Clarifying the Construct of Mindfulness in the Context of Emotion Regulation and the Process of Change in Therapy

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Bishop et al. (this issue) propose an operational definition of mindfulness developed by a recent consensus panel. The group provides a solid empirical framework from which to develop measures of mindfulness, and they propose an exciting research agenda. We describe measurement development work from our research group that provides initial support for the proposed consensus definition and that examines mindfulness in relation to emotion regulation variables. We extend the discussion by describing how mindfulness can enhance the stabilizing and destabilizing aspects of therapeutic change, and we illustrate this in the context of our treatment program for depression.

Key words: **acceptance, cognitive-behavioral therapy, emotion regulation, emotion reactivity, mindfulness, meditation, therapy change processes.** ***[Clin Psychol Sci Prac 11: 255–262, 2004]***

Several lines of research are converging on the idea that emotion regulation is an essential component of mental health and that problems of regulation are associated with a variety of forms of psychopathology (Cicchetti, Ackerman, & Izard, 1995; Davidson, 2000; Gross, 1998). Emotions involve changes in subjective experience, expressive behavior, and physiological responses; emotion regulation refers to processes that amplify, attenuate, or maintain the strength of these emotional reactions (Davidson, 2000; Gross, 1998).[1]

Emotion regulation difficulties can take a variety of forms. One way to regulate emotions is to avoid them. Hayes and colleagues (S. Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) describe a type of regulation called experiential avoidance, which includes avoidance of emotions, thoughts, images, memories, and physical sensations. They acknowledge that avoidance can at times be useful, but this strategy becomes problematic when it persists even when costly, ineffective, or "life distorting." Avoidance of negative experiences can involve distraction, denial, cognitive distortion, suppression, repression, substance abuse, self-harm, disengagement, dissociation, and even suicide. Avoidance can arise in response to positive experiences as well. For example, one can experience anxiety and disengage in the face of increasing intimacy in a relationship, or a person who is recovering from depression can become afraid of and avoid hope and positive experiences.

Another problem of emotion regulation can involve getting preoccupied, consumed, or overtaken by emotions and experiences. It is important to know when it is no longer productive to engage. Overengagement can involve rumination, worry, obsessions, recurrent cravings and strong urges, and compulsive behavior. One can also get entangled with positive experiences, such as the "highs" associated with adventure, risk, challenge, or even success. For instance, Johnson and her colleagues are finding that those with a vulnerability to or history of mania tend to become overly engaged with positive emotion, which can set off a cascade of overconfidence and unrealistic goal-setting that can spiral into mania (Johnson, 2003). Addictions can be conceptualized as a way to both maintain the highs and avoid the lows of life (Marlatt, 1994).

There is now substantial evidence that avoidance and overengagement with emotions are associated with worse psychological and health outcomes (Gross, 2002; Salovey, Rothman, Detweiler, & Steward, 2002; Segerstrom, Stanton, Alden, & Shortridge, 2003). It is less clear, however, what characterizes healthy engagement with emotions.

The power of destructive and healing emotions is central to Buddhist teachings, and we have much to learn from the concept of mindfulness. Mindfulness training provides a way to cultivate emotional balance and decrease the hold of habitual patterns that obscure perception and impair judgment (Kabat-Zinn, 1990). The practice of mindfulness has been around for 2500 years but has only recently become a legitimate area of scientific inquiry. Although it is being adapted from Buddhist traditions, mindfulness integrates themes from

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cognitive, behavioral, experiential, and psychodynamic theories (Martin, 1997).

WHAT IS MINDFULNESS?

The Bishop et al. article (this issue) provides a solid framework from which to organize the study of mindfulness. They provide an operational definition of mindfulness and suggest testable hypotheses and guidelines for instrument development. The group proposes a two-component definition. The first component focuses on the self-regulation of attention so that it is maintained on immediate experience. This involves sustained attention, skill in switching back to the experience if the mind wanders, and nonelaborative awareness of thoughts, feelings, and sensations. The second component involves approaching one's experience with an orientation of curiosity and acceptance, regardless of the valence and desirability of the experience. Mindfulness meditation is hypothesized to develop a distanced or "decentered" relationship with one's internal and external experiences, to decrease emotional reactivity, and to facilitate a return to baseline after reactivity. These benefits are the conceptual opposites of the problems of avoidance and overengagement with emotions reviewed above.

