Journal of Cognitive Psychotherapy: An International Quarterly
Volume 25, Number 3 • 2011

Treatment of Three Anxiety Disorder Cases With Acceptance and Commitment Therapy in a Private Practice

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Acceptance and commitment therapy (ACT) for anxiety disorders is a type of cognitive behavioral therapy that focuses on decreasing the behavior regulatory function of anxiety and related cognitions, and has a strong focus on behavior change that is consistent with client values. In this case series, 3 consecutive referrals seeking treatment for anxiety disorders at a private practice were treated with 9–13 sessions of ACT. In-session exposure therapy was not included to determine the effects of ACT without the compounding effects of already proven treatment procedures. The treatment procedure was identical across disorders to test the use of a unified treatment protocol for anxiety disorders: panic disorder with agoraphobia, comorbid social phobia and generalized anxiety disorder, and posttraumatic stress disorder. All participants showed clinical improvement in their specific anxiety disorders as rated on multiple standardized assessments after treatment, with gains maintained at follow-up (8 months or more). Time series assessments, taken throughout treatment, of anxiety and avoidance behaviors showed large decreases in avoidance but not in anxiety, suggesting ACT was effective by changing the way participants responded to anxiety rather than anxiety itself.

Keywords: anxiety; acceptance and commitment therapy; treatment; psychological flexibility; experiential avoidance

Anxiety disorders are the most common psychological disturbances that lead people to seek mental health services (Narrow, Rae, Robins, & Regier, 2002). However, while effective treatments for these disorders exist, they are not effective for all individuals (e.g., Stewart & Chambless, 2009). This problem is amplified in that empirically supported treatments, particularly exposure-based ones, have limited acceptability for patients and mental health practitioners (e.g., Becker, Zayfert, & Anderson, 2004). The limited adoption by practitioners of empirically based procedures is also likely influenced by the need to learn various protocols for the treatment of each anxiety disorder—even though these protocols have core features that do not need to be relearned. This has led to interest in the development of unified protocols for all anxiety disorders

DOI: 10.1891/0889-8391.25.3.203

(e.g., Barlow, Allen, & Choate, 2004; Eifert & Forsyth, 2005; McEvoy, Nathan, & Norton, 2009). Acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) has been proposed as such an approach (Eifert & Forsyth), but only descriptions of its use as a unified protocol exist (Eifert et al., 2009), and its transportability to a private practice is unclear.

The ACT model of anxiety disorders proposes that attempts at regulating anxiety are at the core of anxiety disorders rather than the presence of particular levels of anxiety. This particular approach to anxiety (and other inner experiences) comes out of behavioral research on language and cognition, mainly relational frame theory (RFT). Research on RFT has shown that inner experiences occur in *functional* and *relational* contexts and that these contexts can be targeted separately (Steele & Hayes, 1991). Similar to basic behavioral research on extinction, which shows that extinction involves new learning rather than unlearning (e.g., Bouton, 2002), it has been shown in RFT research that specific cognitions cannot be unlearned (Wilson & Hayes, 1996). However, the context in which inner experiences occur can be altered, so that they have less of a behavior regulatory impact (e.g., Levitt, Brown, Orsillo, & Barlow, 2004). Therefore, similar to other third-generation behavior therapies, ACT seeks to alter the functional effects of inner experiences with much less concern for the form, frequency, or likelihood of any particular category of inner experience such as anxiety, worry, or panic sensations. ACT aims to decrease avoidance of these inner experiences as the dominant response to anxiety. The repertoire of responses in anxiety is broadened, thus resulting in *psychological flexibility* (defined as the ability to openly experience anxiety while moving in personally chosen directions). This is accomplished through targeting the six psychological processes thought to be responsible for the onset and maintenance of anxiety disorders from an ACT perspective: being present, acceptance, defusion, self as context, values, and committed action (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

Summary of ACT for Anxiety Disorders Outcome Research

Data on the effectiveness of ACT lags behind more traditional procedures such as cognitive behavioral therapy (Powers, Zum Vörde Sive Vörding, & Emmelkamp, 2009), but the data on ACT in general is supportive and growing (Hayes et al., 2006; Ruiz, 2010). Data supporting the mechanisms of change in ACT are generally stronger than overall ACT outcome data for any one disorder (Hayes et al., 2006). There are more than 40 studies supporting the six processes targeted in ACT, with much of this support being for acceptance (e.g., Hofmann, Heering, Sawyer, & Asnaani, 2009; Levitt et al., 2004), defusion (e.g., Marcks & Woods, 2005, 2007; Masuda et al., 2010), being present or mindfulness (e.g., Arch & Craske, 2006), and values (Páez-Blarrina et al., 2008).

