Integrating Acceptance and Mindfulness Into Existing Cognitive-Behavioral Treatment for GAD: A Case Study

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Generalized anxiety disorder (GAD) is a chronic, pervasive disorder associated with significant impairment in functioning. While cognitive-behavioral interventions appear to be relatively efficacious in reducing GAD symptoms, the proportion of treated individuals who reach desired levels of end-state functioning is less than ideal. A number of recent theoretical and empirical advances in the field have led to the development of novel, experimental treatments for GAD. The current paper describes the integration of acceptance and mindfulness techniques into an existing cognitive-behavioral group treatment for GAD. Data from 4 clients suggest that further refinement of acceptance and mindfulness methods may facilitate improvement in the quality of life and psychosocial functioning of individuals diagnosed with GAD.

GENERALIZED anxiety disorder (GAD) is a commonly occurring disorder associated with a chronic course and significant psychosocial impairment. The National Comorbidity Study (NCS) estimated a lifetime prevalence rate of 5.1% for GAD in the community (Wittchen, Zhao, Kessler, & Eaton, 1994), while rates in primary care settings are estimated to be as high as 40% (Katon et al., 1990). GAD has been associated with impairment in role and social functioning, poor life satisfaction (Massion, Warshaw, & Keller, 1993), and an increased occurrence of distressing minor life stressors (Brantley, Mehan, Ames, & Jones, 1999). It produces a significant financial burden through excessive medical service utilization and lost productivity at work (Greenberg et al., 1999). GAD is unlikely to remit on its own (Yonkers, Warshaw, Massion, & Keller, 1996) and it remains more chronic than panic disorder following a course of pharmacotherapy (Woodman, Noyes, Black, Schlosser, & Yagia, 1999). Thus, the development of efficacious treatments for this disorder is sorely needed (Brown, Barlow, & Liebowitz, 1994).

In a recent review of the treatment literature, Borkovec and Ruscio (2001) concluded that cognitive-behavioral approaches yield significant changes (with large effect sizes) that are maintained or improved at follow-up. However, the specific critical components of treatment have not yet been fully identified. Some studies have found that full CBT packages are more efficacious than individual components (e.g., Butler, Fennell, Robson, & Gelder, 1991), while other studies have found dismantled and full packages comparable (e.g., Barlow, Rapee, & Brown, 1992). No one component of cognitive-behavioral treatment has emerged as a specific and critical component of treatment. For instance, Öst and Breitholtz (2000) recently found no differences between applied relaxation and cognitive therapy in producing clinically significant improvement posttreatment or at 1-year follow-up.

Although there is evidence for the efficacy of cognitive-behavioral interventions, GAD remains the least successfully treated of the anxiety disorders (Brown et al., 1994). On average, only slightly more than half the clients who participate in treatment outcome studies achieve high end-state functioning (i.e., scores on outcome measures within normative ranges) at the termination of treatment and at follow-up (e.g., Borkovec & Costello, 1993; Butler et al., 1991; Ladouceur et al., 2000). Progress in treatment development for GAD may lag behind the other anxiety disorders because GAD has been moved from a residual category to its own diagnostic category relatively recently. However, another significant challenge for treatment development in this area stems from the relatively diffuse nature of the central defining feature of GAD: worry (Roemer & Orsillo, 2002). Thus, additional work is needed to develop treatments for GAD that reflect recent advances in the conceptualization of the disorder.

Novel treatment development efforts are currently in progress in a number of research laboratories to address this identified need. Borkovec and colleagues (e.g., Borkovec, 1999; Newman, 2000) have begun to integrate interpersonal strategies in their cognitive-behavioral treatment approach; Ladouceur and colleagues (e.g., Ladouceur et al., 2000) have specifically targeted intolerance of

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uncertainty as a key component of their cognitive-behavioral treatment; Mennin, Heimberg, and colleagues are taking an emotion-focused approach to treatment (Mennin, Heimberg, Turk, & Fresco, 2002; Mennin, Turk, Heimberg, & Carmin, in press); and Wells (1999) has focused on metacognitive strategies in treatments of GAD. In addition to these important developments in theory and intervention, we believe that an explicit integration of mindfulness and acceptance perspectives into cognitive-behavioral treatments of GAD may improve the efficacy and breadth of impact of extant interventions (Roemer & Orsillo, 2002).

