

Mindfulness Approaches in Cognitive Behavior Therapy

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Abstract. Mindfulness is the latest addition to the armamentarium of cognitive behavioral therapists. Mindfulness methods from the wisdom traditions, as well as from current psychological theories, are beginning to be used as cognitive behavioral strategies for alleviating psychological distress and for personal transformation. The use of mindfulness as a clinical tool is in its infancy, with attendant growing pains in theory, research and practice. We briefly discuss the historical context of the use of mindfulness, recent developments in theory, research and practice, and future developments. We conclude that mindfulness shows a lot of promise as a clinical treatment modality, but there are inherent pitfalls in the developing approaches.

Keywords: Mindfulness, cognitive behavior therapy, personal transformation, assessment of mindfulness, psychological distress, wisdom traditions.

Introduction

One of the basic foundations of traditional cognitive behavior therapy (CBT) has been to directly challenge an individual's irrational thinking (i.e. erroneous cognitions) that leads to maladaptive behavior. Some of the newer approaches in CBT, however, are focused less on challenging an individual's irrational or negative thinking and more on changing the individual's relationship to thoughts and feelings through acceptance and mindfulness. These newer CBT approaches include Acceptance and Commitment Therapy (ACT; Hayes, Strosahl and Wilson, 1999), Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams and Teasdale, 2002), as well as others that either are based on mindfulness (e.g. Marlatt, 2002; Singh, Lancioni et al., 2006) or incorporate mindfulness within a package of treatments, such as Dialectical Behavior Therapy (DBT; Linehan, 1993), Integrative Behavioral Couples Therapy (ICBT; Jacobson, Christenson, Prince, Cordova and Eldridge, 2000), and meta-cognitive approaches (MCT; Wells, 2000). Although it has been accepted only recently in mainstream cognitive behavior therapy, there has been intense interest, development, application and research on mindfulness-based therapies. Mindfulness-based approaches vary in their components, but typically they include one or more of the following: a personal meditation practice based on concentration and/or contemplative meditation exercises, behavioral practices (e.g. loving kindness, compassion, and generosity), cognitive strategies (e.g. reflection on the transitory nature of events and the emptiness of self), and empathic strategies (e.g. the alternate giving of happiness and taking of suffering [*tonglen* practice]). All of these techniques are viewed collectively as elements of training the mind.

Recent developments in theory

There are two major strands of theoretical development, one of which has roots in psychology and the other in wisdom traditions, chiefly Buddhism. For example, ACT emerged from behavior analysis and is rooted in relational frame theory, which deals with language and cognition (Hayes, Barnes-Holmes and Roche, 2001). In addition to mindfulness and acceptance, ACT includes individualized behavior change strategies derived from behavioral theory. In contrast, MBSR is clearly based on Buddhist teachings (i.e. *dharma*) and derives its psychological theory from it. MBCT was informed by MBSR although it includes additional concepts to account for psychological distress, particularly relapse, and its amelioration.

As we see it, there are at least two forces at play in theory development with regard to mindfulness-based approaches and cognitive behavior therapy. The first development is aligned with the history of science. Accumulation of new data that cannot be accounted for by an established theory leads to the development of a new theory or the broadening of an existing theory. For example, research by Langer (1989) delineated the psychological theory of mindfulness and its application to human behavior. Continuing research based on Langer's theory is helping to elucidate how manipulating our thinking can lead to a better quality of life. The growing literature on ACT can be seen as helping to broaden an existing theory (e.g. relational frame theory) or theories, rather than developing a new theory (Hayes, 2004). This approach enables researchers to use deductive reasoning based on current data and to develop testable research hypotheses based on the expanded theory.

The second development is exemplified by MBSR, which has followed an inductive methodology that allows theory development based on experiential data. Although mindfulness is a core principle in most wisdom traditions, it has been made most explicit within the Buddhist tradition, flowing from two discourses by the Buddha (*Anapanasati Sutra* and *Satipathana Sutra*). The Buddha's *Four Noble Truths* (i.e. suffering, the origin of suffering, the cessation of suffering, and the path to the cessation) could be characterized as a theory of human behavior based on meditation experience. The MBSR is derived from this understanding of human behavior and is based on an experiential approach to personal transformation. MBSR was developed to relieve the suffering of people who were experiencing stress and pain due to their medical illness. Mindfulness meditation is taught by experienced meditation practitioners who adhere to the spirit and substance of *dharma*. This approach has resulted in a proliferation of research that attests to replicable clinical findings across disorders and settings. Our own work on the use of mindfulness meditation techniques in the fields of mental illness and intellectual disabilities has taken a similar path (Singh, Winton et al., 2006).