There is evidence for the efficacy of ACT for most anxiety disorders, with the most support being for generalized anxiety disorder (GAD) and obsessive-compulsive disorder (OCD). One open trial (Roemer & Orsillo, 2007) and one randomized controlled trial (Roemer, Orsillo, & Salters-Pedneault, 2008) evaluated the efficacy of an ACT-based treatment for GAD. In the open trial (Roemer & Orsillo), 16 treatment completers showed significant reductions in GAD severity and depression, and increases in quality of life, with expected process changes. In the randomized clinical trial (Roemer et al., 2008), 31 adults diagnosed with GAD were either assigned to an ACT-based treatment or a waitlist control condition; after waitlist, they received treatment. Treatment was more effective than waitlist, and at posttreatment, 78% of treated participants no longer met criteria for GAD. Acceptance of internal experiences and engagement in values-based activities were both positively related to responder status above reductions in worry (Hayes, Orsilo, & Roemer, 2010).

An 8-week ACT protocol (with no in-session exposure therapy) was tested in a multiple baseline with four adults diagnosed with OCD (Twohig, Hayes, & Masuda, 2006a). ACT had a

significant impact on OCD severity, depression, and anxiety; and moved OCD severity scores from the clinical range to the nonclinical range with near-zero levels of compulsions at posttreatment and follow-up. ACT processes were related to outcomes. These results were recently replicated in a randomized clinical trial ($N = 79$), where ACT (without in-session exposure) was compared with progressive relaxation training (PRT; Twohig et al., 2010). Using an intent-to-treat analysis, ACT was statistically more efficacious than PRT at reducing OCD severity. Clinically significant change in OCD severity occurred more in the ACT condition than in PRT using multiple levels of analysis (clinical response rates: ACT posttreatment 46%–56%, follow-up 46%–66%; PRT posttreatment 13%–18%, follow-up 16%–18%). There is also evidence for the efficacy of ACT, or ACT plus habit reversal, in the treatment of OCD spectrum disorders, such as skin picking and trichotillomania (Twohig et al., 2006b; Twohig & Woods, 2004; Woods, Wetterneck, & Flessner, 2006).

The following two studies are also supportive of ACT, but generally failed to show significant differences between ACT and comparison treatments. Zettle (2003) found that ACT and systematic desensitization were equally effective at treating 37 participants with math anxiety, with results maintained at 2-month follow-up. Participants with low psychological flexibility at pretreatment, as measured by the Acceptance and Action Questionnaire (Hayes et al., 2006), responded significantly better to ACT than to systematic desensitization, suggesting ACT is most useful for individuals who are psychologically inflexible. Block (2002) compared ACT to cognitive behavioral group therapy (CBGT) and a no-treatment control group (13 per condition; $N = 39$) in the treatment of social phobia. ACT participants showed an increase in willingness to experience anxiety, a significant decrease in behavioral avoidance during public speaking, and a marginal decrease in anxiety during the exposure exercises as compared with the control group. CBGT participants had a marginally significant increase in willingness, a significant decrease in self-reported avoidance, and a marginal decrease in reported anxiety relative to the no-treatment group. No significant differences between the two active treatments were found, except on the behavioral measure where ACT participants remained longer in the posttreatment behavioral exposure task.

Additional support for ACT and anxiety includes two randomized controlled trials, showing ACT reduces worksite stress (Bond & Bunce, 2003; Hayes, Bissett, et al., 2004) and anxiety and stress experienced by parents of disabled children (Blackledge & Hayes, 2006). Efficacy trials, in general, (Lappalainen et al., 2007; Strosahl, Hayes, Bergan, & Romano, 1998) and an outcome trial for anxiety and depression, in particular (Forman, Herbert, Moitra, Yeomans, & Geller, 2007), support the use of ACT. ACT is also supported across a variety of anxiety cases generally (Eifert et al., 2009; Hayes, 1987), and with health anxiety (Jourdain & Dulin, 2009) and posttraumatic stress disorder specifically (PTSD; Orsillo & Batten, 2005; Twohig, 2009).

