

COMMENTARY

Acceptance and Commitment Therapy: Empirical Considerations

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Cognitive-behavioral therapy (CBT), including behavior therapy, cognitive therapy, and their integration, has evolved over the past four decades to become the most empirically supported psychological treatment for a range of psychiatric conditions, spanning the preponderance of Axis I disorders, selected Axis II disorders, and a range of associated clinical-health problems. The evolution of cognitive-behavioral theory and treatment has followed a coherent scientific framework, first introduced in the cognitive-behavioral modeling and treatment of depression, to include: (a) systematic clinical observations, (b) definition and psychometric operationalization of key disorder-specific cognitive, emotional and behavioral constructs, (c) laboratory investigation of operationalized disorder-specific processes, (d) development of comprehensive CBT treatment interventions to target the processes of empirically tested disorder-specific models, (e) progression from early noncontrolled clinical outcome studies to the development of sophisticated, large-scale randomized controlled trials testing disorder-specific CBT interventions, (f) examination of disorder-specific moderators and mediators of change in CBT treatment, and (g) openness to refinements and elaborations based on empirical updates from experimental and clinical investigations.

Keywords: Acceptance and Commitment Therapy; CBT; cognitive therapy; causality; mediational analysis

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COGNITIVE-BEHAVIORAL THERAPY (CBT), including behavior therapy, cognitive therapy, and their integration, has evolved over the past four decades to become the most empirically supported psychological treatment for a range of psychiatric conditions, spanning the preponderance of Axis I disorders, selected Axis II disorders, and a range of associated clinical-health problems. The evolution of cognitive-behavioral theory and treatment has followed a coherent scientific framework, first introduced in the cognitive-behavioral modeling and treatment of depression, to include: (a) systematic clinical observations; (b) definition and psychometric operationalization of key disorder-specific cognitive, emotional and behavioral constructs; (c) laboratory investigation of operationalized disorder-specific processes; (d) development of comprehensive CBT treatment interventions to target the processes of empirically tested disorder-specific models; (e) progression from early noncontrolled clinical outcome studies to the development of sophisticated, large-scale randomized controlled trials testing disorder-specific CBT interventions; (f) examination of disorder-specific moderators and mediators of change in CBT treatment; and (g) openness to refinements and elaborations based on empirical updates from experimental and clinical investigations.

A recent testament to the success of this scientific framework has been its ability to accommodate theoretical and clinical advancements emerging in mindfulness-based and acceptance-based treatments that emphasize skill development in the ability to pay attention to present-moment experiences in particular ways that promote openness, acceptance, and reduced reactivity in ways that are distinct from traditional CBT. Within this area, treatments include Mindfulness-Based Stress Reduction (MBSR; [Kabat-Zinn, 1990](#)), Dialectical Behavioral Therapy (DBT; [Linehan, 1993](#)), Mindfulness-Based Cognitive Therapy (MBCT; [Segal, Williams, & Teasdale, 2002](#)),

Meta-Cognitive Therapy (MCT; Wells, 2009), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), the latter of which is outlined in the article by Hayes, Levin, Plumb, Boulanger, and Pistorello (2013–this issue). A number of recent reviews have considered the similarities and differences between CBT and ACT in terms of theoretical and clinical approaches (Arch & Craske, 2008; Hofmann, 2008; Hofmann & Asmundson, 2008), and there are now three meta-analyses detailing the clinical efficacy of ACT (Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Öst, 2008; Powers, Zum, Vording, & Emmelkamp, 2009). This literature has addressed conceptual and empirical issues pertaining to ACT and its relation to the broader CBT umbrella. The goal of this commentary is not to rekindle these debates but rather to address conceptual issues that give direction for future empirical study.