Recent developments in research and practice

Clinicians using mindfulness techniques have strived to assess the effectiveness and efficacy of their interventions using rigorous research methodologies. This fits in well with the current zeitgeist in various fields that are focused on evidence-based clinical practice. Mindfulness studies have ranged from clinical case studies using single-subject designs to randomized control trials. However, the use of mindfulness as a clinical tool is in its infancy, with attendant growing pains in research and practice. There are several issues that merit comment.

First, there is currently no consensus on the actual definition of mindfulness, a term that has been used to describe Buddhist practice, but also considered a state, a trait, a process and an outcome in the psychological literature. Mindfulness has been defined differently in social psychological research (e.g. Langer, 1989) as well as within the clinical and Buddhist literature (e.g. Bishop et al., 2004). Bishop et al. recently developed an operational definition based on a two-component model of mindfulness that remains to be tested for utility in research and practice. They postulated that the underlying psychological processes involve (a) attention and awareness, and (b) acceptance. This is a good start and will yield some testable hypotheses, but it has its own problems (e.g. Brown and Ryan, 2004). Contrary to the Bishop et al. (2004) definition, in which awareness is assumed to be a process underlying mindfulness, in some Buddhist traditions mindfulness and awareness are accepted as distinct features of the mind. Indeed, in the Kagyu and Nyingma traditions, awareness is regarded as an innate component of the mind obscured by our conditioning, which can be lifted by the practice of mindfulness. Further, in their exposition of mindfulness meditation, Bishop et al. are not totally clear on the difference between concentration and contemplative forms of meditation with regard to attention. We suspect that there will continue to be different definitions of mindfulness in psychological research, just as there continues to be different understanding of mindfulness within and between Buddhist and other wisdom traditions because mindfulness is not a unitary concept devoid of context. Even at the most global level, the definition of mindfulness will vary depending on whether one is interested in mindfulness from a social psychological, clinical, or spiritual context, or from the perspective of a researcher, clinician, or a practitioner, and their various combinations.

Second, related to the problems associated with the definition of mindfulness, there is the issue of measurement. Given the proliferation of definitions of mindfulness, there have been various attempts to develop instruments to quantify mindfulness. For example, self-report measures have been developed to assess mindfulness during formal sitting meditation (Lau et al., 2006), the experience of mindfulness (Walach, Buchheld, Buttenmüller, Kleinknecht and Schmidt, 2006), everyday mindfulness (Brown and Ryan, 2003; Feldman, Hayes, Kumar, Greeson and Laurenceau, 2007), mindfulness skills (Baer, Smith and Allen, 2004), and individual differences in the propensity to be mindful (Bodner and Langer, 2001). These tools suffer from one or more forms of validity: construct validity (e.g. the nature of the underlying construct of mindfulness is still amorphous); external validity (e.g. the rating scales are based on responses from samples of convenience, particularly college students with little understanding of mindfulness); and criterion validity (e.g. the absence of objective measurement against which self-ratings can be compared).

In addition to self-report measures, there is intense interest in quantifying the neurophysiological effects of mindfulness practice and mindfulness meditation. Recent studies show that changes due to mindfulness meditation practices can be measured at both behavioral and neurophysiological levels (Creswell, Baldwin, Eisenberger and Lieberman, 2007, Davidson et al., 2003; Schwartz and Begley, 2002). For example, there is neurophysiological evidence for changes in brain function when a person observes another's emotional state, resulting in the activation of the same neural circuitry in the observer as in the observed (de Vignemont and Singer, 2006). A recent functional magnetic resonance imaging study reported that in response to emotional stimuli, novice and experienced meditators can activate the neural circuitry linked to empathy during loving-kindness and compassion meditation, with the neural responses being modulated by the participants' experience in meditation (Lutz, Brefczynski-Lewis, Johnstone and Davidson, 2008). These studies strongly indicate that the effects of meditation can be measured at the neurophysiological level.

In other studies, the impact of training in mindfulness is measured in terms of changes in the dependent variable (e.g. pain, stress, symptoms of specific disorders) (e.g. Baer, 2006). Qualitative and quantitative changes in these variables can be measured and used as an index of personal well-being (Grossman, Niemann, Schmidt and Walach, 2004). Another strategy is to measure the effects of mindfulness practice on others. For example, staff trained in mindfulness meditations produce happiness in individuals with profound intellectual disability (Singh et al., 2004), and reduce the use of restraints and increase learning in adults with intellectual disability (Singh, Lancioni et al., 2006) without direct intervention for these behaviors. Other studies show that parents trained in mindfulness meditations increase social behavior and reduce maladaptive behaviors in their children (Singh et al., 2007). In all, there is a healthy development of techniques for directly and indirectly measuring the putative effects of mindfulness.