Review of ACT for Anxiety Disorders Process Research

Understanding the processes through which a treatment works is ultimately more important than whether it works, because understanding the process allows for adaptation and improvements to the treatment, as well as appropriate matching of the treatment to particular clients (DiGiuseppe, 2006). Thus far, there is supportive research for all ACT processes (as reviewed in Hayes et al., 2006; Ruiz, 2010), but only work involving anxiety disorders will be reviewed here. The target process of ACT (psychological inflexibility) has consistently been shown to be highly and significantly correlated with anxiety disorders in general (Hayes, Strosahl, et al., 2004) and specifically with PTSD (e.g., Marx & Sloan, 2005), OCD (Abramowitz, Lackey, & Wheaton, 2009; Briggs & Price, 2009), and panic disorder (e.g., Tull & Roemer, 2007). Beyond correlation, multiple studies have shown that greater fear and panic symptoms were seen for individuals with low psychological flexibility

in a panic-inducing task (e.g., Feldner, Zvolensky, Eifert, & Spira, 2003; Kelly & Forsyth, 2009). Component analyses have shown the efficacy of individual ACT processes in increasing willingness to engage in panic-inducing activities over control groups (Eifert & Heffner, 2003; Levitt et al., 2004), experience obsessive-like thoughts over control conditions (Marcks & Woods, 2005, 2007), and experiencing distressing emotions, including anxiety and depression (Campbell-Sills, Barlow, Brown, & Hoffman, 2006). Finally, mediational analyses, including findings of temporal changes in ACT processes prior to outcomes, have been found in the treatment of anxiety disorders (e.g., Hayes et al., 2010). Thus, it appears there is broad fit and applicability of ACT for anxiety disorders beyond outcome data.

Summary

ACT has a relatively clear and supported model of anxiety disorders and their treatment. There is preliminary data on its efficacy for anxiety disorders, and the limited data is supportive of its purported process of change. Still, there is very limited testing of ACT as a unified protocol for anxiety disorders. Eifert et al. (2009) recently published an article describing ACT as applied to anxiety disorders and used three case examples with differing diagnoses. The cases presented were selected from a larger trial, so they are not representative of typical clinical participants and their protocol incorporated exposure therapy techniques done from an ACT model. This article builds on the work presented by Eifert et al. by treating three consecutive referrals to an outpatient clinic, using a full-time clinician as the therapist, and using an ACT protocol that purposefully excludes any in-session exposure exercises. Additionally, there was a focus on tracking the processes of change that may have affected the outcomes.

Method

Data were collected on the effectiveness of ACT for varying anxiety disorders on three consecutive participants who presented in an outpatient private practice setting. At the intake session (pretreatment), all participants were interviewed with the Anxiety Disorders Interview Schedule for *DSM-IV* (Brown, DiNardo, & Barlow, 2006) and completed a standardized severity measure for each diagnosis. A self-report assessment of psychological flexibility was completed at pretreatment. Because ACT focuses on behavior change rather than reduction in anxiety, daily monitoring of anxiety and avoidance behaviors occurred for 7–14 days prior to and throughout therapy. The same measures completed at pretreatment were also completed after treatment (posttreatment), as well as more than 8-month follow-up (Participant 1 = 17 months, Participant 2 = 13 months, Participant 3 = 8 months). The first author treated all participants and engaged in weekly consultation with the second author, an expert in the use of ACT for anxiety disorders (e.g., Twohig et al., 2010). The treating therapist had been practicing cognitive behavioral therapy since 1999 and ACT since 2001. The treatment purposefully excluded in-session exposure (defined as confronting anxiety-provoking stimuli, either in vivo or imaginal) to clarify the effects of the treatment without interference from already proven procedures. Generally, the same treatment procedures were used with all participants.

Participants

Participant 1 was a 33-year-old White female diagnosed with panic disorder with agoraphobia. Although panic attacks had been occurring for the past 7 years, they only met clinical levels 4 months prior to treatment. Triggers for panic attacks included any discussion of anxiety and panic, drinking caffeine, and eating chocolate. She avoided being alone for fear she would not

have access to help in the event of a panic attack. One panic attack occurred in the month preceding intake, and six to eight panic attacks occurred during the preceding 6 months. On a 0–8 scale, with 8 = *constantly worried/extreme apprehension*, she rated her current worry/apprehension as 6. When reporting interference and distress with respect to the ways apprehension and avoidance of situations have interfered with her life, both interference and distress were rated as 8 on a 0–8 scale, where 8 = *very severe*. Suicidal ideation was reported in response to "life being like this." Extensive avoidance behaviors occurred in response to panic attacks, the most significant being attempts to prevent her husband from being away from the home at night and attempts to prevent him from traveling more than an hour and a half away from home. Lorazepam, to be taken on an as-needed basis, had been prescribed by an emergency room (ER) physician following a visit to the ER in response to a panic attack. However, she indicated she had not used the Lorazepam, and described a strong desire to avoid the use of medication. She did not report Lorazepam use during treatment, but did carry the bottle with her as a safety behavior ("I always make sure I don't leave the house without it").

