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Mindfulness: An effective coaching tool for improving physical and mental health

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Abstract

Purpose: This article provides an overview of the mechanisms of action, evidence base, and practice of mindfulness, with an emphasis on how to easily incorporate this valuable skill into practice.

Data sources: PubMed, CINAHL, PsychInfo Databases.

Conclusions: Conscious attention to the present moment in a receptive way is known as mindfulness. A growing body of research indicates that mindfulness can be taught and cultivated to improve physical and mental health.

Implications for practice: Accordingly, as part of the coaching competency, mindfulness can be practiced and taught by advanced practice nurses to support lifestyle and behavioral changes, decrease perceived stress, enhance quality of life, and, ultimately, improve health and health outcomes.

Keywords

Mindfulness; coaching; stress and coping; health promotion

Mindfulness

Mindfulness is an ancient concept derived from the Pali word *sati*, which can be translated as *presence of mind*. Use of the term *mindfulness* in this article reflects its roots in Asian Buddhist contemplative practice and its secular health applications as developed by Kabat-Zinn (1982; Kabat-Zinn, Lipworth, Burncy, & Sellers, 1986). According to Kabat-Zinn (1994), who popularized the concept in the West, mindfulness involves purposefully paying attention to the present moment in a curious, open way without judgment. Brown and Ryan

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(2003), experts in the science and application of mindfulness, have described it as receptive attention to and awareness of the present moment. Mindfulness is thought to be more experiential and less analytical than typical wakefulness, providing an opportunity to disengage from habitual and potentially taxing preoccupation in biases, defenses, and rumination (Brown, Ryan, & Creswell, 2007). This use of the term mindfulness differs from common use referring to being careful, heedful, or conscientious. In a concept analysis, White (2013) found mindfulness to be a "transformative process" associated with increased ability to "be present" with "acceptance," "attention," and "awareness" that may enhance nurse well-being and sustain therapeutic presence (p. 1).

Mindfulness is considered an inherent capacity that can be cultivated through various meditative practices. Through such practices, both patients and nurses typically can cultivate a level of mindfulness that can decrease psychological distress and physical symptomatology. At a basic level, these practices involve paying close attention to the present moment, bringing into awareness what is, as well as how one reacts to what is. Ultimately, the mindfulness practice also involves letting go of judgments (e.g., labeling thoughts/responses as *good* or *bad*) to truly attend to any experiences that occur to facilitate focusing on any experience that occurs, rather than avoiding some while clinging to others.

An example of mindfulness practice is being mindful of a particular object or phenomenon, such as one's breathing, which entails observing the moment-to-moment sensations of each inhalation and exhalation in a receptive, curious manner. When thoughts and emotions arise, they are noticed kindly and simply as thoughts and emotions. This maintains or returns awareness to the present moment, where attention can again be anchored on the breath. Breathing meditation is a common mindfulness practice, especially with novices.

Coaching, advanced practice, and mindfulness

According to Spross (1998), coaching is one of six core competencies for advanced practice nurses (APNs). Coaching is an evidence-based, interpersonal process used to engage patients in participating in their own care by building self-care skills. Spross originally conceptualized coaching as a way to ameliorate patients' suffering, and later suggested that it facilitates safe passage for people facing personal transitions (McCain et al., 1998). Transitions (e.g., adjusting to living with a chronic illness, providing long-term caregiving) are inherently stressful and can be eased by APNs skilled in coaching. APN coaching can also help patients initiate and sustain behavior changes that achieve outcomes such as effective self-care, decreased perceived stress, improved quality of life (QOL), and increased self-efficacy.

One of the tools that APN coaches can use to help patients achieve these outcomes is mindfulness. Evidence shows that mindfulness can reduce stress and promote self-care and QOL in a variety of clinical and healthy populations (Chiesa, Brambilla, & Serretti, 2010; Moore & Malinowski, 2009). Another bonus: mindfulness can be taught and implemented regardless of a patient's race, ethnicity, or socioeconomic status.