Traditionally, cognitive interventions have included methods designed to change internal experiences. An underlying assumption in this area is that changes in cognitions can produce changes in emotional response (e.g., Persons, 1989) and changes in emotional response are often held as a desired outcome of psychotherapy. Alternatively, acceptance-based approaches assume that psychopathology results from unhealthy methods of experiential avoidance, a process that occurs when an individual is "unwilling to remain in contact with particular private experiences (e.g., bodily sensations, emotions, thoughts, memories, behavioral predispositions) and takes steps to alter the form and frequency of these events and the contexts that occasion them" (Hayes et al., 1996, p. 1154). Acceptance-based treatment methods are targeted at reducing experiential avoidance by encouraging clients to behave effectively and in accordance with valued life directions, which requires active contact with naturally occurring, sometimes aversive, private experiences (Hayes et al., 1996). This therapeutic stance is similar to mindfulness, a Buddhist tradition, which has been described as a state in which one is fully observant of external and internal stimuli in the present moment and does not attempt to judge or change any aspects of the current situation (e.g., Kabat-Zinn, 1994; Segal, Williams, & Teasdale, 2002). Treatments that incorporate acceptance and mindfulness are currently being explored in the treatment of a number of problems, including substance abuse (Hayes, Strosahl, & Wilson, 1999; Marlatt, 1994), couples distress (Cordova & Jacobson, 1993), trauma (Follette, 1994), eating disorders (Telch, Agras, & Linehan, 2000), depressive relapse (Segal et al., 2002; Teasdale, Segal, Williams, Ridgeway, Soulsby, & Lau, 2000), exhibitionism (Paul, Marx & Orsillo, 1999), schizophrenia (Bach & Hayes, 2002), and borderline personality disorder (Linehan, 1993a, 1993b), and mindfulness has been proposed as a common factor in psychotherapy across theoretical orientations (Martin, 1997). While the integration of these constructs into therapy is not new, recently a number of specific clinical methods for facilitating acceptance and mindfulness have been explicitly described (e.g., Hayes et al., 1999; Linehan, 1993a, 1993b), increasing dissemination and allowing clinical researchers to more systematically examine the efficacy of these approaches.

Treatment focused on reducing experiential avoidance seems particularly well suited for GAD. Worry, the characteristic feature of GAD, has been conceptualized as a strategy of avoidance (e.g., Borkovec, 1994; Borkovec, Alcaine, & Behar, in press). Research documents that individuals strategically worry in an attempt to prepare for, or avoid, the occurrence of low-probability future negative events (Borkovec & Roemer, 1995; Cartwright-Hatton & Wells, 1997; Davey, Tallis, & Capuzzo, 1996). Additionally, a number of studies suggest that worry may function to diminish/avoid internal distress (Borkovec & Hu, 1990; Borkovec & Roemer; Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994; Wells & Papageorgiou, 1995) and that worry is associated with a lower tolerance for uncertainty (Dugas, Gagnon, Ladouceur, & Freeston, 1998) and higher levels of self-reported experiential avoidance (Roemer, Salters, Raffa, & Orsillo, in press). Psychophysiological studies confirm the efficacy of worry in reducing internal experiences. Whereas panic and phobic reactions are typically associated with increased sympathetic activation, the process of worry actually produces a restricted range of autonomic responses (Connor & Davidson, 1998; Hoehn-Saric & McLeod, 1988; Lyonfields, Borkovec, & Thayer, 1995). For a more complete review of the conceptual and empirical underpinnings of the relationships between avoidance, worry, and GAD, see Roemer and Orsillo (2002).