Participant 2 was a 45-year-old White male who met criteria for social phobia and GAD. He reported that anxiety symptoms had been a problem "ever since I can recall—since I was a kid." Distress and life interference of his social anxiety symptoms were both rated as 6 on a 0–8 scale, where 8 = *very severe*. Social contexts rated as most problematic included meeting his child's teachers, being assertive, initiating conversations, eating in public, and speaking with unfamiliar people. He indicated that his fears have interfered with his life because "I stay home a lot," and because they affect his productivity at work. Additionally, he stated "I'm bothered a lot—it's almost constant." He estimated that he worries 70% of each day. On a 0–8 scale, where 8 = *very severe*, he rated the life interference of his worry-related tension and anxiety as 7 and the distress as 5. He reported that his worries "have been interfering with my life forever."

Participant 3 was a 31-year-old White female who met criteria for PTSD. The onset of symptoms occurred after being confronted by a male who jumped in front of her car, aimed a pistol at her, and threatened to kill her. This event occurred approximately 2 months prior to intake. Similar traumatic experiences (i.e., those involving strong and powerful males) occurred earlier in life, and memories of those experiences were triggered by this event. Violence, guns, and men who abused her with weapons were some of her primary fears. Interference from PTSD was rated as 8 and distress as 7 on the same 0–8 scale used with Participants 1 and 2. Extensive anger following the event was reported, as well as the fear that her anger would get out of control and she would "go off" on other people. Additionally, one prior manic episode occurred 4 months prior to intake. At the time of intake, she was not experiencing a manic or major depressive episode; however, toward the end of treatment (after session 13), she entered into a major depressive episode and received a diagnosis of bipolar I disorder, most recent depressed at that time. The treatment presented in this case focuses on the PTSD. She was seen concurrently by a psychodynamic therapist and psychiatrist for the management of bipolar symptoms and teaching of basic life skills (e.g., job skills and coaching and housing assistance). She had been under the care of these other treatment providers for 8 months prior to seeking treatment for PTSD, and her PTSD was not addressed by these other treatment providers.

Measures

Anxiety Disorders Interview Schedule (ADIS; Brown et al., 2006). The ADIS is a structured interview primarily aimed at diagnosing anxiety disorders. Assessors provide a severity rating for diagnoses on a 0- to 8-point scale. The rating reflects the distress and functional impairment caused by that particular disorder; the following anchors are used to guide scoring: 0 (*absent/none*), 2 (*mild*; *slightly disturbing/disabling*), 4 (*moderate*; *definitely disturbing/disabling*), 6 (*severe*; *markedly disturbing/disabling*), and 8 (*extreme*; *very disturbing/disabling*). The ADIS has excellent interrater reliability

(kappas between .60 and .86 across disorders), and validity is supported by the consistency of the ADIS and diagnostic criteria for these disorders (Summerfeldt & Antony, 2002).

Panic Disorder Severity Scale (PDSS; Shear et al., 1997). The PDSS assesses the severity of panic disorder in adults who are diagnosed with panic disorder. Seven clinician-rated items are rated based on the past month and rated on a 5-point scale, with 0 = *none or not present at all* to 4 = *extreme*, *pervasive*, *near-constant symptoms*, *disabling/incapacitating*. Higher scores represent greater severity. Interrater reliability for this measure is high at .88, but internal consistency is low with a .65 because of the varying dimensions of panic disorder.

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzer, & Borkovec, 1990). This is a 16-item questionnaire that measures worry proneness. Each item is rated on a 5-point Likert scale. Scores range from 16 to 80, and higher scores represent more frequent worry. The mean for participants diagnosed with GAD is 67.7 (SD = 8.9) and 44.3 (SD = 11.4) for a nonanxious group (Molina, Borkovec, Davey, & Tallis, 1994). It has high internal consistency (αs between .86 and .93) and good test–retest reliability (rs between .74 and .93 from 2 to 10 weeks).

Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987). The LSAS measures the level of performance and social difficulties experienced by individuals with social phobia. It contains 24 items that are rated on both fear (0 = *none* to 3 = *severe*) and avoidance (0 = *never* to 3 = *usually*). Total scores for fear and avoidance are reported in this study. Clinical levels for the fear scale are 35.5 (SD = 13.6) and 31.6 (SD = 14.5) for the avoidance scale. It has high internal consistency (α = .96) and good convergent and discriminant validity (Heimberg et al., 1999).

PTSD Checklist-Civilian Version (PCL-C; Ruggiero, Del Ben, Scotti, & Rabalais, 2003). The PCL-C is a 17-item self-report measure that assesses symptoms of PTSD in civilians. The PCL-C has high internal consistency ($\alpha > .85$), good test–retest reliability (r = .92), and high correlations with other well-established measures of PTSD. Mean score in a college student population is 29.4, and a score of 44 has been suggested as the clinical cutoff for PTSD (Ruggiero et al., 2003).