Mindfulness evidence base

Psychological mechanisms

Repeatedly being mindful, through formal practice and/or in daily life, appears to have important effects on mental processes and underlying neural circuitry (Lutz, Slagter, Dunne, & Davidson, 2008). Research indicates that the mental process mechanisms through which mindfulness enhances physical and mental health include decreased negative rumination, improved emotional regulation, nonattachment, and less ego-focused thinking (Brown & Ryan, 2003; Desrosiers, Vine, Klemanski, & Nolen-Hoeksema, 2013; Jain et al., 2007; Sahdra, Shaver, & Brown, 2010; Sanders & Lam, 2010; Shahar, Britton, Sbarra, Figueredo, & Bootzin, 2010). Other mechanisms by which mindfulness affects physical and mental health are an increased sense of coherence, an altered perception of stressors, development of an observing attitude, changes in spirituality, improved attention-related functions, and cognitive flexibility (Dobkin, 2008; Dobkin & Zhao, 2011; Greeson et al., 2011; Kerr, Josyula, & Littenberg, 2011; Moore & Malinowski, 2009).

Neurobiology

Multiple studies using functional magnetic resonance imaging (fMRI) have been done to identify the physiologic processes underlying mindfulness. In several studies, mindfulness has been associated with amygdala deactivation, suggesting a downregulation of negative emotion (Chiesa et al., 2010; Creswell, Way, Eisenberger, & Lieberman, 2007; Lutz et al., 2013; Modinos, Ormel, & Aleman, 2010; Moynihan et al., 2013; Way, Creswell, Eisenberger, & Lieberman, 2010). Three fMRI studies have suggested another mechanism for the effects of mindfulness, namely, decreased ego-focused thinking (Brown, Ryan, Creswell, & Niemiec, 2008; Heppner, 2007; Way et al., 2010; Zeidan, Martucci, Kraft, McHaffie, & Coghill, 2013). In another fMRI study, a mindful state attenuated perceived emotional intensity when subjects viewed positive, negative, and neutral pictures (Taylor et al., 2011). This study compared novice and experienced meditators, and found that experienced meditators exhibited deactivation of the medial prefrontal and posterior cingulate cortices, known as the default or baseline mode network, indicating that long-term practice enhances emotional stability by facilitating present-moment awareness and fostering acceptance of various emotional states. Finally, mindfulness has been associated with altered intrinsic functional connectivity, suggesting improved focused attention, sensory processing, and reflective awareness of sensory experiences, as well as increased regional gray matter brain density (Holzel et al., 2011; Kilpatrick et al., 2011). More evidence and elaboration of these neurobiologic mechanisms can be found in a review of the neuroscientific research on meditation by Lutz et al. (2007). An exciting recent addition to the literature is a study that employed fMRI to demonstrate that individuals with higher empathic neurobiological profiles predict higher engagement in compassion-based meditation. This emerging focus in mindfulness research will ultimately help clinicians guide patients to engage in the most beneficial mindfulness training (Mascaro, Rilling, Negi, & Raison, 2013).

Mindfulness-based stress reduction (MBSR)

MBSR, the most written about and studied mindfulness intervention, was developed by Kabat-Zinn (1982) as a stress-reduction program to address chronic pain. Early research supported its effectiveness in this regard (Kabat-Zinn, 1982; Kabat-Zinn et al., 1986; Kabat-Zinn, Lipworth, & Burney, 1985). This highly structured program comprises eight 2.5-h sessions and a daylong retreat. Components include breath meditation, Hatha yoga postures, body scanning, and discussions related to stress perception and coping. Daily homework includes meditation, yoga, and a variety of "inquiry" exercises to increase one's ability to live more mindfully.