This conceptualization of worry as representing an experiential avoidance strategy has led us to begin to integrate elements of existing cognitive-behavioral treatments for GAD (e.g., Borkovec & Roemer, 1994; Borkovec et al., in press; Craske, Barlow, & O'Leary, 1992) with elements of acceptance-based treatments such as Hayes and colleagues' (1999) Acceptance and Commitment Therapy (ACT) and Linehan's (1993a, 1993b) Dialectical Behavior Therapy (DBT) in our treatment of GAD. Our approach targets habitual responding and encourages mindfulness, acceptance of internal experience, and mindful action as a replacement for the habitual restrictions in action that accompany worry. In this article, we describe an uncontrolled trial in which we examined the potential usefulness of our initial treatment development efforts with four clients presenting for GAD treatment.

Method

Participants

Four individuals who presented for treatment at the Center for Anxiety and Related Disorders (CARD) at Boston University participated in the group treatment. Ann was a 27-year-old, married, Caucasian graduate student who met symptom criteria for GAD at the time of the

assessment. Because the onset of her worry was 3 months before the assessment rather than the requisite 6 months, she was assigned the diagnosis of anxiety disorder not otherwise specified. Her presenting complaints were that she felt she needed help relaxing and learning to delegate tasks to others. She reported worrying primarily about graduate school, financial issues, and minor concerns such as punctuality. Ann described feeling on edge, irritable, and easily fatigued. She expressed the concern that worry interfered in her life in that she was constantly wasting time trying to decide the best way to do things. Ann reported being excessively devoted to work and productivity to the exclusion at times of leisure activities.

Roger, 45 years old, was a single, Caucasian, male mental health professional with a 38-year history of GAD. He also had a past history of social phobia and recurrent major depression, with one past depressive episode with psychotic features. While Roger's primary areas of worry were the absence of a romantic relationship in his life and financial concerns, he habitually avoided engaging in activities directed at addressing these issues. Roger also reported worries about his family, his health, and growing older. He described frequently feeling on edge and irritable and he demonstrated difficulty concentrating in his interactions.

Sean, a single, 25-year-old Caucasian male, presented with a 2-year history of GAD and additional diagnoses of alcohol abuse and depressive disorder not otherwise specified. His primary area of worry was health, although he also worried about finances and relationships with others. He expressed considerable concern that he would develop HIV or AIDS despite practicing safe sex and undergoing regular testing for the disease. This worry was significantly interfering with his ability to develop a meaningful, intimate relationship with his girlfriend. Sean reported symptoms such as restlessness, being easily fatigued, difficulty concentrating, irritability, and unsatisfying sleep. He noted a strong relationship between his worry and his mood.

Gil was a 33-year-old single Caucasian male with a 25-year history of worry and GAD-related symptoms. He also carried an additional diagnosis of obsessive-compulsive disorder and had a history of major depressive disorder, recurrent, which was in partial remission. His primary areas of worry and dissatisfaction were relationship and work. Specifically, Gil felt that he was too consumed by career performance and that he was overlooking intimate relationships with his family and friends. He also reported a lack of emotional satisfaction with his current long-term romantic relationship, but he expressed fear about ending it. In general, Gil felt that because of his worry he was "squandering his life away" and not living it to the fullest.

Measures

The Anxiety Disorders Interview Schedule for *DSM-IV* (ADIS-IV; DiNardo, Brown, & Barlow, 1994) comprehensively evaluates *DSM-IV* anxiety and mood disorders and elicits the information necessary to make differential diagnoses. It is an updated version of the widely used and evaluated ADIS-R based on *DSM-III-R* criteria (DiNardo & Barlow, 1988). A recent study found that reliability coefficients using the ADIS-IV were either equal to, or higher than, those using the ADIS-R, with a reliability for primary GAD diagnoses of $k = .67$ (Brown, DiNardo, Lehman, & Campbell, 2001). In addition to providing diagnostic information on both GAD and any other comorbid diagnoses, the ADIS-IV includes a clinical severity scale for each diagnosis received ranging from 0 to 8 (extreme interference or distress).

The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is a 16-item measure of trait levels of worry with excellent psychometric properties (Molina & Borkovec, 1994), which has been found to discriminate GAD from all other anxiety disorders (Brown, Antony, & Barlow, 1992). Clients indicate the extent to which each statement describes them using a 5-point Likert scale. Possible scores range from 16–80.