Acceptance and Action Questionnaire (AAQ; Hayes, Strosahl, et al., 2004). The AAQ is a 9-item questionnaire that measures psychological inflexibility. Questions are rated on a 7-point Likert-type scale. Lower scores reflect less psychological inflexibility (greater psychological flexibility). Upper quartile scores for clinical and nonclinical samples are 42 and 38, respectively. The AAQ has adequate internal consistency (α = .70) and acceptable test–retest reliability.

Weekly Avoidance and Anxiety Measure. Two face valid questions on anxiety and avoidance were completed by all participants each day throughout the study. The participants were asked to report their scores to the clinic via telephone at the end of each day. Anxiety was assessed with the same question for all participants: "Average anxiety for the day? (0 to 100, where 0 = *no anxiety* and 100 = *most anxiety ever*)." Avoidance was also averaged for the day on a 0–100 scale, where 0 = *no avoidance* and 100 = *most avoidance ever*. The participants were instructed to only rate avoidance of events that would trigger anxiety.

Treatment

All 3 participants were treated with a course of ACT (Hayes et al., 1999) for anxiety disorders (see Eifert & Forsyth, 2005; Twohig et al., 2006a for examples). ACT focuses on six target processes: (a) *acceptance*—acknowledgement of and willingness to experience all private events (i.e., thoughts, feelings, physical sensations); (b) *defusion*—decreasing the literal function of language/thoughts in their influence on behavior; (c) *self as context*—recognition of the self as a context in which private events occur, not as the product of their content; (d) *contact with the present moment*—recognition and engagement with present experience instead of behavior regulated by thoughts about the past or the future; (e) *values*—clarification of values to provide guidance and purpose to life instead of reliance on private experiences; and (f) *committed action*—behavioral commitments to follow chosen values instead of a life of inaction or impulsive choice

based on the content of private experiences. Because ACT is a process-based approach, therapy was not provided using a standardized session-by-session treatment protocol. Instead, therapy focused on the six target ACT processes flexibly and as needed per participant. The order and length in which the processes were addressed varied with each client, but all courses of therapy addressed the same six processes. While traditional exposure-based exercises would be consistent with the committed action process of ACT, these specific techniques were not used within session in this treatment. This was done to limit the overlap between ACT and traditional behavioral exposure work so the empirical results from this investigation would be clear.

Because these clients were seen as part of regular clinical services and not a structured treatment outcomes study, the same number of sessions was not used for all participants. Treatment ended when a clinically meaningful reduction was seen. Participant 1 was seen for nine weekly 90-minute sessions (because of a lengthy commute, her sessions were longer than the standard 50-minute sessions); Participant 2 was seen for 10 weekly 50-minute sessions; Participant 3 was seen for 13 weekly 50-minute sessions.

ACT, as delivered to these participants, can be summarized in four phases. The first phase of treatment involved a collaborative, supportive, and detailed examination of typical participant responses to and ways of coping with anxiety. The overall effectiveness of attempts to control or regulate anxiety in general were discussed. For example, the participant would generate a list of all the techniques and strategies he or she had used to control anxiety. These would then be rated according to short-term and then long-term effectiveness. The participants would also be asked to notice the negative effects resulting from the attempts to control anxiety (e.g., the negative effects of avoidance). Participants generally concluded that responding to anxious experiences by trying to control or eliminate them was somewhat effective in the short term but not effective in the long term, and often had negative consequences. Participants were also asked to evaluate their experiences of attempting to regulate or control anxiety between therapy sessions. Eventually, all participants acknowledged the limited success of these strategies and were willing to consider alternative responses to anxiety.

Phase 2 introduced acceptance as an alternative response to anxiety in place of the traditional attempts to control or regulate anxiety. The focus of therapy shifted from regulating anxiety to mindfully accepting the presence of anxiety and anxiety-related inner experiences while working to improve daily functioning and overall quality of life. The participants were taught how to allow anxiety to occur without needing to regulate or control it through the use of metaphors and experiential exercises. For example, the struggle with anxiety was compared to being stuck in quicksand. It was suggested that the more the participant struggled against the quicksand (the anxiety), the faster he or she would sink. It was suggested that acceptance was comparable to letting go of the struggle against the quicksand and increasing contact or surface area with the very thing the participant is trying to escape (i.e., the quicksand/anxiety). Another exercise to illustrate acceptance used a piece of paper that represented anxiety. The participant was encouraged to struggle against the paper (the anxiety) and not let it touch them. This was compared to the traditional struggle with anxiety, and then it was suggested that the participant just let the paper sit on his or her lap without struggling. It was noted that the paper (the anxiety) was touching them in both cases. Opportunities to reinforce acceptance were addressed throughout the rest of therapy.

