat of demand characteristics was reduced. Second, because mindfulness was defined and validated as a dispositional construct that is not likely to vary from one circumstance to another (Brown & Ryan, 2003), it seems unlikely that therapists who are very mindful in general become less so in a therapeutic context. Finally, another potential limitation of the MAAS is that it measures only one aspect of mindfulness (e.g., moment-to-moment attentional awareness) in contrast to some literature that supports mindfulness as being multifaceted (as in DBT; Linehan, 1993). At the time we began this study, the MAAS was the only published measure of mindfulness; however, more recently other measures assessing multiple factors of mindfulness (e.g., Kentucky Inventory of Mindfulness Skills [KIMS; Baer, Smith, & Allen, 2004]) have been developed and published. It is important to note, however, that some of these factors (e.g., Describe scale on the KIMS) appear to be underdeveloped without specific training in their usage (as in DBT; Linehan, 1993). Therefore, the use of the MAAS in this study appears reasonable.

Another limitation is the varying sample sizes for the variables; while this should be considered, it does not explain away our conclusions, as all findings without exception were in the same direction (i.e., mindfulness did not facilitate positive outcome).

In conclusion, results of this study indicated that greater therapist mindfulness predicted less improvement in global functioning and less reduction in client symptom severity at termination (i.e., poorer treatment outcome) in a community clinic utilizing manualized, empirically supported therapies provided by trainees. It was suggested that mindful therapists might be less adherent to manualized treatment because working memory limitations detract from a simultaneous focus on the delivery of manualized therapy and the off-task statements and behaviors of the client. An implication of our results is that inherent trait mindfulness among trainees does not necessarily facilitate effective psychotherapy (though formal mindfulness training may). Although mindfulness has been associated with a number of physical and mental health benefits in previous literature (Brown & Ryan, 2003), this study suggests that mindfulness may represent a potential primrose path for beginning therapists using manualized treatments. Insofar as this is a somewhat provocative conclusion and ours is the first study to our knowledge to address this question, we eagerly await future research on this scientifically and clinically important topic.

Note

1. Hours and months of experience were not significant predictors of therapist mindfulness.

References

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

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10,* 125–143.

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment, 11,* 191–206.

Beilock, S. L., Carr, T. H., MacMahon, C., & Starkes, J. L. (2002). When paying attention becomes counterproductive: Impact of divided versus skill-focused attention on novice and experienced performance of sensorimotor skills. *Journal of Experimental Psychology: Applied, 8,* 6–16.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., et al. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science & Practice, 11,* 230–241.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84,* 822–848.

Cukrowicz, K. C., White, B. A., Reitzel, L. R., Burns, A. B., Driscoll, K. A., Kemper, T. S., et al. (2005). Improved treatment outcome associated with the shift to empirically validated treatments in a graduate training clinic. *Professional Psychology: Research and Practice, 36,* 330–337.

Friis, S., Melle, I., Opjordsmoen, S., & Retterstol, N. (1993). Global Assessment Scale and Health-Sickness Rating Scale: Problems in comparing global functioning scores across investigations. *Psychotherapy Research, 3,* 105–114.

Guy, W. (1976). Clinical global impression. In W. Guy (Ed.), *ECDEU assessment manual for psychopharmacology* (pp. 217–222). Rockville, MD: National Institute of Mental Health.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology: Science & Practice, 10,* 144–156.

Kane, M. J., & Engle, R. W. (2003). Working-memory capacity and the control of attention: The contributions of goal neglect, response competition, and task set to Stroop interference. *Journal of Experimental Psychology: General, 132,* 47–70.

Leon, A. C., Shear, M. K., Klerman, G. L., & Portera, L. (1993). A comparison of symptom determinants of patient and clinician global ratings in patients with panic disorder and depression. *Journal of Clinical Psychopharmacology, 54,* 383–393.

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder.* New York: Guilford Press.

Lyons-Reardon, M., Cukrowicz, K. C., Reeves, M. D., & Joiner, T. E. (2002). Duration and regularity of therapy attendance as predictors of treatment outcome in an adult outpatient population. *Psychotherapy Research, 12,* 273–285.

Mattison, R. E., Bagnao, S. J., Mayes, S. D., & Felix, B. C. (1990). Reliability and validity of teacher diagnostic ratings for children with behavioral and emotional disorders. *Journal of Psychoeducational Assessment, 8,* 509–517.

Moos, R. H., McCoy, L., & Moos, B. S. (2000). Global Assessment of Functioning (GAF) ratings: Determinants and role as predictors of one-year treatment outcomes. *Journal of Clinical Psychology, 56,* 449–461.

Nathan, P. E., & Gorman, J. M. (1998). Treatments that work—and what convinces us they do. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work.* New York: Oxford University Press.

Richmond, R. (1992). Discriminating variables among psychotherapy dropouts from a psychological training clinic. *Professional Psychology: Research and Practice, 23,* 123–130.

Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine, 21,* 581–599.

Stern, R. G., Fudge, R., Sison, C. E., Allen, E. R., Crichton, J., & Losonczy, M. (1998). Computerized self-assessment of psychosis severity questionnaire (COSAPSQ) in schizophrenia: Preliminary results. *Psychopharmacology Bulletin, 34,* 9–12.

Offprints. *Requests for offprints should be directed to Thomas E. Joiner, Jr., PhD, Department of Psychology, Florida State University, Tallahassee, FL 32306-1270. E-mail: joiner@psy.fsu.edu*