UNDERSTANDING MINDFULNESS IN THE CONTEXT OF EMOTION REGULATION

We are developing a measure of mindfulness and studying the construct in the context of emotion regulation variables, as recommended by Bishop et al. (this issue).[2] We describe briefly the findings from our psychometric studies, as they begin to clarify how mindfulness relates to avoidance of and overengagement with internal experiences, and how mindfulness might represent something more than the absence of these less adaptive strategies.

We are developing the Cognitive Affective Mindfulness Scale (CAMS) to assess the awareness, attention, present-focus, and acceptance/nonjudgment aspects of the mindfulness construct. The items are specific to one's orientation to thoughts and feelings rather than to all experiences. The CAMS is not specific to any particular type of meditation training, and it does not require one to have had meditation training. Therefore, this measure can assess mindfulness acquired through life experiences, religious practices, or therapies and skills-training programs that do not directly teach mindfulness meditation skills. This feature of the CAMS will be important in future studies that examine the extent to which mindfulness meditation must be taught directly, and whether principles of mindfulness are taught in therapies that address engagement with emotions but do not teach meditation (e.g., standard exposure-based therapies, or emotion-focused therapy, Greenberg, 2002a).

The first version of the CAMS was developed and examined in the context of an integrative therapy for depression we are developing (A. Hayes & Harris, 2000) that includes a mindfulness component. We found that the CAMS was sensitive to change in mindfulness over the course of therapy. This increase in mindfulness was associated with decreases in experiential avoidance and rumination over the course of treatment (Kumar, Feldman, & Hayes, 2004). This 18-item version of the CAMS showed promise, so we refined and streamlined the item pool through a series of psychometric studies (Feldman, Hayes, Kumar, & Greeson, 2003, 2004) that yielded the current 12-item scale (CAMS-R).

In two studies with large and ethnically diverse undergraduate samples (*n*s = 250 and 300), confirmatory factor analyses revealed that the 12-item scale consisted of four factors: attention, awareness of internal experiences, acceptance of internal experiences, and present-focus. These four factors predicted a second-order variable of mindfulness. In another sample of undergraduates ($n = 111$), higher scores on mindfulness were associated with less experiential avoidance, thought suppression, rumination, worry, and spread of activation from a negative event to a negative sense of self (overgeneralization). Mindfulness was also associated with more clarity of feelings, perceived ability to repair one's mood, and cognitive flexibility. Using a measure of one's approach to upcoming problems (Feldman & Hayes, in press), we found that mindfulness was associated with trying to understand the antecedents of problems (insight-seeking), without getting stuck in stagnant deliberation or fantasizing about a positive outcome without planning the steps to get there. As expected, mindfulness was associated with less depression and anxiety and with more well-being.

These findings suggest that mindfulness is the opposite of avoidance and overengagement strategies. As a Buddhist perspective suggests, mindfulness seems to represent an emotional balance that involves acceptance of internal experiences, affective clarity, an ability to regulate one's emotions and moods, cognitive flexibility, and a healthy approach to problems. Mindfulness might indeed represent a solid ground from which to experience the vicissitudes of life without losing one's balance or distorting one's experience. This is the essence of the Buddhist concept of equanimity, which perhaps is something we can teach in therapy.

MINDFULNESS AND THE PROCESS OF CHANGE IN THERAPY

A focus of the Bishop et al.'s (this issue) proposed definition of mindfulness is on the decentered perspective it cultivates and the view of emotions as impermanent entities with which we can engage, without avoiding or becoming entangled. This is indeed an important aspect of mindfulness, but the *process* by which one gets to this decentered perspective warrants some discussion. If we do not look more closely at how this process occurs and its timing, we can inadvertently overwhelm people.