Phase 3 focused on defusion and self as context. Rather than helping participants develop skills to determine whether any particular thought was accurate or meaningful, participants learned when to follow or respond to thoughts and when to just let them occur without responding to them. This occurs as a form of discrimination training, where thoughts are followed based on how useful they are in guiding responses in any given moment. In other words, the focus of therapy was on the function of thoughts, not their content. This is taught through a series of exercises, metaphors, and discussions. For example, participants are asked to practice just noticing what he or she is thinking instead of being caught up in the thought. Participants learn to say "I just had

the thought that I can't do this," instead of, "I can't do this." Another example of a defusion metaphor is comparing private events to passengers on a bus driven by the participants. Participant is encouraged to notice the passengers and realize that although they may appear threatening and influence the route taken, the passengers cannot actually change where he or she chooses to drive. Self as context is similar to defusion in that it focuses on the way participants responded to inner experiences. Self as context particularly has to do with experiencing inner experiences as events that occur within us but are not defining of us. For example, anxiety is something we experience, not something we are. This is often compared to a game of chess in which the pieces represent private experiences, and it is suggested that the participant is the chessboard—the place or context in which the pieces are experienced. If a participant experientially senses the difference between oneself and what is felt, then behaving while anxious is a realistic alternative.

As the participants continued to practice acceptance, defusion, and self as context, Phase 4 shifted to the development of values-driven behavior. This involved the identification of idiosyncratic-valued behavioral "directions" and behavioral commitment strategies designed to increase behavior controlled by these valued directions rather than behavior functioning to avoid or escape anxious experience. Values are defined in ACT as areas of life that are meaningful that one would be willing to work toward. Values can never be accomplished (e.g., valuing education vs. obtaining a college degree), thus they have the ability to guide behavior over long periods of time and continue to motivate actions well after therapy. Values are addressed in here to replace the focus on anxiety regulation. It is like saying to the participant, "If life is not going to be about controlling your anxiety, what are you going to make it about?" Weekly commitments are made to follow ones values instead of controlling anxiety. Participants are often instructed to practice acceptance, defusion, and self as context while engaging in these actions. For example, Participant 1 started hiking, an activity she highly valued, but abandoned once her panic and anxiety became the focus of her life. Participant 2 started approaching attractive women and initiating conversations. Participant 3 began engaging in valued interpersonal interactions she had been avoiding. These activities may appear similar in form to traditional exposure exercises or behavioral experiments, but they aim to be functionally different in that the client focuses on acceptance and defusion of anxiety-related inner experiences.

Results

The primary dependent variables were scores on self-report severity measures of participant primary diagnoses and clinical severity ratings (CSR) from the ADIS. To track the process through which the treatment produced results, the AAQ was completed at all assessment points. See Table 1 for scores on all measures. Finally, all participants completed the weekly anxiety and avoidance questions throughout the investigation to provide additional information on the process through which ACT works (presented in Figure 1). Results for figures are not reported statistically, but rather interpreted visually as is consistent with clear single subject data (Barlow, Nock, & Hersen, 2008).

Participant 1 was seen for treatment of panic disorder with agoraphobia. As seen in Table 1, her pretreatment scores on the PDSS were above the clinical level as was her CSR. She showed a clinically significant drop in both of these scores at posttreatment, which was maintained at follow-up. Additionally, she no longer met criteria for panic disorder with agoraphobia at posttreatment. She had a slight decrease on the measure of psychological inflexibility from pretreatment to posttreatment, but the largest decrease was seen from posttreatment to follow-up. Finally, as shown in Figure 1, her changes in avoidance behaviors are likely the precipitator of these clinical changes. Very quickly, after her first couple sessions, she was able to cease her avoidance behaviors. It should also be noted that while she may have had a slight decrease in overall anxiety, her mean anxiety stayed fairly constant throughout treatment.

TABLE 1. Participant Descriptions and Scores at Pretreatment, Posttreatment, and Follow-up

	Outcome on Symptom Questionnaire			Acceptance and Action Questionnaire		
	Pretreatment	Posttreatment	Follow-Up	Pretreatment	Posttreatment	Follow-up
Participant 1. Panic disorder with agoraphobia for the past 7 years. Triggers: discussion of panic and caffeine. Avoided being alone and traveled with husband						
Panic Disorder Severity Scale	21	1	1	38	34	20
Anxiety Disorders Interview Schedule clinical severity rating	7	0				
Participant 2. Comorbid social phobia (SP) and generalized anxiety disorder (GAD): Social fears were broad and caused him to stay home often. Worried 70% of day.						
Penn State Worry Questionnaire	64	44	43	39	38	34
Liebowitz Social Anxiety Scale–Fear	47	—	17			
Liebowitz Social Anxiety Scale–Avoidance	47	—	11			
Anxiety Disorders Interview Schedule clinical severity rating (GAD)	7	1				
Anxiety Disorders Interview Schedule clinical severity rating (SP)	6	2				
Participant 3. Posttraumatic stress disorder: Primarily afraid of violence, guns, and strong men. One manic episode 4 months prior to pretreatment. Bipolar I diagnoses at posttreatment.						
PTSD Checklist-Civilian Version	77	40	28	23	44	28
Anxiety Disorders Interview Schedule clinical severity rating	7	2				

