

Mindfulness: What It Is and How It Is Impacting Healthcare

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abstract

The following is a review of literature concerning the place of mindfulness, a non-judging present-moment awareness, and techniques by which to invoke it, in Canadian healthcare. Central to the discussion are the effects of mindfulness on personal and interpersonal well-being. A recent surge of research has found mindfulness to positively impact a wide range of measures of personal health including stress, anxiety, affect, and healthy lifestyle choices. At present, mindfulness-based interventions have been confirmed effective for the treatment of chronic pain, psoriasis, and a number of psychiatric illnesses, and are possibly helpful for the prevention of cognitive decline. Mindfulness also presents benefits to interpersonal relationships by promoting empathy, compassion and attentiveness reflected in the enhanced patient-centeredness with which mindful physicians conduct their clinical practice. As such, mindfulness training among healthcare providers is advocated for the improvement of quality of care as well as a means to mitigate work-related stress and burnout. The underlying mechanisms of the effects of mindfulness are also discussed, with emphasis on present-moment attentiveness and a disempowerment of one's maladaptive cognitions allowing the individual to act with intention and care rather than out of habit and impulse. Given the potential for mindfulness to promote health and enrich the practice of medicine, its increased utilization among patients, physicians, and the population at large is encouraged.

introduction

Mindfulness is a concept derived from Buddhist tradition. It is a central component of an ancient school of thought concerning human suffering and ways to bring about its cessation.¹ It is characterized by Jon Kabat-Zinn² – a foremost pioneer in introducing mindfulness to medicine – as a nonjudgmental, curious, and self-compassionate awareness of one's moment-to-moment experience. It is an active and deliberate regulation of one's attention so as to focus it on the many cognitive events – sensations, thoughts, emotions, and so on – that occur within the field of consciousness at any given moment. Further, it is to manifest a nonjudgmental orientation toward these cognitions, treating them not as things to be liked and disliked, or pursued and resisted, but rather as objects of observation to simply acknowledge and accept as they are.³

In recent decades, research interest in mindfulness has grown.^{4,5} While mindfulness practices are diverse – yoga, tai chi, and various prayer and chanting

exercises present a few examples – meditation has been the primary object of our scientific study.⁶ Mindfulness meditation is the deliberate evocation of mindfulness, usually in a state of physical stillness,⁷ and was first introduced to the Western medical lens with the establishment of Mindfulness-Based Stress Reduction (MBSR) therapy in American clinics and hospitals in the 1980s.⁷ MBSR is a secular therapy that seeks to develop participants' mindfulness skills through meditation practice.⁷ MBSR's success in the management of chronic pain spurred the development of a considerable body of literature exploring the impact of mindfulness training on human psychology and physiology.⁶

the health benefits of mindfulness

This research has confirmed millennia-old reports⁶ of mindfulness as a powerful promoter of personal and interpersonal health. First, it is now generally accepted that mindfulness training can promote

long-standing increases in positive affect and reductions in anxiety, negative affect,^{8,9,10} emotional reactivity,¹¹ and stress.^{12,13} Second, it is reported to increase empathy and compassion¹⁴ and promote a sense of connectedness with others.¹⁵ Third, it has emerged as a predictor of various health-determining lifestyle choices, including diet,¹⁶ exercise,¹⁶ and substance use.^{17,18,19} Fourth, the act of meditation itself is associated with increased parasympathetic tone and related decreases in heart rate, blood pressure, blood cortisol, breathing rate, skin conductance, and muscle tension.²⁰ Finally, a number of mindfulness training studies^{21,22,23} in patient populations report enhanced immune function as measured by cytokine expression,^{21, 22} leukocyte quantities,^{21, 22} and antibody titers in response to vaccination.²³ Together, these findings suggest not only a capacity of mindfulness to promote subjective well-being, but also a preventive effect on stress- and hypertension-mediated pathologies, as well as the possibility of enhanced immunoprotection from viral and bacterial diseases.