The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) is a 21-item measure of current levels of depression. It is the most widely used measure of depression and is commonly included in outcome studies of GAD in order to determine the effect of treatment on depressive symptoms. Respondents choose from a variety of statements that describe varying levels of depressive symptomatology to report on their experiences. Possible scores range from 0 to 63.

The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988) is a widely used, well-researched, 21-item measure of severity of anxiety symptoms. Clients report how much they have been bothered by a list of symptoms during the previous week on a 4-point Likert-type scale. Possible scores ranged from 0 to 63.

The Action and Acceptance Questionnaire (AAQ; Hayes et al., 2002) is a self-report measure that assesses emotional avoidance and emotion-focused inaction (i.e., behavioral avoidance in the service of experiential avoidance). Respondents report the extent to which each statement applies to them using a 7-point Likert-type scale. The version used in this study had 17 items. Thus, scores could range from 17 to 119, with high scores corresponding to severe experiential avoidance, or unwillingness to remain in contact with particular feelings and thoughts, and lower scores reflecting acceptance and action. A number of studies employing clinical and nonclinical samples have established that the AAQ has adequate psychometric properties (Eifert et al., 2000; Hayes et al.).

The Credibility/Expectation Scales (Borkovec & Nau, 1972) assess the extent to which clients view a specific therapy package as sufficiently credible, and whether it

evokes significant expectancy for change. Clients rate the extent to which each of four statements is true for them on a 9-point Likert-type scale. They also report the percent improvement they think and feel will occur by the end of treatment. This measure has recently been demonstrated to have high internal consistency within the subscales and good test-retest reliability (Devilly & Borkovec, 2000).

The Post-Treatment Survey was developed by the authors to provide some preliminary information about the aspects of the therapy package that clients found most useful. The measure consists of 17 components of treatment (e.g., relaxation, learning about the function of worry) that are rated by the respondent on a 5-point Likert-type scale representing varying levels of helpfulness. There is also an open-ended question that asks about the most useful element of treatment.

Procedure

A clinical graduate student assessor extensively trained in this interview at CARD interviewed participants using the ADIS-IV. Consensus diagnoses were assigned during weekly full staff meetings at the clinic. Participants were then placed on a waiting list until they were contacted by the therapists about the possibility of receiving group treatment for GAD. Immediately before the first group session, participants completed a questionnaire packet including the PSWQ, BDI, BAI, and the AAQ. The credibility/expectancy scales were administered at the end of the first treatment session following a presentation of the rationale and an overview of the methods to be used. After the last treatment session, participants completed the questionnaire packet and a posttreatment ADIS-IV was administered.

Treatment

The therapists were a clinical psychologist (SO) and an advanced graduate student. Another beginning graduate student sat in and observed the group for training purposes. Treatment consisted of nine weekly sessions and one taper session (that occurred 2 weeks after Session 9), each lasting 2 hours. As noted above, the elements of therapy presented here were drawn from Borkovec's cognitive-behavioral treatment for GAD (e.g., Borkovec & Roemer, 1994), *Mastering Your Anxiety and Worry* (Zinbarg, Craske, & Barlow, 1993), Hayes and colleagues' (1999) ACT treatment, and Linehan's (1993a, 1993b) DBT.

Our treatment is aimed at targeting the future focused thinking, habitual responding, experiential avoidance, and behavioral inaction we find to be characteristic of GAD. We use methods such as self-monitoring and mindfulness exercises to shift clients' attention from the future to the present moment. These methods facilitate a more flexible way of responding and increase the client's behavioral repertoire to allow for behaviors that are more consistent with the client's valued directions. Exercises and metaphors directed at decreasing experiential avoidance also facilitate this behavioral change. An overview of our treatment model is presented in Table 1.