Participant 2 met criteria for social phobia and GAD at pretreatment. A standardized severity measure of worry showed clinically elevated levels at pretreatment, which were significantly reduced by posttreatment, and results were maintained at follow-up (see Table 1). A very similar pattern was found for the CSR for GAD. He reported that his worry frequency had dropped to 20%–25% of each day at posttreatment from 70% reported at pretreatment. Additionally, he rated the life interference as 0 and worry-related distress as 2 at posttreatment. This participant showed elevated levels at pretreatment on a standardized measure of social anxiety. Because of a clerical error, posttreatment levels on the LSAS were not collected (but posttreatment levels on the CSR of the ADIS were notably lower than pretreatment); nevertheless, follow-up levels were below clinical cutoffs. Again, a similar pattern was seen for the CSR. He did report some

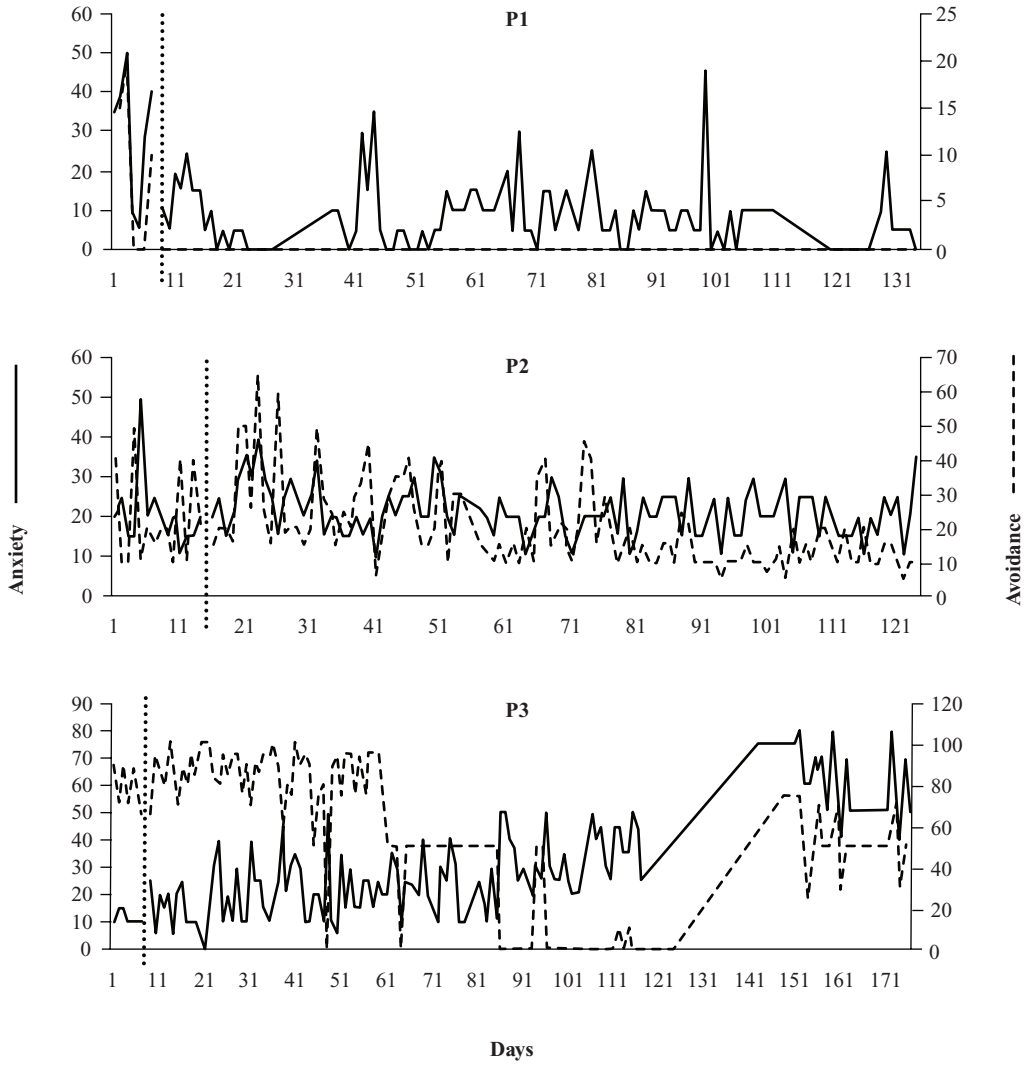

Figure 1. Daily ratings of anxiety (solid line) and avoidance (dashed line) throughout treatment.

continued social anxiety when initiating conversations with women, but denied any life interference in any other area. He no longer met criteria for either diagnosis at posttreatment. He showed only modest decreases on a measure of psychological inflexibility throughout treatment. As illustrated in Figure 1, he maintained steady levels of anxiety throughout treatment, but had significant decreases in avoidance behavior.