The practice of mindfulness teaches one to approach internal experiences with curiosity and acceptance, which allows for intensive self-observation without judgment, elaboration, or attempts to fix or change the experience (Bishop et al., this issue). Although this might sound simple, it requires repeated practice and a fundamental shift in the way that we view emotions. Individuals gripped by intense and frightening emotions are likely to have difficulty sitting with their emotions and accepting them without some preparation and additional skills to help them keep their balance. With depression and borderline personality disorder, accessing and staying with a core negative view of self and all of the associated emotions can overwhelm the person and trigger strong avoidance and disengagement, the most serious forms of which are self-harm and suicide. When applying mindfulness meditation to psychotherapy, we must be careful to assess clients' abilities to tolerate the negative material that they will face without their current coping strategies.

It is perhaps for this reason that mindfulness- and acceptance-based therapies designed for the *acute* phase of the problem, rather than the *relapse prevention* phase, include mindfulness strategies as one component of a multi-component package. Linehan's (1993) therapy for borderline personality disorder includes both change and acceptance skills, as do Marlatt's (1994) program for addictions, Roemer and Orsillo's (2002) therapy for generalized anxiety disorder, and Hayes's (S. Hayes, McCurry, Afari, & Wilson, 1993) acceptance and change therapy. In our depression treatment and wellness program (A. Hayes & Harris, 2000), we use mindfulness meditation training as one way to facilitate both the stabilization and destabilization aspects of therapeutic change.

Stabilizing Aspects of Mindfulness. In the first eight weeks of our program, we teach mindfulness meditation in addition to problem-solving and coping skills; healthy lifestyle behaviors that improve diet, exercise, and sleep habits; and strategies to increase social support. The skills introduced in this phase of therapy are designed to stabilize the client, build resources, and increase resilience. We introduce these skills early on because they provide initial symptom relief and because they take time to incorporate into the person's life. Our program is designed with relapse prevention in mind in that we teach skills that can reduce the symptoms of depression and also cultivate healthy self-care behaviors and mental health (Fredrickson, 2001; Ryff & Singer, 1998).

We have adapted principles and techniques from Jon Kabat-Zinn's approach (1990) and focus primarily on breathing training and teaching the principles of attention, awareness, present-focus, and acceptance/nonjudgment as they relate to internal experiences. Clients are taught the concept of mindful engagement with emotions, and they learn to notice instances of avoidance and overengagement with emotions and the consequences of these strategies in their own lives. Because those suffering with depression are often faced with a number of significant stressful and difficult circumstances, we teach them how to approach the problems gradually and to apply the coping and problem-solving skills that they are learning. Clients also learn how to implement mindfulness and self-care principles into their lives. Meditation is difficult to do in this early phase, so we introduce the training in session four, when the depression begins to decrease. The meditation exercises are also introduced in a graded way such that people

meditate a little each day and increase their tolerance. In addition, clients write essays about their depression each week throughout the course of therapy. Both the meditation and writing exercises are conceptualized as gradual forms of exposure to disturbing emotions.

In our first open trial of this therapy (Hayes, Beevers, Feldman, Laurenceau, & Perlman, in press), mindfulness (as measured by the CAMS) significantly increased by the end of this first eight-week phase of therapy, and there was a significant improvement in depression by the midpoint and at the end of therapy. A particularly interesting finding is that the change in mindfulness was associated with concurrent decreases in experiential avoidance and rumination (Kumar et al., 2003), which are regulation strategies that can interact to perpetuate depression and interfere with change (Beevers, Wenzlaff, Hayes, & Scott, 2000; Wenzlaff & Luxton, 2003). Although we cannot isolate the influence of mindfulness meditation, this package of stabilization strategies seemed to provide a foundation for another type of change in the second phase of therapy, which involves destabilization.

Destabilizing Aspects of Mindfulness. As people learn to stop running from and getting entangled with their emotions, they come face to face with the material that has kept them in this cycle. What happens here receives little attention in recent attempts to import mindfulness practices and principles into psychotherapy. Relapse prevention programs are designed to reduce activation and engagement with destructive emotions and to "*nip in the bud*" habitual patterns when the levels of emotion are still low (Breslin, Zack, & McMain, 2002; Segal, Williams, & Teasdale, 2002; Teasdale, 1999).