Session 1 began with an overview of the roles of the therapists and clients and a discussion about rules and confidentiality. Clients were then invited to share their individual problems and goals for therapy, as well as their successful and unsuccessful prior attempts to cope with their problems. The therapists presented a model of anxiety and a model of worry, underscoring the function (e.g., avoidance, motivation, superstition) and cost (e.g., concentration difficulties, depletion of resources for other activities/goals, taking a "spectator" approach to life) of the lifestyle associated with GAD. The habitual nature of worry was highlighted and therapy was framed as an opportunity to learn and practice new, more flexible ways of responding to previously anxious cues. The interfering role that worry can play in living a satisfying and valued life was discussed. Finally, an overview of the treatment model was presented and participants were instructed in diaphragmatic breathing.

Session 2 was devoted to reviewing the material covered in the previous session and the introduction and practice of progressive muscle relaxation (PMR; Bernstein, Borkovec, & Hazlett-Stevens, 2000). PMR was not offered as a method of anxiety control. Instead, it was described as a method by which participants could become more mindful or aware of their experience. In each of the

Table 1
An Overview of the Treatment Model

Target for Change	Treatment Approach
Focus on future	Increase present moment focus through self-monitoring, PMR, and mindfulness exercises
Rigid, habitual anxious responding	Increase choice and flexibility through increased awareness of behavioral restriction (self-monitoring), enhancement of willingness, and an assessment of valued life directions
Experiential avoidance	Facilitate acceptance and willingness through mindfulness exercises, shift-of-control efforts from internal experience to value-consistent behavior
Behavioral avoidance	Commitment to valued action

subsequent sessions, breathing, PMR, or a mindfulness exercise was conducted at the beginning of each group to solidify these skills and to prepare the therapists and clients for the work that was to be done in each session. PMR was practiced throughout the rest of therapy, gradually reducing the number of muscle groups used and eventually encouraging cue-controlled relaxation. In addition, clients were instructed to practice PMR and other mindfulness exercises between sessions throughout the rest of the treatment.

In Session 3, we used ACT methods (Hayes et al., 1999) to explore clients' attempts to control their thoughts (including worries) and emotions. This session included a mix of didactic presentation and experiential exercises. For instance, clients were instructed on the adaptive function and universality of emotional responding (e.g., Linehan, 1993a, 1993b). They were also alerted to the value that society places on control and the ways in which they have successfully exerted control over their behavior. However, they were also asked to explore the way in which efforts at experiential control had been successful or unsuccessful in their own lives. Exercises were conducted to demonstrate the thought suppression paradox.

The possibility of willingness, an alternative to efforts at control, was introduced in Session 4 (e.g., Hayes et al., 1999). Willingness involves giving up efforts to control one's internal experiences in the service of moving forward with valued action. Willingness was differentiated from wanting to experience, or purposely eliciting, negative thoughts and feelings. Instead, it was defined as allowing the experiencing of thoughts, feelings, and bodily sensations that arise when one engages in behaviors consistent with their values.

The relationship between willingness and mindfulness was also discussed in this session (Linehan, 1993a, 1993b). Specifically, the therapists suggested that mindfulness involves awareness of the present moment and willingness to experience it. A simple mindfulness exercise involving awareness of physical sensations was conducted. After processing this exercise, the group discussed how experiences are often judged as "good" or "bad," which can lead to efforts to change or control such experiences. Therapists then discussed the possibility of taking a nonjudgmental stance on experience, emphasizing the approach of noticing without evaluating. A more difficult mindfulness exercise was introduced to illustrate this concept. Specifically, participants were asked to imagine leaves floating down a stream and they attempted to place thoughts, experiences, and feelings they were having on the leaves as they passed by. The contrast between mindfulness and worry was discussed.

Session 5 centered on valued directions (Hayes et al., 1999). Group members discussed the ways in which worry and efforts at control had become primary in their lives, which pointed to the need for participants to reassess areas of life that were important to them. The difference between goals (outcome) and values (process) was explored through the use of metaphors. Specifically, goals are described as specific achievements to be accomplished in the service of a particular valued life direction.