As outlined, ACT is a behavioral therapy that employs acceptance, mindfulness, and cognitive defusion strategies to enhance psychological flexibility and harness behavioral change in the direction of valued goals. The theoretical foundation of ACT is rooted in functional contextualism, “a type of psychological pragmatism that extends Skinner's radical behaviorism” (Hayes et al., 2013–this issue) that attempts to integrate cognition and language into a behavioral analytic framework. The theory from which much of ACT arises, Relational Frame Theory (RFT), focuses on how language impacts cognition, emotion, and behavior, particularly the extent to which language gives rise to psychopathology in contexts in which valued behaviors are restricted or abandoned to cope with cognitive activity. ACT is interested in understanding how “psychopathology is caused in large part by the tendency to become entangled in cognition, taking thoughts literally and remaining in a problem-solving mode even when that is not helpful” (Hayes et al., 2013–this issue). From the ACT perspective, this attempt to respond to and control language leads to experiential avoidance, attentional inflexibility, and reduced efforts to pursue valued behaviors, collectively resulting in a state of psychological inflexibility. Stemming from this conceptualization of psychopathology, ACT uses acceptance and mindfulness strategies (i.e., acceptance, defusion, the now, self) and commitment and behavior change processes (i.e., values and committed action) to enhance psychological flexibility. As outlined, “because of its bottom up, inductive nature, the ACT model is not a model of any specific type of disorder, nor of a set of techniques” (Hayes et al., 2013–this issue). Thus, the goal of ACT is not changing cognitions or

symptoms, as in CBT, but learning to become mindful and accepting of cognitions and symptoms, and pursuing valued behavior.

Although not limiting the ultimate feasibility or efficacy of ACT, there is somewhat of a disconnect between the theoretical and philosophical foundations of ACT and its clinical strategies. Hayes and colleagues are aware of this as they state, “behavioral principles are difficult to scale directly into clinical work, and early bold attempts to do so were long put aside . . . the solution to this conundrum is to develop clinically useful models of pathology and treatment based on middle-level terms that are not behavioral principles but are based on them” (Hayes et al., 2013–this issue). The lack of correspondence, however, between the theoretical underpinnings (RFT) and the clinical approach in ACT raises the important question of whether the theoretical framework of ACT is parsimonious and whether support for the “middle-level terms” provides direct or indirect support for the foundational hypotheses of RFT.

Mainstream cognitive-behavioral approaches have been faced with similar challenges in the adequate operationalization of the theoretical underpinnings for certain disorder-specific treatment interventions and showing the hypothesized relation between theory and clinical practice. There have been, however, notable successes including substantial empirical support for the hypothesized cognitive mechanisms in depression: (a) negative cognitive triad (negative view of self, personal world, and future), (b) negatively biased processing of stimuli, and (c) dysfunctional beliefs/schemas (see Beck, 2008, for review).

Notwithstanding the empirical support that has amassed over 40 years, recent research has demonstrated the need for refinements to the original model to capture broader aspects of cognitive vulnerability. For example, while Beck (1976) first described the importance of *distancing* or *decentering* from thoughts to gain a more objective perspective on them in order to reduce dysphoric reactivity, the importance of cognitive reactivity as an independent vulnerability marker for depression has been fully appreciated only recently (Fresco, Segal, Buis, & Kennedy, 2007; Scher, Ingram, & Segal, 2005; Segal et al., 2006). These experimental findings have also provided the impetus for the development of novel treatment approaches within a CBT framework that may more explicitly and completely target cognitive reactivity with mindfulness-based strategies to prevent depressive relapse (Segal et al., 2002). MBCT employs mindfulness training to teach ways of decentering without any explicit attempts to

change cognitive content, and this approach has been shown to significantly reduce depression relapse in those with recurring (three or more) episodes (Teasdale et al., 2000). While initially conceptualized as a depressive relapse intervention, preliminary research suggests that it may also impact on depressive symptoms in the acute phase of the disorder, although additional clinical trial work is required (Hofmann, Sawyer, Witt, & Oh, 2010). Similar to teaching decentering in MBCT, ACT teaches *defusion* strategies to cultivate an open and accepting attitude toward thoughts, without explicit attempts to change the content of thoughts (or other aspects of internal experience). From the ACT perspective, becoming entangled with cognition reduces opportunity for experiential awareness and valued action. Examples of defusion techniques include thanking one's mind for a thought, watching thoughts go by as if they were written on leaves floating down a stream, and repeating words out loud until only the sound remains (Hayes et al., 2013-this issue). The goal then is not to question or change thoughts but rather to cultivate mindful tolerance and acceptance toward them, thus ostensibly bypassing the ruminative trap of cognition. Skill development in defusion and the other ACT clinical strategies has been shown in preliminary research to reduce features of depression in acute phase interventions (Hayes et al.).

