

**Are there Adverse Effects Associated with Mindfulness?**

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Mindfulness is advocated by the National Institute for Health and Care Excellence, American Psychiatric Association, and the Royal Australian and New Zealand College of Psychiatrists for treating specific psychiatric disorders in adults (Shonin et al., 2014). However, despite its growing popularity, there is concern and uncertainty as to whether there are health risks associated with mindfulness. Such concerns form part of what has been termed the ‘mindfulness backlash’ or ‘McMindfulness’ movement that has involved ongoing inquisitorial debate in the mass media (e.g., *BBC*, *Guardian*, *Huffington Post*, *Independent*, *Telegraph*, *Waikato Times*, *Washington Post*), trade/weekly journals (e.g., *Lifhack*, *Salon*, *The Daily Good*, *The Spectator*), practitioner journals (e.g., *The Psychologist*, *Psychology Today*, *PsychCentral*), and academic journals (e.g., *Advances in Mind Body Medicine*, *British Journal of General Practice*, *Clinical Practice*, *Journal of Counselling and Development*, *Mindfulness*, *Mindfulness and Compassion*, *Self and Society*). More specifically, such concerns have arisen pursuant to an increasing number of empirical and anecdotal reports that participation in a mindfulness-based intervention (MBI) has led to (for example) executive memory impairments, depersonalisation, asociality, panic attacks, psychotic episodes, addiction (i.e., to mindfulness), and/or impaired reality testing. This paper briefly appraises the evidential quality of these reports, identifies factors that appear to exacerbate the risks of mindfulness, and makes recommendations for safe clinical implementation.

### **Appraisal of Empirical Evidence**

Most studies of mindfulness assess a limited range of pre-defined health outcomes and have thus not sought to explore whether mindfulness can incur health risks. Consequently, it is difficult to estimate the prevalence of participants that experience adverse effects following participation in an MBI. However, a small but steadily growing number of studies reporting negative effects indicates that the matter warrants closer empirical attention. One such study

(Wilson et al., 2015) randomly assigned participants ( $n=293$  across two separate experiments) to a mindfulness or mind-wandering induction, and participants completed exercises based on the Deese-Roediger-McDermott word recall and recognition paradigm. Findings demonstrated that participants in the mindfulness induction were significantly more likely to report critical non-studied word items than participants in the mind-wandering induction. The same authors conducted a third experiment that found that participants ( $n=215$ ) had reduced reality-monitoring accuracy (assessed via levels of recall on an associated-word-pair test) after completing the mindfulness induction. Based on findings from the three separate experiments, the authors concluded that mindfulness can cause difficulty in differentiating internal and external sources of information resulting in increased false-memory susceptibility.

Although the authors' abovementioned conclusion is consistent with the study outcomes, a major limitation that appears to have been overlooked is the fact that in the mindfulness induction, student participants listened to a 15-minute guided mindfulness exercise in which they were instructed to practice non-judgemental awareness of their breathing. In traditional mindfulness-practice communities, individuals would often practice mindfulness for several hours each day – over a period of many years – before being deemed to have a basic grasp of the practice. Therefore, it is doubtful whether participants – many without prior mindfulness experience – would be able to cultivate a state of genuine mindfulness in just 15 minutes by listening to an audio recording.

Another study recruited 30 adult male meditation practitioners of which 29 reported – among other forms of meditation – engaging in mindfulness meditation (26 of these 29 participants were affiliated with an organisation that practiced mindfulness as a 'core practice') (Lomas et al., 2015). Participants attended semi-structured interviews that explored their subjective experiences of meditation. Although some positive outcomes were identified, 25% of the participants' narrative related to problems arising from their meditative practice. More

specifically, the qualitative analysis demonstrated that meditation led to intrapsychic problems including troubling experiences of self, exacerbation of mental health issues, and reality being challenged. However, the extent to which these findings can be generalized to other mindfulness practitioners is questionable because most participants belonged to the same meditation centre. Therefore, the form of mindfulness they were practicing may be based on a single instructor's interpretation of the technique.