Participants were asked to complete a values assessment between Sessions 5 and 6 in which they expressed their personal views on how they would like to choose to live their lives in various domains (e.g., friendship, career, leisure, spirituality; Hayes et al., 1999). They were also asked to list external and internal barriers to each valued direction. For instance, if a valued direction included being an honest and committed friend, an external barrier might be that the person currently has no friends, whereas an internal barrier would be the thought, *I am afraid to take the risk.*

In Session 6, the group completed the values assignment together. Participants were asked to state whether or not they were ready to commit to taking some action toward living with their valued directions. External barriers were explored and reworked as actions. In other words, in the example described above, the external barrier of "no friends" was reworked into an action consistent with the valued direction of intimate friendships, such as asking an acquaintance to lunch or calling an out-of-touch friend. Internal barriers were examined in the context of willingness. Clients explored whether or not they were willing to accept negative thoughts and emotions that would likely arise through the process of living a meaningful life.

Sessions 7 through 9 were primarily focused on a rotating review of values, recent actions consistent with values, barriers to action, and renewed commitment to action. When a client appeared unwilling to engage in action consistent with his or her reported values, the group examined whether or not the value was truly meaningful and personal to the participant or if it reflected the wishes of the participant's social environment. Following this analysis, the participant would either recommit to valued action, modify the value to be more in line with his or her personal preferences, or maintain an unwillingness to bear the cost (negative thoughts and feelings) of a valued life direction. Therapists urged participants to continue to evaluate the workability of whichever outcome they chose.

Additionally, these sessions provided a model of responding to worry that was closely tied to valued action. Specifically, participants were encouraged to notice when they experienced worry, to mindfully observe the nature and function of the worry, and to determine whether or not the worry response required some action. For instance, Gil was chronically worried about the status of his relationship, and he frequently attempted to push those

thoughts away. However, through an exploration of his values, he became aware that he yearned for a more intimate relationship than his partner was willing to provide. Thus, Gil eventually took action as a result of his responses to this situation. On the other hand, Roger experienced worries that an intimate partner would never accept him, and he responded to these thoughts by avoiding potential partners. However, Roger reconnected with his value to be in a relationship and committed to taking action, regardless of the thoughts that he experienced along the way.

In Session 10, each participant discussed the progress they had made and the work they wished to continue posttreatment. The main points of the treatment were reviewed and the therapists met individually with each member to explore any individual concerns that remained.

Throughout therapy participants completed a number of outside assignments, including monitoring their anxious responses and worry. Over the course of treatment, monitoring extended to observing the function of worry and its relationship to valued actions. Participants were encouraged to practice mindful exercises (e.g., breathing, PMR, observing) daily and to keep a record of their practice. Finally, participants completed several written exercises related to values and were urged to take daily action consistent with their valued directions.

Table 2
Pre- and Posttreatment Scores

	ADIS Severity		PSWQ		BAI		BDI		AAQ	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Ann	5	4	70	49	14	0	10	6	60	58
Roger	5	4	58	53	4	3	6	1	73	67
Sean	5	4	77	58	21	9	24	10	89	86
Gil	6	—	80	80	11	2[a]	9	2	67	66

Note. ADIS = Anxiety Disorders Interview Schedule for DSM-IV; PSWQ = Penn State Worry Questionnaire; BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; AAQ = Acceptance and Action Questionnaire. Dash indicates missing data.
[a] Data missing from postassessment; value is from Session 9.

Results

Clients' ratings of credibility and expectancy of the treatment were comparable to those reported in Borkovec and Costello's cognitive-behavioral treatment outcome study (7.25 and 67.5%, respectively, as compared to 6.95 and 68.52% in Borkovec & Costello, 1993).