Use of MBSR has been studied in clinical and healthy populations for almost three decades. This technique has been linked to generally improved health in stressed populations (Grossman, Niemann, Schmidt, & Walach, 2004; Monti et al., 2006), decreased average daily cortisol levels (Carlson, Speca, Faris, & Patel, 2007), increased immune responsiveness (Davidson et al., 2003), lower self-reported distress (Astin et al., 2003; Smith et al., 2008; Speca, Carlson, Goodey, & Angen, 2000; Tacon, McComb, Caldera, & Randolph, 2003), and reduced depressive and physical symptoms (Dobkin & Zhao, 2011; Gallegos, Hoerger, Talbot, Moynihan, & Duberstein, 2013). In patients with cancer, MBSR increased meaningfulness, decreased psychological symptoms and fatigue, and improved sleep. A systematic review indicated that MBSR might play a helpful role in cancer care (Smith, Richardson, Hoffman, & Pilkington, 2005). In a subsequent review of MBSR in breast cancer survivors, Matchim, Armer, and Stewart (2011) found that this technique promoted sleep quality and QOL while decreasing stress, distress, state anxiety, and mood disturbances (Henderson et al., 2012; Lengacher et al., 2012). Physiologic outcomes included improved immune function and blood pressure as well as increased DHEA and cortisol. Because these promising results were based on studies that lacked methodologic rigor, the authors concluded that additional randomized controlled trials with longer follow-up periods were needed.

A systematic review by Fjorback, Arendt, Ornbol, Fink, and Walach (2011) showed evidence supporting the use of MBSR for preventing depression relapse and improving mental health. These authors also cited the need for additional randomized, longitudinal studies. In other clinical populations, evidence suggested that MBSR improved menopausal symptoms, insomnia, anxiety, subjective well-being, empathy, perceived daily stressors, and other mental health indicators, and it decreased pain associated with fibromyalgia and failed back surgery (Brown, West, Loverich, & Biegel, 2011; Carmody et al., 2011; Esmer, Blum, Rulf, & Pier, 2010; Gross et al., 2011; Kerrigan et al., 2011; Khoury et al., 2013; Schmidt et al., 2011; Shapiro, Brown, Thoresen, & Plante, 2011; Vollestad, Sivertsen, & Nielsen, 2011).

A study of healthy individuals showed that MBSR was associated with increases in left-sided anterior activation on electroencephalography, a pattern previously associated with positive affect, and enhanced immune function (Davidson et al., 2003). In nurses, MBSR has been shown to increase sense of coherence and reduce stress (Foureur, Besley, Burton, Yu, & Crisp, 2013); facilitate the introduction of spirituality and presence into nursing practice in a hospice setting (Bruce & Davies, 2005); and a 4-week MBSR program in

reducing self-reported stress symptoms among nursing leaders (Pipe et al., 2009). In a literature review, Praissman (2008) found that although additional, well-designed studies are needed, MBSR is safe and effective in decreasing stress in both patients and healthcare providers, and noted that no adverse side effects have been documented.

Other mindfulness meditation-based approaches

In a nonclinical sample, mindfulness was shown to significantly decrease emotional exhaustion and increase job satisfaction in a convenience sample of 219 employees (Hulsheger, Alberts, Feinholdt, & Lang, 2013). Several systematic reviews have focused on other types of mindfulness-based interventions. A meta-analysis of 209 studies indicated that mindfulness-based therapies are effective in reducing a variety of psychological problems including anxiety, depression, and stress (Khoury et al., 2013). In 24 addiction studies, mindfulness reduced the consumption of alcohol, cocaine, amphetamines, marijuana, cigarettes, and opiates compared to waitlist controls and general education groups (Chiesa & Serretti, 2013). Mindfulness meditation (MM) may provide benefits across the cancer trajectory, from acute to palliative care; additional qualitative research into different styles of MM is recommended (Shennan, Payne, & Fenlon, 2011). Two recent studies, including a critical review of the literature, indicated that MM decreases the intensity of chronic pain (Brown & Jones, 2013; Reiner, Tibi, & Lipsitz, 2013). MM-based interventions may improve psychological and physical symptoms associated with chronic pain, but, again, better-designed studies are needed. Although not conclusive, preliminary evidence suggests that MM-based approaches may be useful in decreasing the frequency of chronic tension type headaches, reducing alcohol preoccupation, treating eating disorders, and preventing substance abuse relapse (Cathcart, Galatis, Immink, Proeve, & Petkov, 2013; Ostafin, Kassman, & Wessel, 2013; Wanden-Berghe, Sanz-Valero, & Wanden-Berghe, 2011; Zgierska et al., 2009). In two related studies, mindfulness meditators were rated as actually looking happier by external raters who viewed short video clips of their behavior (Choi, Karremans, & Barendregt, 2012). More recent additions to the literature include two MM-related practices, Loving Kindness and Compassion. A review of these practices showed that they may help manage a variety of mental problems such as depression, social anxiety, marital conflict, anger, coping, and the stress of long-term caregiving (Hofmann, Grossman, & Hinton, 2011).