In this way, taking depression as an example, both MBCT and ACT teach new ways of paying attention and relating to experiences—in ways that mainstream CBT does not—and show promise to contribute to our effective treatments for depression. While they emerge from distinct theoretical traditions, they converge in their use of mindfulness strategies to change attentional capacities. In MBCT *decentering* strategies are explicitly developed to reduce cognitive reactivity, whereas in ACT, *defusion* techniques are aimed at enhancing psychological flexibility. If future large-scale empirical studies of ACT demonstrate that it can successfully impact on the mid-level constructs, such as psychological flexibility, in a way that mainstream CBT cannot, and these changes are in turn found to mediate treatment response in a way that mainstream CBT cannot, then this finding would contribute immensely to the scientific basis of ACT as a distinct treatment within CBT. Similarly, studies that compare treatment outcomes and mediational effects between different mindfulness and acceptance interventions for specific disorders, for instance MBCT versus ACT for depression, would provide for a highly specific examination of the shared and distinct components of these newer treatment approaches. Finally, the

results from these types of studies would provide insight into whether the foundational hypotheses of ACT, or the correspondence between the foundational hypotheses and ACT clinical processes, are of special importance.

A further philosophical assumption of ACT is that all behavior is determined by the environmental context with minimal recognition of the internal determinants of behavior. In an earlier response to radical behaviorism or contextualism, David Barlow (1997, p. 447) stated, “but at the very least, it seems to me that biological factors must be integrated into any comprehensive model of human behavior and human behavior change.” Since then, there have been watershed developments in the study of genetic contributions to psychopathology, Gene × Environment interactions, and clinical neuroscience. It would seem necessary for a modern clinical model of psychopathology to accommodate findings pertaining to the role of internal determinants of behavior. This is not only a task for ACT, but for all psychological models of psychopathology, including mainstream CBT. There have been new and exciting results emerging from behavioral genetics, clinical neuroscience, and cognitive-behavioral theories that show opportunities for integrative programmatic research. Studies have identified a key genetic diathesis (e.g., the presence of the 5-HTTLPR short allele) in the development of negative cognitions and processes characteristic of depression (see Beck, 2008, for review), and neuroimaging research points to improvements in neural aspects of affect and self-regulation in the mood and anxiety disorders following CBT (see Frewen, Dozois, & Lanius, 2008, for review). Hayes and colleagues (Fletcher, Schoendorff, & Hayes, 2010) have recently acknowledged the importance of neurobiological features and outlined a framework for the examination of the neuroscience components of ACT (i.e., mindfulness meditation) on the mid-level process of ACT (i.e., paying attention). Other non-ACT mindfulness studies have already begun to accumulate, demonstrating the interesting associations between mindfulness practice and increased cortical thickness in various parts of the brain (Lazar et al., 2005) and mindfulness training and reductions in neural dysphoric reactivity (Farb et al., 2010). Future theory-driven neuroimaging studies of emotion regulation and the examination of neural changes in traditional CBT and mindfulness and acceptance-based therapies will contribute to understanding the distinction and overlap in etiological models and treatment processes in these approaches.

Beyond the use of neuroimaging approaches to distill differences between traditional CBT and mindfulness and acceptance treatments, additional

research is required to disentangle the differences between cognitive restructuring and cognitive defusion/decentering. Cognitive restructuring, like acceptance, requires the person to acknowledge and deal directly with previously avoided or suppressed cognitive material. Behavioral exposures and behavioral experiments in CBT also aim to facilitate a disengagement from repetitive thinking and a reconnecting with experience in vivo, suggesting a likely impact on maladaptive suppression tactics. It has been noted that both ACT and CBT require “additional thinking to not get tied up in thinking” and so both may be at risk of promoting maladaptive suppression in some cases (Arch & Craske, 2008). Further experimental work is required to assess the distinction between cognitive reappraisal and mindfulness and acceptance emotion-regulation strategies in reducing suppression tactics and negative affect. In particular, studies examining the timing and sequencing of reappraisal and mindfulness and acceptance strategies could promote a more scientifically informed integration of these approaches in the treatment of specific conditions. Experimental studies could examine the comparison of cognitive restructuring versus cognitive defusion/decentering strategies in negative mood priming designs. In the treatment context, given that both ACT and CBT incorporate behavioral exposure, study designs comparing standard exposure therapy to exposure therapy plus ACT components compared to exposure therapy plus cognitive restructuring would provide an empirical context to delineate the additive benefits of both treatments beyond the shared behavioral features. Additionally, studies of this nature would allow for the examination of specific mediational models while holding the behavioral component constant. Studies are also required to test whether treatment nonresponders to one form of treatment can achieve better clinical outcomes with an alternative treatment. For example, a small open study on social anxiety disorder has shown that patients achieving partial response to cognitive-behavioral group therapy subsequently benefit from the addition of a mindfulness and acceptance-based intervention (Kocovski, Fleming, & Rector, 2009).