While all four clients continued to experience moderate levels of GAD distress and interference posttreatment, as a group they experienced statistically significant reductions on the PSWQ, $t(3) = 2.176$, $p < .059$, the BAI, $t(3) = 3.15$, $p < .025$, the BDI, $t(3) = 3.326$, $p < .023$, and the AAQ, $t(3) = 2.78$, $p < .035$, from pre- to posttreatment (see Table 2). In order to put our findings in a context, we applied Borkovec and Costello's (1993) method of defining treatment responders and high end-state functioning. A client was considered to have responded on a measure if he or she showed at least a 20% decrease over the course of therapy; a client was considered to have reached high end-state functioning if his or her posttherapy score fell within normal range on the measure (defined as 2.0 for the ADIS clinical severity ratings). Seventy-five percent of the sample met criteria for responder status on at least three of the four outcome measures. Fifty percent of the sample reached high end-state functioning using the same criteria. It is important to note that findings may be somewhat misleading because Roger actually met criteria for high end-state functioning on the three self-report measures prior to treatment, even though he demonstrated substantial symptomatology in the interview and in the course of treatment.

Given that the overarching goal of therapy was to encourage clients to live fulfilling lives rather than allowing worries and fears to serve as obstacles to action, we feel that it is important to examine the life changes made by our clients over the course of therapy. All four clients declined referral for additional treatment and they all reported improvement in their life directions. For instance, Ann decided to make a career change through the course of therapy. At the beginning of treatment she was experiencing significant worries related to her career, primarily because she was profoundly dissatisfied with her field of study. While completing the values exercises in treatment, Ann discovered that her interest in pursuing a job in her field was solely due to her desire to prove she could, despite being learning disabled. At the close of treatment, she had begun to search for a job/career more in line with her interests and values.

Similarly, Roger made significant life changes through the course of therapy. For instance, he addressed his financial worries by completing his back taxes, an activity he had been avoiding for quite some time. At the beginning of therapy, he had assumed that he would have to quit his current job, which he enjoyed, or work more hours at a second job, to address his somewhat unrealistic financial concerns. Through therapy, he was able to realize that this approach jeopardized his other valued life goals (e.g., developing relationships, engaging in leisure activities). He was eventually able to take actions that balanced several of his life values.

Roger also became more in contact with the value he placed on relationships over the course of therapy and he began to experience how he was allowing doubts and fears to stand in the way of his developing intimate

relationships. Although he continued to worry about relationships, he also put a personal ad in the paper, met a potential dating partner from out of town through a mutual friend, had several enjoyable phone contacts, and eventually spent the weekend visiting this new dating partner.

Sean also made considerable progress in his valued directions throughout the course of therapy. At the beginning of treatment, Sean was extremely concerned about disclosing his worries about HIV. He did not want the therapists to know of his fears and he was unwilling to express them to the group. Over the course of treatment, he opened up and discussed his fears and concerns candidly with the group. Furthermore, Sean became more deeply involved with a woman and was eventually able to talk to her about his fears. Together they made a commitment to monogamy, completed a series of HIV tests, started on oral birth control, and began having unprotected sex.

Sean also became much more aware of his emotional experiences through treatment. At the beginning of treatment, he would describe feelings of dread and doom, but he was unable to connect those feelings to any external event. However, over the course of treatment he began to identify his values and observe his reactions. For instance, at the end of treatment he became aware of the fact that he was tremendously unhappy in his current job and he began to take action to change careers.

Gil showed the least progress on interview and self-report measures of anxiety and depression. He missed several consecutive sessions of group toward the end of the treatment because of his work-related travel schedule, and thus he did not get much individualized attention working on his values assignments. However, Gil was still able to make some substantial changes in his life. He found a new job in his company that was more in line with his personal values and that required less of a life commitment. The night before the final treatment session he also made the difficult decision to end his long-term relationship, realizing that he valued a level of intimacy that was absent in the relationship. He reported a high level of worry that he would never find another partner and he was able to report that regardless of these worries he felt committed to his choice to find a more expressive partner.

In an attempt to identify in a preliminary manner the critical components of treatment, we examined clients' feedback on the Post-Treatment Survey. Ann reported learning the difference between acceptance and resignation, working on approaching rather than avoiding situations, and recognizing early cues of her anxiety. Roger indicated that developing relaxation/mindfulness skills and focusing on values in choice making were highly useful components of treatment. Sean noted that focusing on values, learning to approach rather than avoid, and learning various ways to respond to worrisome cues were extremely helpful aspects of treatment. Gil was the only group member who provided negative feedback about the treatment. Specifically, he found the early sessions to be overly instructional (and unfortunately he missed several of the later sessions). However, Gil rated the attention to values as a very helpful component of treatment. Finally, while Ann and Roger found the group format particularly helpful, Sean found that it detracted from more individual, focused attention to particular concerns.

