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FEATURE

What are the benefits of mindfulness

A wealth of new research has explored this age-old practice. Here's a look at its benefits for both clients and psychologists.

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Learning objectives:

As a result of having participated in this continuing education program, participants will be able to:

1. Identify the definition of mindfulness and what practices develop mindfulness.
2. Identify at least four benefits of the effect of mindfulness meditation on therapists and therapist trainees.
3. Understand the relationship between therapists' mindfulness and psychotherapy outcome based on the research to date.

Mindfulness has enjoyed a tremendous surge in popularity in the past decade, both in the popular press and in the psychotherapy literature. The practice has moved from a largely obscure Buddhist concept founded about 2,600 years ago to a mainstream psychotherapy construct today.

Advocates of mindfulness would have us believe that virtually every client and therapist would benefit from being more mindful. Among its theorized benefits are self-control, objectivity, affect tolerance, enhanced flexibility, equanimity, improved concentration and mental clarity, emotional intelligence and the ability to relate to others and one's self with kindness, acceptance and compassion.

But is mindfulness as good as advertised? This article offers an overview of the research on mindfulness and discusses its implications for practice, research and training.

Empirically supported benefits of mindfulness

The term "mindfulness" has been used to refer to a psychological state of awareness, the practices that promote this awareness, a mode of processing information and a character trait. To be consistent with most of the research

reviewed in this article, we define mindfulness as a moment-to-moment awareness of one's experience without judgment. In this sense, mindfulness is a state and not a trait. While it might be promoted by certain practices or activities, such as meditation, it is not equivalent to or synonymous with them.

Several disciplines and practices can cultivate mindfulness, such as yoga, tai chi and qigong, but most of the literature has focused on mindfulness that is developed through mindfulness meditation — those self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calmness, clarity and concentration (Walsh & Shapiro, 2006).

Researchers theorize that mindfulness meditation promotes metacognitive awareness, decreases rumination via disengagement from perseverative cognitive activities and enhances attentional capacities through gains in working memory. These cognitive gains, in turn, contribute to effective emotion-regulation strategies.

More specifically, research on mindfulness has identified these benefits:

Reduced rumination. Several studies have shown that mindfulness reduces rumination. In one study, for example, Chambers et al. (2008) asked 20 novice meditators to participate in a 10-day intensive mindfulness meditation retreat. After the retreat, the meditation group had significantly higher self-reported mindfulness and a decreased negative affect compared with a control group. They also experienced fewer depressive symptoms and less rumination. In addition, the meditators had significantly better working memory capacity and were better able to sustain attention during a performance task compared with the control group.

Stress reduction. Many studies show that practicing mindfulness reduces stress. In 2010, Hoffman et al. conducted a meta-analysis of 39 studies that explored the use of mindfulness-based stress reduction and mindfulness-based cognitive therapy. The researchers concluded that mindfulness-based therapy may be useful in altering affective and cognitive processes that underlie multiple clinical issues.

Those findings are consistent with evidence that mindfulness meditation increases positive affect and decreases anxiety and negative affect. In one study, participants randomly assigned to an eight-week mindfulness-based stress reduction group were compared with controls on self-reported measures of depression, anxiety and psychopathology, and on neural reactivity as measured by fMRI after watching sad films (Farb et al., 2010). The researchers found that the participants who experienced mindfulness-based stress reduction had significantly less anxiety, depression and somatic distress compared with the control group. In addition, the fMRI data indicated that the mindfulness group had less neural reactivity when they were exposed to the films than the control group, and they displayed distinctly different neural responses while watching the films than they did before their mindfulness training. These findings suggest that mindfulness meditation shifts people's ability to use emotion regulation strategies in a way that enables them to experience emotion selectively, and that the emotions they experience may be processed differently in the brain (Farb et al., 2010; Williams, 2010).