Participant 3 met criteria for PTSD. Her scores on a standardized measure of PTSD severity were above the clinical cutoff as shown in Table 1. Her scores dropped below the clinical level at posttreatment with continued gains at follow-up. The CSR followed the same pattern. Additionally, she no longer met criteria for PTSD at posttreatment. She met criteria for bipolar I disorder and remained in the midst of a major depressive episode at discharge. The current depressive episode was precipitated by several postmanic episode consequences (as noted earlier, she experienced a manic episode prior to intake), including job loss, eviction, loss of friends, excessive and disabling consumer debt, and legal proceedings. She had a notable increase in

psychological inflexibility likely in response to her major depressive episode that overlapped with posttreatment, but slight decreases were seen at follow-up. Participant 3 had the most dramatic decrease in her avoidance behaviors, with near zero levels for a couple of weeks toward the end of treatment (see Figure 1).

Discussion

In this investigation, three consecutive cases who presented with anxiety disorders were treated with 9–13 sessions of a similar ACT for anxiety disorders protocol (without the use of in-session exposure therapy). Participants showed clinically significant pretreatment to posttreatment changes in severity of anxiety disorders, with results maintained at follow-up. These results were found on standardized severity measures as well as the clinician severity rating of the ADIS. Self-report process data (measured using the AAQ) was as expected for 2 of 3 participants. The results for the third participant were likely influenced by a major depressive episode that was part of a bipolar I diagnosis. Process data collected through daily self-report of anxiety levels and avoidance behavior were supportive of ACT processes. All 3 participants showed notable reductions in avoidance behaviors throughout treatment, but very little change in anxiety severity.

This case series has experimental and clinical implications. Experimentally, this is the first study we are aware of using ACT for anxiety disorders to track changes in anxiety and avoidance using a time series design. Data from three cases is in no way definitive, but the consistency across all 3 participants is notable. These findings are supportive of a change process involving altering the function of anxiety over its severity. These data suggest that an anxiety disorder can successfully be treated by focusing on the functional impact of anxiety on behavior over the level of anxiety.

Clinically, this study is notable for several reasons. First, all 3 participants had clinical responses using one general protocol. This is advantageous because the therapist only needed to be familiar with one protocol for four different disorders. Additionally, Participant 2 who was diagnosed with GAD and social phobia received treatment for both disorders simultaneously. The therapist easily conceptualized both of his disorders as stemming from unnecessary avoidance of anxiety-related inner experiences. It appears that the participant was able to globally reduce this avoidance and experience benefits for both disorders.

Second, no in-session exposure was used in these interventions. In-session exposure procedures are consistent with an ACT model (e.g., Eifert & Forsyth, 2005), but they do not appear to be necessary for good clinical outcomes. This may be useful clinically because some participants and therapists are unwilling to participate in exposure exercises. Clearly, these participants approached feared events outside of the session because doing so is part of the desired outcome of the treatment of anxiety disorders, but these events were approached based on values and done so while practicing other ACT processes. Additionally, this type of work only occurred outside of session as homework, which can be valuable in terms of therapist time and financial cost to the client because much of the work is completed outside of session. Data collected in this study indicated that these activities did not promote anxiety reduction.

As with all studies, there are limitations that should be addressed in future experiments. First, this is a case series that was conducted by a full-time practitioner. Thus, many of the experimental controls that are common in outcome research are lacking. Blind assessors were not used, so inadvertent biases may exist in the reporting of clinical severity. There are no control participants, so it is unclear what effect nonspecific treatment factors had on the outcomes. The sessions were not recorded and scored for treatment integrity, so it is unclear how consistent the actual therapy was to what is reported. Finally, extraneous variables that are usually controlled in outcome research were not controlled in this investigation. No exclusions were

made based on additional diagnoses, co-occurring life events, or other therapies or medications. Nonetheless, these limitations also increase the external validity of this investigation. The participants in this case series were not recruited or screened. They were "real" clients treated by a "real" therapist. It is hoped that this study is part of the beginning of the evaluation of a unified protocol of ACT for anxiety disorders that can be used alone or in conjunction with already supported exposure procedures.

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