Another aspect of mindfulness practice that might be relevant in the acute phase of therapy involves moving into suffering and difficult emotions with a foundation of mindfulness, and *transforming* the destructive emotions. The titles of some recent books on mindfulness meditation practices capture this orientation to disturbance, "The Places that Scare You: A Guide to Fearlessness in Difficult Times" (Chödrön, 2001) and "Tariki: Embracing Despair, Finding Peace" (Itsuki, 2001). Kabat-Zinn (1990) describes a process of mindful engagement with difficult emotions, where emotions are encountered and felt in all of their force, as there is "no other way through to the other side of them" (p. 320). Ricard Matthieu (in Goleman, 2003), a Buddhist monk and scholar, describes a meditation exercise that, although thousands of years old, sounds strikingly similar to modern descriptions of exposure therapy:

> One classical approach in Buddhist practice is for the meditator to look straight in the eye of the disturbing emotion and understand what it is and how it works. . . . The experiment will show that the more one looks at [the emotion], the more it disappears beneath one's very eyes, like the frost melting under the morning sun. When one genuinely looks at it, it suddenly loses its strength. . . . Indeed, at the very source of destructive emotions there is something that is not yet harmful. . . . After this, when emotions arise, they don't trigger a chain of thoughts that proliferate and take over the mind, compelling one to act. (pp. 81–83)

A number of behavioral and cognitive-behavioral authors have likened mindfulness practice to interoceptive exposure (e.g., Baer, 2003; Linehan, 1993; Roemer & Orsillo, 2002) in that the person is encouraged to fully experience the feelings without trying to control them in order to learn that the emotions pass without using old regulation strategies. Experiential therapists have long emphasized the importance of deepening the level of emotional experiencing in therapy so that the client can move to a healthy engagement with emotions. Although not presented from the perspective of mindfulness, Greenberg's (2002b) description of healthy engagement with emotions captures the essence of mindfulness—attention to and awareness of emotions, a present-centered focus, and a nonjudgmental stance. It has become clear across theoretical orientations that exposure to avoided material, affective arousal, and emotional tolerance are important components in the process of change in therapy (Foa & Kozak, 1986; Greenberg, 2002b; Samoilov & Goldfried, 2000; Teasdale, 1999). An exposure-based approach to disturbing emotions seems to have stood the test of time.

An important implication of an exposure framework is that there can be disturbance, or a *worsening* of distress, in the process of developing emotional tolerance and coming to a more decentered relationship with

emotions. This period of worsening has been discussed in writings on the process of meditation outside of the context of therapy. With regular practice, maladaptive patterns can intensify. Chödrön (2001) describes feelings of distress and dread that can indicate that the old patterns are loosening. As one gives up old ways of coping and looks more closely at disturbing emotions and habits, one begins to understand their hold, how they play out, and their roots. This process brings a period of increased distress that Buddhists have long acknowledged and called "heightened neurosis" (Chödrön, 2002, p.106).

This transient period of worsening with exposure to the feared material is well-established in the anxiety disorders treatment literature (e.g., Gilboa-Schechtman & Foa, 2001; Nishith, Resick, & Griffin, 2002). A central principle from dynamic systems research across a variety of sciences is also that a period of increased in turbulence or system variability precedes transition and system reorganization (e.g. A. Hayes & Strauss, 1998; Mahony, 1991; Thelen & Smith, 1994; van Geert & van Dijk, 2002). Studies of those who have experienced dramatic and positive life changes suggest that there is a similar period of disturbance before these types of transitions (e.g., Heatherton & Nichols, 1994; Miller & C'de Baca, 2001).