Boosts to working memory. Improvements to working memory appear to be another benefit of mindfulness, research finds. A 2010 study by Jha et al., for example, documented the benefits of mindfulness meditation among a military group who participated in an eight-week mindfulness training, a nonmeditating military group and a group of nonmeditating civilians. Both military groups were in a highly stressful period before deployment. The researchers found that the nonmeditating military group had decreased working memory capacity over time, whereas working memory capacity among nonmeditating civilians was stable across time. Within the meditating military group, however, working memory capacity increased with meditation practice. In addition, meditation practice was directly related to self-reported positive affect and inversely related to self-reported negative affect.

Focus. Another study examined how mindfulness meditation affected participants' ability to focus attention and suppress distracting information. The researchers compared a group of experienced mindfulness meditators with a control group that had no meditation experience. They found that the meditation group had significantly better performance on all measures of attention and had higher self-reported mindfulness. Mindfulness meditation practice and self-reported mindfulness were correlated directly with cognitive flexibility and attentional functioning (Moore and Malinowski, 2009).

Less emotional reactivity. Research also supports the notion that mindfulness meditation decreases emotional reactivity. In a study of people who had anywhere from one month to 29 years of mindfulness meditation practice, researchers found that mindfulness meditation practice helped people disengage from emotionally upsetting pictures and enabled them to focus better on a cognitive task as compared with people who saw the pictures but did not meditate (Ortner et al., 2007).

More cognitive flexibility. Another line of research suggests that in addition to helping people become less reactive, mindfulness meditation may also give them greater cognitive flexibility. One study found that people who practice mindfulness meditation appear to develop the skill of self-observation, which neurologically disengages the automatic pathways that were created by prior learning and enables present-moment input to be integrated in a new way (Siegel, 2007a). Meditation also activates the brain region associated with more adaptive responses to stressful or negative situations (Cahn & Polich, 2006; Davidson et al., 2003). Activation of this region corresponds

with faster recovery to baseline after being negatively provoked (Davidson, 2000; Davidson, Jackson, & Kalin, 2000).

Relationship satisfaction. Several studies find that a person's ability to be mindful can help predict relationship satisfaction — the ability to respond well to relationship stress and the skill in communicating one's emotions to a partner. Empirical evidence suggests that mindfulness protects against the emotionally stressful effects of relationship conflict (Barnes et al., 2007), is positively associated with the ability to express oneself in various social situations (Dekeyser el al., 2008) and predicts relationship satisfaction (Barnes et al., 2007; Wachs & Cordova, 2007).

Other benefits. Mindfulness has been shown to enhance self-insight, morality, intuition and fear modulation, all functions associated with the brain's middle prefrontal lobe area. Evidence also suggests that mindfulness meditation has numerous health benefits, including increased immune functioning (Davidson et al., 2003; see Grossman, Niemann, Schmidt, & Walach, 2004 for a review of physical health benefits), improvement to well-being (Carmody & Baer, 2008) and reduction in psychological distress (Coffey & Hartman, 2008; Ostafin et al., 2006). In addition, mindfulness meditation practice appears to increase information processing speed (Moore & Malinowski, 2009), as well as decrease task effort and having thoughts that are unrelated to the task at hand (Lutz et al., 2009).

The effects of meditation on therapists and therapist trainees

While many studies have been conducted on the benefits of applying mindfulness approaches to psychotherapy clients (for reviews, see Didonna, 2009 and Baer, 2006), research on the effects of mindfulness on psychotherapists is just beginning to emerge. Specifically, research has identified these benefits for psychotherapists who practice mindfulness meditation:

Empathy. Several studies suggest that mindfulness promotes empathy. One study, for example, looked at premedical and medical students who participated in an eight-week mindfulness-based stress reduction training. It found that the mindfulness group had significantly higher self-reported empathy than a control group (Shapiro, Schwartz, & Bonner, 1998). In 2006, a qualitative study of therapists who were experienced meditators found that they believed that mindfulness meditation helped develop empathy toward clients (Aiken, 2006). Along similar lines, Wang (2007) found that therapists who were experienced mindfulness meditators scored higher on measures of self-reported empathy than therapists who did not meditate.