Discussion

In summary, all four clients made significant life changes throughout the course of therapy. Two clients reported marked decreases in symptomatology, a third started with fairly low reports of symptomatology and demonstrated additional improvements after therapy, and a fourth client missed several sessions, yet still made some significant changes throughout the course of therapy. On average, clients' scores on all of the self-report measures changed statistically in the direction of decreased symptoms and increased acceptance, although the magnitude of these changes was small. Of course, in the absence of a comparison group, it cannot be determined if the changes seen in the current description are a result of treatment. However, given the chronicity of this disorder (Woodman et al., 1999), it would be unusual for the level of change evident for Ann and Sean to result from mere passage of time. Thus, we believe that the proposed integration of mindfulness and acceptance techniques into existing cognitive-behavioral treatment merits further refinement and study.

It is possible that the gains made by the clients described in this paper were a result of the traditional components of treatment, such as psychoeducation about anxiety or relaxation, or nonspecific factors. However, in the Post-Treatment Survey, all four clients pointed to unique elements of this treatment package as most efficacious (mindfulness, acceptance, values), supporting the potential efficacy of a newly developed treatment along these lines. Of course, client report does not necessarily mean that these are truly the active ingredients of treatment; more research is clearly needed to determine whether the novel elements are in fact beneficial.

Our findings clearly suggest that some revision of the treatment as it was delivered to these clients is necessary. In particular, both client report and therapist observation suggest that the dosage of therapy needs to be increased. Clients seem to have responded to many of the novel aspects of treatment, but it is not clear that they had sufficient time and practice to fully integrate these elements into their daily lives.

The most advantageous format for treatment, group or individual, remains to be determined. Conceptually, we believe that combining group and individual formats allows for the most optimal practice of acceptance, mindfulness, identifying values, and mindful action, in addition to individualized attention, in the course of treatment. However, there are practical concerns that make this approach less accessible to private practitioners. Thus, individual treatment might be the most effective form of treatment delivery.

Gil's observation, confirmed by therapists' impressions, highlighted the overly instructional nature of our early treatment sessions. Later sessions seemed particularly successful because of their predominant focus on examples from the clients' experiences rather than didactic presentations. Future treatment development should integrate mindfulness practice earlier in the course of therapy and ensure that each session contains sufficient experiential practice to keep clients engaged and actively learning.

Treatment development should also focus on the challenge inherent in integrating change and acceptance techniques. Our treatment approach includes elements commonly used for anxiety reduction, such as relaxation and exposure, yet we believe that rigid, repeated attempts to reduce anxiety are maintaining factors in GAD (e.g., Wells, 1995). Future treatment development should address this dialectic with clients, using the approaches of others who have similarly addressed this conflict (e.g., Hayes et al., 1999; Linehan, 1993a, 1993b) as models.

Finally, we noted in this preliminary investigation that clients evidenced what seemed like substantial changes that were not necessarily reflected in the traditional assessment measures. Among her recommendations for improving cost-benefit analysis in the development of psychotherapy methods, Newman (2000) underscored the importance of broadening the focus of treatment outcome assessment to include quality of life. In our own future work, we plan to incorporate more broad-based assessment measures in an attempt to capture what appears to be clinically relevant information more systematically. The types of changes we observed also point to the need for more long-term assessment of outcomes. Treatment ended while many of these clients were in the midst of substantial life changes. It will be important to assess outcomes once these changes have taken place and a state of equilibrium has been established in order to more accurately measure the effect of treatment.

Our experience suggests that integrating mindfulness and acceptance approaches into cognitive-behavioral treatment for GAD offers some promise. However, a somewhat longer treatment, offered in an individual format, and focused on further integrating change-based and acceptance-based elements of the intervention deserves further study.

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