Mindfulness training delivery

Emerging research suggests that phone and web-based methods of mindfulness training may be effective in producing significant clinical outcomes. Phone-delivered mindfulness training in patients with implantable cardioverter defibrillators improved participant mindfulness and anxiety (Salmoirago-Blotcher et al., 2013). One study demonstrated that a web-based mindfulness training program was feasible and acceptable to participants who experienced decreased psychological distress, perceived stress, and negative affect when practiced regularly (Gluck & Maercker, 2011). Another web-based delivered mindfulness intervention reduced measures of stress similar to traditional mindfulness programs in a convenience sample of ambulatory patients (Morledge et al., 2013).

Application in clinical practice

Meditative practice

Meditation is an effective modality for cultivating mindfulness. Meditation derives from the Greek *meditari*, meaning to engage in contemplation or reflection. It has been part of spiritual and healing practices for thousands of years (Kabat-Zinn, 1994). Meditation is practiced using a variety of techniques to alter how one relates to or suspends the stream of thoughts to relax the body and mind. Most types of meditation have four common elements: (a) a quiet location with as few distractions as possible; (b) assumption of a specific comfortable posture; (c) a focus of attention (e.g., a mantra, an object, the breath); and (d) an open state of mind wherein one lets thoughts and distractions come and go naturally without judging them. MM often uses the breath as the anchor of attention in the present moment, but physical sensations and movements, such as slow walking or yoga postures, are commonly used. As one gains greater skill in MM, a fuller range of experiences, including thoughts and feelings, can be observed as phenomena unfolding from moment to moment without the content of such experiences distracting attention from the present moment. MM is used not just for its potential benefits during the practice period itself; it can also be applied to experiences in daily life.

Although the concept of mindfulness has garnered much attention in psychological, neuroscientific, and health-related research, it is a relatively new tool in advanced nursing practice. Much of the research has been done on MBSR, but the research on MM is generally supportive, which portends greater accessibility of mindfulness-based techniques for both practitioners and patients. Although formal MBSR training may not yet be available or affordable for many who can benefit from it, one can still integrate basic mindfulness techniques into clinical practice. The ability to direct the mind to create an internal state of receptive attention to and awareness of the present moment can be cultivated with routine practice of fairly basic, established techniques (Brown et al., 2008; Shapiro et al., 2011). Although many situations such as chronic illness and long-term caregiving are long-standing and seemingly unchangeable, practicing mindfulness can shift one’s perception and relationship with these stressors. APNs can introduce the concept and practice of mindfulness to their clinical practice by using the information, suggestions, and resources in Tables 1-3. In addition, O’Haver Day & Horton-Deutsch (2004) provide a description and review of empirical support for mindfulness-based interventions, including a useful case study integrating MM in advanced practice psychiatric nursing.

Anticipatory guidance

The literature on mindfulness provides important insights that may facilitate the acquisition of this potentially beneficial skill. At first, some people may experience resistance to or difficulty with the practice. In one qualitative study, participants described moments of distress related to MBSR practice (Kerr et al., 2011). However, they also reported being able to develop a “witnessing attitude” toward their distress. Learning to be present and aware involves behavior change, but it is possible and accessible for everyone. Although people tend to resist change, even when they know it will benefit them, an acceptance of initial feelings of discomfort can facilitate behavior change (Maxwell, 1995). Merely explaining

this phenomenon to patients may help them feel less self-critical as they learn new health behaviors.

Learning to be more mindful is a process. An ancient proverb teaches that “the mind belongs to you; you do not belong to the mind.” Training the mind is akin to training the body. To increase physical strength and stamina, one starts a program slowly and then gradually increases the duration and intensity of training over time. In general, one does not begin increasing strength and stamina by lifting 100 pounds and running 10 miles. These concepts also pertain to the training of the mind. It is a process. One can begin simply by learning to become aware of the breath.