Compassion. Mindfulness-based stress reduction training has also been found to enhance self-compassion among health-care professionals (Shapiro, Astin, Bishop, & Cordova, 2005) and therapist trainees (Shapiro, Brown, & Biegel, 2007). In 2009, Kingsbury investigated the role of self-compassion in relation to mindfulness. Two components of mindfulness — nonjudging and nonreacting — were strongly correlated with self-compassion, as were two dimensions of empathy — taking on others' perspectives (i.e., perspective taking) and reacting to others' affective experiences with discomfort. Self-compassion fully mediated the relationship between perspective taking and mindfulness.

Counseling skills. Empirical literature demonstrates that including mindfulness interventions in psychotherapy training may help therapists develop skills that make them more effective. In a four-year qualitative study, for example, counseling students who took a 15-week course that included mindfulness meditation reported that mindfulness practice enabled them to be more attentive to the therapy process, more comfortable with silence, and more attuned with themselves and clients (Newsome, Christopher, Dahlen, & Christopher, 2006; Schure, Christopher, & Christopher, 2008). Counselors in training who have participated in similar mindfulness-based interventions have reported significant increases in self-awareness, insights about their professional identity (Birnbaum, 2008) and overall wellness (Rybak & Russell-Chapin, 1998).

Decreased stress and anxiety. Research found that premedical and medical students reported less anxiety and depressive symptoms after participating in an eight-week mindfulness-based stress reduction training compared with a waiting list control group (Shapiro et al., 1998). The control group evidenced similar gains after exposure to mindfulness-based stress reduction training. Similarly, following such training, therapist trainees have reported decreased stress, rumination and negative affect (Shapiro et al., 2007). In addition, when compared with a control group, mindfulness-based stress reduction training has been shown to decrease total mood disturbance, including stress, anxiety and fatigue in medical students (Rosenzweig, Reibel, Greeson, Brainard, & Hojat, 2003).

Better quality of life. Using qualitative and quantitative measures, nursing students reported better quality of life and a significant decrease in negative psychological symptoms following exposure to mindfulness-based stress reduction training (Bruce, Young, Turner, Vander Wal, & Linden, 2002). Evidence from a study of counselor trainees exposed to interpersonal mindfulness training suggests that such interventions can foster emotional intelligence and social connectedness, and reduce stress and anxiety (Cohen & Miller, 2009).

Similarly, in a study of Chinese college students, those students who were randomly assigned to participate in a mindfulness meditation intervention had lower depression and anxiety, as well as less fatigue, anger and stress-related cortisol compared to a control group (Tang et al., 2007). These same students had greater attention, self-regulation and immunoreactivity. Another study assessed changes in symptoms of depression, anxiety and post-traumatic stress disorder among New Orleans mental health workers following an eight-week meditation

intervention that began 10 weeks after Hurricane Katrina. Although changes in depression symptoms were not found, PTSD and anxiety symptoms significantly decreased after the intervention (Waelde et al., 2008). The findings suggest that meditation may serve a buffering role for mental health workers in the wake of a disaster.

Other benefits for therapists. To date, only one study has investigated the relationship between mindfulness and counseling self-efficacy. Greason and Cashwell (2009) found that counseling self-efficacy was significantly predicted by self-reported mindfulness among masters-level interns and doctoral counseling students. In that study, attention mediated the relationship between mindfulness and self-efficacy, suggesting that mindfulness may contribute to the development of beneficial attentional processes that aid psychotherapists in training (Greason & Cashwell, 2009). Other potential benefits of mindfulness include increased patience, intentionality, gratitude and body awareness (Rothaupt & Morgan, 2007).

Outcomes of clients whose therapists meditate

While research points to the conclusion that mindfulness meditation offers numerous benefits to therapists and trainees, do these benefits translate to psychotherapy treatment outcomes?

So far, only one study suggests it does. In a study conducted in Germany, randomly assigned counselor trainees who practiced Zen meditation for nine weeks reported higher self-awareness compared with nonmeditating counselor trainees (Grepmair et al., 2007). But more important, after nine weeks of treatment, clients of trainees who meditated displayed greater reductions in overall symptoms, faster rates of change, scored higher on measures of well-being and perceived their treatment to be more effective than clients of nonmeditating trainees.