Third, there is the issue of the quality of research methods used and the reporting of the research. All research reviews have noted the methodological limitations of studies using mindfulness alone or as a component of a treatment package (e.g. Baer, 2003; Bishop, 2002; Öst, 2008). This is to be expected given an emerging field of research and practice. Some critical variables that are often missing or incomplete in mindfulness studies include: definition of mindfulness; demographic variables of the participants (including prior practice in mindfulness meditation); research design (including randomization procedures); number and length of training sessions; type and length of mindfulness practice; use of training and treatment

manuals; operationalized measures of outcomes; use of other interventions; treatment setting; homework or practice requirements between sessions; specific follow-up requirements; and quality-of-life outcomes from the perspective of the participants. Furthermore, studies should specify whether the effects of mindfulness are being measured for their immediate, short-term, or long-term effects.

Fourth, the centrality of meditation in achieving mindfulness is unclear. For example, Hayes and Shenk (2004) have noted that if mindfulness is defined in terms of the psychological processes involved, any technique that increases attention to the present moment and an attitude of acceptance could be classified as a mindfulness technique irrespective of whether the technique involves meditation or not. Indeed, there are several psychological methods for enhancing mindfulness that do not rely on meditation. We see this as the convergence of two different streams of thinking about mindfulness. The underpinning of one of them is in Buddhist meditation techniques while the other is rooted in psychological theory, yet both are labeled as mindfulness techniques. When the former is reduced to the status of a psychological construct, it may well not need to be anchored to meditation. In this sense, only future studies will answer the question whether it is necessary to include meditation to enhance mindfulness.

Fifth, the role of personal engagement in meditation practices and training in mindfulness of the therapist or trainer should be mentioned. Some mindfulness methods currently being used in CBT (e.g. in MBSR and MBCT) have their origins in ancient Buddhist traditions. Thus, it is reasonable to expect that the therapists should have some history of personal practice in meditation and formal training in mindfulness procedures. Indeed, that has been a critical requirement for therapists delivering the MBSR program, a program that has remained true to the spirit and substance of Buddhist teachings. In our own research and practice, we have found that the meditation practice of the therapist is a critical variable in the training of participants and delivery of mindfulness interventions, and consequently the outcomes for the participants. Mindfulness is a multifaceted practice and without personal engagement in meditation, the therapist is unable to fully relate to the experiences of the participants and to provide individualized feedback.

It is our view that we need to clearly articulate the basis of the mindfulness techniques we use in our research and practice. We should encourage research in both kinds of mindfulness practices, those that are based in meditation and those that are not. If we do not do this, we are in serious danger of reducing mindfulness meditation to a technological model for treating psychopathology, thereby losing its historical essence as an approach to transformation of self. Mindfulness meditation has always been more than a psychological construct that mediates or moderates human behavior. The end point of mindfulness meditation is not in the alleviation of psychological or physical distress. At its core it is about gaining insight into the nature of our own minds, thereby enabling each of us to differentiate between our conditioned and unconditioned self. It provides a method for enlightenment, the *summum bonum* of existence.

Future directions

We have covered a number of areas that will merit our attention in future research and practice, including theory development, definition of mindfulness, measurement systems, research methodology, and clinical utility of the various mindfulness procedures. In many respects, mindfulness as a psychological construct is still in its nascent phase of development

as a clinical method of alleviating psychological and medical distress. Yet, even in its infancy, research has shown that the various mindfulness methods, either alone or in combination with other treatments, have been fairly effective in treating a wide range of disorders and problems (Baer, 2006). However, due to conceptual and methodological problems, we still need well-controlled research to know *if* the various mindfulness-based treatments work, *for whom* they work, and *why or how* the methods work.

We need to investigate the comparative clinical utility of mindfulness techniques that involve or do not involve meditation. Further, we need to investigate the role of the therapist/trainer in treatment outcome. The critical question to ask is the relevance of personal engagement in meditation practices as a prerequisite to being a mindfulness therapist. Some of the newer therapies have manualized their mindfulness treatments and it would be especially important to assess the role of experienced vs. novice therapists using these manuals. It is not uncommon in our field to discover that manualized psychological treatments tend to be delivered by our least skilled and junior clinicians, typically for reasons of cost. Future research and practice should establish the level of skill, training, experience, and supervision that will be required for the effective and efficient delivery of mindfulness-based therapies. Finally, we hope that mindfulness meditation will be taught not only to those who are experiencing pain and suffering, but also to those who wish to engage in personal transformation of self that goes beyond cognitive awareness and acceptance.

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