principles and mechanisms of mindfulness

How is mindfulness doing all of this? The cognitive and neurobiological mechanisms underlying the benefits of mindfulness training are undoubtedly complex, and while a number of compelling models have been proposed (for review, see Hölzel et al²⁰), our understanding of these mechanisms remains rudimentary. Even so, because mindfulness is a conscious psychological process,³ we stand to learn a great deal about it by reflecting upon the conscious experiences of mindful people. In one account of personal reflection, Krasner²⁴ writes:

"What mindfulness - based interventions ask of the participants ... is to consciously shift [the] locus of control internally, acknowledge and accept whatever challenges arise, and apply wise attention to the challenges without judgment in the present moment ... It is through the cultivation of this awakened state that one begins to see the perceptual distortions of unexamined thoughts, feelings, and sensations. In doing so, one recognizes how these distortions drive the engine of behaviour and choices and how this results in movement toward states of greater disease."

A number of interesting changes are thought to occur with this sort of insight. One such change, as Krasner alludes to, is that maladaptive cognitions tend to lose their power in guiding behaviour. Brewer et al²⁵ illustrate this notion with the example of fictional Joe Smoker, who, upon experiencing a craving for a cigarette, might bring mindful awareness to the sensations and perceptions that comprise his craving and just observe them from moment to moment. The craving itself and any judgments surrounding it become merely objects of curious and wide-eyed observation, and in this process lose their salience as driving forces for behaviour.

A similar principle applies not only to overt behaviour, but to our maladaptive cognitions themselves. As Crane et al²⁶

explain, becoming mindful represents a paradigm shift in the 'mode of mind' in which we operate: we disengage from a ruminative avoidant mode of processing and engage with an acceptance-based, approach-oriented mode anchored in present-moment awareness. In this mode we are better able to notice and reflect upon our thought processes, and, to an extent, deliberately let go of those we find maladaptive.

In considering the interpersonal effects of mindfulness, Bihari and Mullan²⁷ come to important insights in their 2014 qualitative study of the effects of mindfulness training on participants' relationships. These authors suggest that mindfulness incites an enhanced awareness of one's tendencies to react automatically to internal and external cues in interpersonal situations. This allows one to act less out of habit and impulse, and more out of conscious purpose. They also report an enhanced ability to engage in constructive, fruitful arguments and to "be with" another without submitting to urges to "fix" or avoid that person. These findings indicate a capacity of mindfulness to promote constructive and fulfilling interpersonal interactions and help avoid destructive and taxing ones.

clinical applications of mindfulness

The potential clinical relevance of mindfulness training is not difficult to imagine, and its application to patients has grown considerably since the initial introduction of MBSR.^{4,5} In psychiatry and clinical psychology, mindfulness training has come to play a central role in a number of distinct therapies concerning mood,^{28,29} anxiety,⁴ personality,³⁰ conduct³¹ and substance use disorders.³² MBSR itself has extended its reach from managing chronic pain to complementing a wide range of medical treatments as a means to reduce psychological comorbidities of illness.^{8,33} Larouche et al's 2015 review³⁴ suggests that mindfulness-based interventions, in their capacity to improve many of the risk factors for neurodegenerative cognitive decline (including stress, mood disturbance, and metabolic syndrome),

show promise as preventive strategies for cognitive impairment and Alzheimer's disease. Kabat-Zinn et al³⁵ report accelerated skin clearing among psoriasis patients who listened to a guided mindfulness meditation tape during their phototherapy sessions as compared to controls without the tape – a remarkable finding for psychosomatic medicine. Together, these findings make it clear that the clinical applicability of mindfulness is extensive and continued research in a variety of fields is warranted.