However, the results of three other studies were not as encouraging. Stanley et al. (2006) studied the relationship between trait mindfulness among 23 doctoral-level clinical psychology trainees in relation to treatment outcomes of 144 adult clients at a community clinic that used manualized, empirically supported treatments. Contrary to expectation, therapist mindfulness was inversely correlated with client outcome.

This is consistent with other findings that suggest an inverse relationship exists between therapists' mindfulness and client outcomes (Bruce, 2006; Vinca & Hayes, 2007). Other research suggests that no relationship exists between therapist mindfulness and therapy outcome (Stratton, 2006).

What might be behind these results? It could be that "more mindful" people are likely to score lower on self-reports of mindfulness because they are more accurately able to describe their "mindlessness." Conversely, people who are less mindful may not realize it and therefore may be inclined to rate themselves higher on such measures.

Overall, while the psychological and physical health benefits of mindfulness meditation are strongly supported by research, the ways in which therapists' mindfulness meditation practice and therapists' mindfulness translate to measureable outcomes in psychotherapy remain unclear. Future research is needed to examine the relations between therapists' mindfulness, therapists' regular mindfulness meditation practice and common factors known to contribute to successful treatment outcomes.

Important next steps in research

Future research holds tremendous potential for learning more about the neurophysiological processes of meditation and the benefits of long-term practice on the brain. Research on neuroplasticity may help explain the relationships among length and quality of meditation practice, developmental stages of meditators and psychotherapy outcomes. More research is needed to better understand how the benefits of meditation practice accumulate over time.

In addition, psychologists and others need to explore other ways to increase mindfulness in addition to meditation. Given that current research does not indicate that therapists' self-reported mindfulness enhances client outcomes, better measures of mindfulness may need to be developed or different research designs that do not rely on self-report measures need to be used. Garland and Gaylord (2009) have proposed that the next generation of mindfulness research encompass four domains: 1. performance-based measures of mindfulness, as opposed to self-reports of mindfulness; 2. scientific evaluation of notions espoused by Buddhist traditions; 3. neuroimaging technology to verify self-report data; and 4. changes in gene expression as a result of mindfulness. Research along these lines is likely to enhance our understanding of mindfulness and its potential benefits to psychotherapy.

Research is also needed on effective and practical means of teaching therapists mindfulness practices. Future research could investigate ways mindfulness practices and mindfulness meditation could be integrated into trainees' practicum and clinical supervision. Since mindfulness-based stress reduction has been successfully used with therapist trainees (e.g., Shapiro et al., 2007), the technique may be a simple way for therapists to integrate mindfulness practices into trainees' practicum class or group supervision. Future research questions could include: Does therapists' practice of mindfulness meditation in clinical supervision with their supervisees affect the supervisory alliance or relational skills of supervisees? Does practicing formal mindfulness meditation as a group in practicum or internship aid in group cohesion, self-care, relational skills or measurable common factors that contribute to successful psychotherapy?

Given the limited research thus far on empathy, compassion, decreased stress and reactivity, more research is needed on how mindfulness meditation practice affects these constructs and measurable counseling skills in both trainees and therapists. For example, how does mindfulness meditation practice affect empathy and compassion for midcareer or late-career therapists who are experienced at mindfulness?

Shapiro and Carlson (2009) have suggested that mindfulness meditation can also serve psychologists as a means of self-care to prevent burnout. Future research is needed on not only how the practice of mindfulness meditation helps facilitate trainee development and psychotherapy processes, but also how it can help therapists prevent burnout and other detrimental outcomes of work-related stress.

In addition, despite abundant theoretical work on ways to conceptually merge Buddhist and Western psychology to psychotherapy (e.g., Epstein, 2007, 1995), there is a lack of literature on what it looks like in session when a therapist uses mindfulness and Buddhist-oriented approaches to treat specific clinical issues.