In addition to cognitive defusion and mindfulness strategies, an important contribution of the ACT perspective is to highlight the importance of addressing values in treatment—the extent to which the clients have clarity of their goals and the degree to which their values are personally chosen. The treatment approach of ACT has more explicitly recognized the importance of values than mainstream CBT. Yet, it may be that both treatments help clients achieve their life goals—for

instance, while this is addressed explicitly in ACT through discussion and experiential exercises, it may be achieved more implicitly in CBT through clients conducting behavioral exposures and experiments toward life goals and values (Arch & Craske, 2008). A further assumption of the ACT model is that clients are more interested in pursuing valued goals rather than reducing the psychological distress associated with the symptoms of clinical disorders (i.e., depression and anxiety). This is a worthy idea for empirical testing. In short, the ACT emphasis on values should be instructive to CBT investigators to more formally assess what has remained an implicit, largely untested assumption, that reduction of distress and symptoms of psychological disorders naturally convert into improvements in quality of life. Future studies should aim to examine the extent to which reductions in disorder-specific symptoms and cognitions mediate improvements in the person's quality of life at posttreatment and follow-up. In CBT, the hypothesized path would be from cognitive to symptom change to improvements in quality of life. In contrast, the hypothesized path in ACT would be from change in mid-level constructs (i.e., psychological flexibility) to improvements in quality of life directly, with symptom change providing little or no mediation in outcomes.

A significant empirical basis is amassing for some of the “mid-level” constructs of ACT, the efficacy of ACT as a psychological treatment, and the purported mechanisms by which it works as outlined by Hayes and colleagues (2013-this issue). In terms of treatment efficacy, an initial meta-analysis of ACT in 12 randomized controlled trials (RCTs) showed a mean controlled effect size of $d=0.48$ at posttreatment. An independent meta-analysis by Öst (2008) with 13 RCTs of ACT reported a mean controlled effect size of (Hedges's g)=0.68. A still more recent meta-analysis by Powers and colleagues (2009) with 18 RCTs with 917 patients showed a sustained identical effect size of (Hedges's g)=0.68. In sum, studies suggest that ACT is superior to wait lists and psychological placebos, although it may be the case at the present time that ACT is not significantly more effective than established treatments, in general, nor superior to control conditions when examined in relation to specific clinical disorders, namely depression and anxiety (Hedges' g =0.03) (Powers et al.). Hayes and colleagues note that Powers et al. enter disorder-specific distress as the primary outcome variable when it should have been considered secondarily in tandem with the goals of ACT. However, this objection does pose somewhat of a problem for the broader community of CBT researchers who focus on the successful treatment and relapse prevention of DSM diagnosable

disorders. Hayes and colleagues state, “. . . scientific politics and the dominance of mainstream measures may require ACT researchers to work both sides of that street” (p. x; i.e., inclusion of diagnostic-specific symptom measures and ACT-process measures) and we hope this will occur so that the full contributions of ACT can be understood, assessed, and appreciated. To be sure, the careful examination of processes of change and outcomes in treatment studies by ACT investigators is leading to a richer understanding of the importance of such constructs as mindfulness, acceptance and psychological flexibility in mediated therapeutic outcomes. Hayes and colleagues note ultimately, “whether the model succeeds or fails in these areas is an empirical matter . . .” (p. x), and it is here that we all find common ground.

In summary, ACT is noted to emerge from a distinct theoretical and philosophical foundation from mainstream CBT. Its emerging empirical basis, focused on clinical variables and processes that overlap with other empirically supported mindfulness and acceptance strategies, suggests considerable promise in advancing CBT within the scientist-practitioner model of psychopathology. Future research will clarify the similarities and differences between ACT and mainstream CBT, as well as the unique aspects among the different mindfulness and acceptance-based treatments. Studies of mechanisms and the neurobiological correlates of change mechanisms within these approaches will continue to contribute to a better understanding of personal vulnerability and optimal strategies to alleviate human suffering.

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