mindfulness, physician distress and quality of care

Numerous groups^{14,36,37,40} have turned their attention toward health care providers as a target population for mindfulness-based interventions to enhance stress resilience and overall well-being. Physicians, in particular, face many stressors in medical practice and thus many challenges in maintaining their own well-being.³⁶ Stress, anxiety, burnout, and compassion fatigue are common ailments³⁶ and they present substantial detriments to the quality of care a physician provides.¹⁴ Burnout, characterized by a reduced sense of accomplishment, emotional exhaustion, and depersonalization,³⁷ is reported by as many as 30% to 40% of practicing

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physicians at a given time³⁸ and by up to 60% as having been experienced at some point in their careers.^{37,39} Burnout is related to a less patient-centered approach to care,³⁷ reduced empathy and compassion,³⁶ and leads to increased medical errors.³⁶ As a result, burnout influences patients' recovery times,¹⁴ compliance with therapies, confidence in their physicians,³⁶ and overall satisfaction with their care.³⁶

Fortney et al⁴⁰ suggest that mindfulness presents a particularly suitable and appealing option for physicians as a means to deal with distress in that it directly addresses meaning in life and work but is entirely secular and firmly founded in empiricism. Indeed, a growing body of evidence⁴⁰⁻⁴³ suggests that mindfulness training is effective in reducing indicators of burnout, depression, anxiety, and stress and improving indicators of well-being, vigor, empathy, and stress-resilience among physicians, other health care professionals, and medical students. Although this field of research is young and much of the data is only quasi-experimental,⁴⁴ these findings indicate the promise of mindfulness training as a means to mitigate distress among healthcare providers and improve quality of care.

How might we understand these changes in healthcare providers' well-being and proficiency? In his reflections upon mindful physicians, Epstein⁴⁵ suggests

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that the critical self-reflection essential to mindfulness enables physicians to listen attentively and presently to their patients' distress; recognize their own errors; make evidence-based decisions; and act with technical competence, insight, and compassion. Beach et al⁴² find that mindfulness among physicians is associated with patient-centered communication and an increased likelihood to consider a range of possible explanations in stressful situations. Further, Beach et al report an enhanced approach attitude among mindful physicians – a capacity to respond consciously and engage with distressing situations rather than react automatically and withdraw from them. Together, these considerations lend us further indication that mindfulness may have an important role to play in promoting an effective, fulfilling, and human-centered practice of medicine.

limitations of mindfulness training

Although most studies have shown encouraging results, mindfulness training sometimes fails to help participants and can potentially even do harm.⁴⁶ Reported adverse responses include panic attacks and intensified perceptions of pain, particularly among new practitioners.⁴⁶ Some authors^{46,47} understand these responses as a result of encountering and attending – perhaps more fully than ever before – to certain burdensome mental events (e.g., traumatic memories or pain).⁴⁶ In addition, while no specific populations for whom mindfulness training is contraindicated have yet been uncovered, case reports of manic and psychotic episodes precipitated by meditation advise caution for certain psychiatric populations.⁴⁸

Crane et al²⁶ emphasize teacher competence as a critical factor in allowing participants to respond adaptively to the arisal of unpleasant perceptions. By offering strategies for open acceptance of perceptions in real time and by themselves embodying the practice,⁴⁶ teachers may allow otherwise aversive experiences to become intense but

valuable learning opportunities. Dobkin et al⁴⁶ also offer a set of guidelines for reducing the risks and maximizing the benefits of mindfulness training. These include pre-screening for psychiatric problems and 'priming' participants before training begins by informing them of potential challenges and ways to approach disconcerting perceptions if and when they arise.

conclusion

The therapeutic applications of mindfulness are considerable and its impact on clinical practice itself appears to be profound. Indeed, several commentators^{4,23,45,49} characterize mindfulness as inciting nothing short of a revolution in the way we conduct our mental lives both within the clinic and without. By continuing to encourage and teach mindfulness meditation and expand mindfulness training programs, we stand to enhance the health of patients and healthcare professionals alike, enrich the practice of medicine, and empower people to navigate their lives with skill, wisdom, and meaning. Given these findings, the continued investigation and realization of potential roles for mindfulness in healthcare is strongly encouraged.

disclosures

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