Mindfulness can prepare one for transition in that it reduces avoidance and overengagement with emotions so that one can engage with difficult emotions without creating more problems or getting stuck, as we found in our research (Kumar et al., 2004). The second phase of our therapy (sessions 9 to 18) is designed to activate and destabilize the network of cognitions, affect, behaviors, and somatic responses associated with one's depression, or what Teasdale (1999) calls the "depressive interlock." As with trauma work, it is essential that the client have the resources to tolerate this difficult process, and the stabilization phase of our therapy is designed to provide this.

We conceptualize this second phase of therapy as another series of exposures. After clients have experienced a reduction in depression, we gradually have them reactivate the most disturbing and feared view of the self, which most often involves themes of defectiveness, undesirability, worthlessness, and failure. To do this, we have clients describe how they see themselves when they are most depressed. We sometimes have them read the weekly essays that they wrote about their depression in the early sessions of therapy. We then have clients explore this negative view of self, its historical roots, and how it plays out in their current lives. This exercise is emotionally evocative, fully activates the depressive network, and should facilitate cognitive and emotional processing and a reduction in symptoms of depression. In this phase of therapy, we integrate principles from exposure-based therapies for trauma (Foa &. Rothbaum, 1997; Resick & Schnicke, 1993), emotion-focused therapy (Greenberg, 2002a), and schema-focused therapies (Beck, 1996; Elliott & Lassen, 1998; Young, Klosko, & Weishaar, 2003). After this destabilization phase, we spend another three to five sessions helping clients to solidify the changes made, address their fears of hope and positive experiences, and set goals that are more consistent with the life they want to live.

As predicted by an exposure model, our research (Hayes et al., 2003, in press) has revealed that a transient worsening of symptoms of depression (which we call "depression spikes") in the second phase of therapy predicted more improvement in depression at the end of third phase. Content analyses of the weekly essays revealed that these depression spikes also predicted more cognitive and emotional processing in the essays that clients wrote during this second phase. This is consistent with a recent finding from Greenberg's group that more emotional processing in the second phase of an emotion-focused therapy predicted more improvement in depression (Pos, Greenberg, Goldman, & Korman, 2003). Mindfulness might play a role in preparing clients for this destabilization period in our therapy because early changes in mindfulness were associated with decreases in experiential avoidance and rumination, and decreases in these regulation strategies predicted more subsequent depression spikes, a strong predictor of overall improvement in depression.

Mindfulness training provides one tool of many to facilitate both the stabilization and destabilization aspects of change. Its utility in cultivating emotional balance and a decentered perspective has been emphasized, but the clinical utility of mindfulness training in *transforming* destructive emotions has not yet been examined. Our data, although preliminary, suggest that an exposure-based approach to the treatment of depression might be fruitful and that mindfulness training might be a useful

addition to treatment in the acute phase of therapy, as well as in the relapse prevention phase (Segal et al., 2002).

CONCLUSION

The Bishop et al. article in this issue provides a solid ground from which to continue the study of mindfulness. This is an impressive step to operationalize a construct that in many ways was foreign to clinical psychology, yet in other ways is strikingly consistent with principles of emotion regulation and change that clinicians and researchers have discovered centuries later. There is much work to do, and the consensus panel provides a cogent research agenda for a construct that until recently was considered outside the bounds of science.

NOTES

1. Gross's broad conceptualization of emotion regulation is most relevant to the issues that we will discuss because it includes situation (internal and external) selection, situation modification, attentional deployment, cognitive change, and response modulation.

2. When we began this research, there were no measures of mindfulness that captured the kind of mindfulness that we thought could be useful in the treatment of depression. Since then three measures have been developed that capture some of the components of mindfulness. The Freiburg Mindfulness Inventory (FMI, Buchheld, Grossman, & Walach, 2002) is a 30-item scale that assesses awareness and nonjudgment of present moment experiences, but it is intended for those familiar with principles of mindfulness. The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) is a 15-item scale that assesses mindful awareness in common daily experiences, as well as internal experiences, but it does not assess the acceptance and nonjudgment aspects of mindfulness. Bishop et al. (2003) recently developed the Toronto Mindfulness Scale (TMS), a 10-item instrument designed to measure mindfulness in response to a specific meditation experience, but it does not assess a more general tendency to experience mindfulness in daily experiences.

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