In conclusion, mindfulness has the potential to facilitate trainee and therapists' development, as well as affect change mechanisms known to contribute to successful psychotherapy. The field of psychology could benefit from future research examining cause and effect relationships in addition to mediational models in order to better understand the benefits of mindfulness and mindfulness meditation practice.

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Table 1
Examples of mindfulness-based interventions for clients

Benefits	Practical mindfulness-based interventions to use with clients	
Emotion regulation	"Can you stay with what is happening right now? ... Can you breathe with what is happening right now?"[1]	"What can you tell me about your experience right now? Notice any changes in your feeling, however subtle."[2]
Decreased reactivity and increased response flexibility	Slowly scan your entire body starting at your toes. Notice any sensations in your body without trying to change them.[3]	Can you allow and accept this feeling and stay in touch with it without reacting to it? If not, what is happening in your experience that's reacting to this feeling? [4]
Interpersonal benefits	For couples: Face each other, look into each other's eyes and notice what reactions, feelings and thoughts arise.[5]	For couples: Face each other, look into each other's eyes, and practice sending loving-kindness to one another.[5]
Intrapersonal benefits	Therapist and client can practice mindfulness meditation together during the therapy session.[6]	Informal daily practice can include: walking and eating meditations, such as mentally saying "lifting ... stepping forward ... heel touching ... toe touching ... lifting ..." when walking.[7]

Footnotes: 1 (Morgan, 2005, p. 135). 2 (Morgan, 2005, p. 138). 3 (Body Scan, Kabat-Zinn, 1990). 4 (Adapted from Didonna, 2009b). 5 (MBRE, Carson et al., 2006). 6 (Lysack, 2005). 7 (Germer, 2005, p.14).

Table 2
Mindfulness-based interventions for trainees and therapists

Benefits	Practical mindfulness-based interventions for trainees and therapists	
Empathy	In trainee dyads in "therapist" and "client" roles: Have therapists track their internal responses to client, and what makes them feel more and less empathetic towards client.[7]	In dyads, pause after each person speaks and consciously relax. While pausing, with acceptance and curiosity ask yourself: What is happening now? What am I feeling now? What might this person be experiencing?[8]
Compassion	Visualize an image, color or memory that elicits feeling friendly toward yourself. Visualize sending this feeling toward an image of yourself, or a challenging client.[9]	Practice sending loving-kindness toward oneself, toward a loved one, toward a 'neutral' client, toward a challenging client and toward all beings.[9]
Counseling skills	In dyads, sit in silence with eyes open. Pay attention to your internal experience in the presence of another person, practicing to bring your attention back to their breath when it wanders.[10]	In trainee dyads in "therapist" and client" roles: Have therapists let go of judgments and the desire to say 'something' and practice fully listening to clients. Have therapists track when their attention wanders off and practice returning attention to back to present moment.[7]
Decreased stress and anxiety	Bring your attention to your experience of breathing. Imagine seeing a client. Pay attention to any feelings of anxiety and fear. Notice how they shift from moment to moment, allowing what is to be there.[11]	In dyads, have each person track his or her own internal feelings, thoughts, and sensations as they stand at varying distances from each other. Practice with an accepting attitude toward internal reactions with eyes open, with eyes closed, facing each other and with backs facing each other.[10]
Other benefits for therapists	Therapists can practice formal sitting mindfulness meditation individually or in groups.	In between sessions, take one minute each to: 1) Ask 'what is my experience right now?' 2) Notice the sensation of each in and out breath 3) Expand your awareness to your whole body with an attitude of acceptance.[12]

Footnotes: 7 (Adapted from Shapiro & Izett, 2008). 8 (Adapted from Deep Listening & Authentically Speaking, Surrey, 2005). 9 (Adapted from Morgan & Morgan, 2005). 10 (From author's (Davis) mindfulness training at Naropa University). 11 (Adapted from Brach, 2003). 12 (Adapted from 3-minute Breathing Space from MBCT, Segal, Williams, & Teasdale, 2002).

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