The practice of meditation can enhance the ability to be mindful. Becoming more mindful can begin by simply sitting 5 min each day, quietly focused on the breath. Although breath is frequently used as a tool for focusing the mind, a candle flame, a meaningful word, or gazing at a beautiful piece of art or something in nature works as well. Choi et al. (2012) stated that mindfulness in action is a process of learning and growing that can begin with immersing oneself in a favorite activity, remaining aware and open to the thoughts that arise, and that, over time, feelings of fear and anxiety are more easily released. With continued practice, one learns to be more observant and aware in all aspects of life, without the need for habitual judging, labeling, and reacting (Lutz et al., 2007).

Conclusion

An abundance of research on MBSR and a growing body of research on other MM techniques are available, providing initial support for benefits. Additional well-designed longitudinal studies are needed in healthy and vulnerable populations, with a continued focus on underlying mechanisms of mindfulness, as well as on the effectiveness of various mindfulness-based meditation strategies. Clinical effectiveness research and less formal evidence from practice can provide feedback to profoundly inform future research. In the interim, APNs can reasonably integrate mindfulness-based techniques into clinical practice, given the potential benefits and the relative ease with which it can be done. Emerging evidence suggests that mindfulness training can be effectively delivered via phone and internet, which may ultimately enhance efficient application in clinical practice.

While historically, research in the area of mindfulness-based interventions is sometimes methodologically flawed, continually emerging high-quality evidence supports the clinical integration of these interventions as cost-efficient, easily delivered, effective options for a variety of clinical populations (Shonin, Van Gordon, & Griffiths, 2013). As summarized in research update on mindfulness (Greeson, 2009), mindfulness enhances health and well-being by increasing attention, awareness, and acceptance of thoughts and emotions, which increases adaptation to stressors. Practicing mindfulness may lead to major improvements in multiple patient outcomes. Finally, in addition to potentially decreasing perceived stress, mindfulness practice may foster self-reflection, thereby enhancing NPs’ coaching abilities.

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Table 1

Meditation practice: strategies for success

1. Start where you are; 5–10 min of daily practice can cultivate mindful awareness. A reasonable goal is 15–20 min most days of the week.
2. Choose a specific time each day. Developing a “discipline” is often most successful if practice is done in the morning before the day gets busy.
3. If you miss your morning practice, practice when you can during the day.
4. Acknowledge that learning new behaviors is difficult and reward yourself for your willingness to try and let go of criticizing yourself.
5. Choose a meditation activity that works for you and use a variety depending on what you need: Focus on breathing while seated, lying down or walking; progress to tai chi or yoga if you wish.

Table 2

Easy ways to be mindful[a]

1. Do one task at a time. Multitasking is inefficient and stressful.
2. Engage in walking meditation by leaving your phone and focusing on the walking and what is around you.
3. Eat a meal silently, away from the television or computer.
4. Take three deep breaths when you awaken and just before sleep.
5. Take a deep breath when you feel yourself getting tense.
6. Schedule play time.
7. Laugh just because you can. Try laughing in your car at stoplights; no one knows you are not using a device they cannot see.
8. Pay attention to what your body tells you; rest a bit when you are tired and stretch when you are tense.
9. Practice gratitude each day.
10. Receive help when it is offered.

[a] Adapted from Lawson (2011), *Demystifying mindfulness*. www.minnesotamedicine.com.

Table 3

Mindfulness: resources for future exploration

1. Mindfulness-based stress reduction (MBSR)
2. MBSR books by Jon Kabat-Zinn and others: *Full Catastrophe Living*; *Wherever You Go, There You Are*; *Coming to Our Senses*; *Mindfulness-Based Stress Reduction Workbook*
3. MBSR guided meditations by Jon Kabat-Zinn: www.soundstrue.com
4. http://www.umassmed.edu/cfm/stress/index.aspx
5. http://www.bemindfulonline.com
6. http://www.mindfulnet.org