A small number of clinical case studies have referred to participants developing an addiction to mindfulness (e.g., Shonin et al., 2014b). The authors asserted that the peaceful mental states associated with mindfulness and other forms of meditation can be used to substitute dysfunctional addictive behaviours (e.g., addiction to gambling or sex) and that in this context, addiction to mindfulness could be a form of 'positive addiction'. However, the authors acknowledged that while this addiction substitution strategy can be therapeutically effective, an addiction to meditation could become maladaptive over the long term.

Based on five years of delivering MBIs at a university in Canada, researchers reported that 24% of participants (participant numbers not provided) demonstrated increases over the cut-off point on a screen for depression at the end of the program (Dobkin et al., 2012). The authors did not provide information about the study procedures used to elicit this information but asserted that their MBI participants reported becoming more aware of both positive and negative aspects of their lives. In other words, the authors appeared to be claiming that rather than mindfulness inducing low-mood states, it simply raised participants' awareness of psychological issues that had hitherto remained latent (or that participants had chosen to ignore).

A review paper examined whether mindfulness and other forms of meditation can induce psychotic episodes (Shonin et al., 2014). Six studies ( $n=12$ ) reporting that meditation induced psychotic symptoms were identified. However, although some patients had practiced

mindfulness-based exercises, others had received training in other forms of meditation. Furthermore, some of the reviewed studies did not consider the clinical history of the patient and/or overlooked the fact that some patients had been exposed to intensive meditation practice involving fasting.

Another study provided an account of the author's first-hand experience of participating in an eight-week program of Mindfulness-Based Stress Reduction (MBSR) (Purser, 2015). The participant author – themselves an experienced Buddhist teacher – appeared to remain unclear about the underlying intentions of the MBI and stated as follows:

“This persuasive and dominant narrative just didn't sit right with me. While people were getting temporary relief from MBSR, as time went on I had a hard time differentiating whether I was being educated in a scientific, evidenced-based method or a political ideology. Perhaps it was both. However, the etiological explanation sounded just a little too convenient – the stress people were experiencing supposedly had nothing to do with their actual material conditions (e.g. loss of income), nor the unreasonable demands placed on them by toxic, workaholic, corporate cultures ... Instead, stress was explained as being a private, subjective, and interior affair – a problem for which individuals needed to take responsibility on their own.” (pp. 8-9)

### **Risk Factors and Recommendations**

Due to the small number of studies that have specifically sought to investigate adverse effects, it remains unclear whether mindfulness can lead to negative health outcomes. However, based on the studies reviewed here as well as on the present authors' experience of teaching mindfulness over a period of decades, rather than mindfulness *per se*, we would argue that it is a lack of understanding of the nuances of mindfulness amongst some instructors – and the

subsequent poor teaching of mindfulness – that is likely to pose the greatest risk to patients. Given that both anecdotal and empirical reports of adverse effects have started to gradually materialize, there is clearly a need for future research to specifically investigate the conditions under which mindfulness may incur negative health consequences. In light of the uncertainty, we recommend that clinicians (i) advise patients to exercise care in their choice of mindfulness instructor, and/or (ii) undergo supervised mindfulness training for a period of at least three years (including with a range of experienced mindfulness teachers) prior to attempting to administer mindfulness in a treatment context.

## References

- Dobkin PL, Irving JA, Amar S 2012 For whom may participation in a Mindfulness-Based Stress Reduction program be contraindicated? *Mindfulness* 3: 44-50.
- Lomas T, Cartwright T, Edginton T, et al. 2015 A qualitative analysis of experiential challenges associated with meditation practice. *Mindfulness* 6: 848-860.
- Purser R 2015 Confessions of a mind-wandering MBSR student: Remembering social amnesia. *Self and Society* 43: 6-14.
- Shonin E, Van Gordon W, Griffiths MD 2014a Do mindfulness-based therapies have a role in the treatment of psychosis? *Australian and New Zealand Journal of Psychiatry* 48: 124-127.
- Shonin E, Van Gordon W, Griffiths MD (2014b) Cognitive Behavioral Therapy (CBT) and Meditation Awareness Training (MAT) for the treatment of co-occurring schizophrenia with pathological gambling: A case study. *International Journal of Mental Health and Addiction* 12: 181-196.
- Wilson BM, Mickes L, Stolarz-Fantino S, et al. 2015 Increased false-memory susceptibility after mindfulness meditation. *Psychological Science* 26: 1567-73.