

DEBATE: The inevitable decline of mindfulness

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The use of mindfulness meditation as a well-being and clinical tool is being deeply challenged on various fronts. The recent failure of showing its salutary effects on schoolchildren, in a large-scale study, which stands as the most expensive study in the history of meditation science (£6.4 million), is accompanied by growing evidence of potential adverse effects associated with mindfulness practice. It is suggested that the heightened enthusiasm surrounding the benefits of mindfulness led academics to use facile metaphors to promote it (such as comparing the mind to a muscle) and distorted its presentation – both in disseminating overhyped findings and in neglecting the report of adverse effects.

Keywords: Mindfulness; adverse effects; mental health; children

Physical strength and fitness are generally healthy conditions that probably don't cause harm in most circumstances. Harm is more likely to arise through unsafe or excessive forms of exercise. In a similar way, mindfulness is a natural human capacity that appears to be beneficial in many circumstances. Harm is more likely to arise through misguided or inappropriate forms of mindfulness practice. (Baer & Kuyken, 2016).

The results of MYRIAD, the most expensive study in the history of meditation science (£6.4 million funded by the Wellcome Trust), have recently been published. Over 8000 children, aged 11–14, were tested across 84 schools. The results show that mindfulness meditation failed to improve the mental health of children compared with a control group and that it might even have had a detrimental effect on those who were at risk of mental health problems (Montero-Marin et al., 2022).

This is an extraordinary study, both in its magnitude – the effort of setting it up, the number of people involved – and in its failure. What feels most astonishing of all is that the rationale to undertake such study was particularly opaque. The press release stated that the research was 'based on the theory that, just as physical training is associated with improved physical health, psychological resilience training is associated with better mental health outcomes'. And it further explained, citing the words of the Principal Investigator, Willem Kuyken, that 'Just as brushing your teeth or going for a run are well-known ways of protecting general physical health, mindfulness exercises develop mental fitness and resilience' (Wellcome Trust, 2016).

The idea of 'mind gyms' where children might exercise and develop mental fitness and resilience is a metaphor, which psychologists cringe at when hearing politicians use it; despite conflicting theories on how the mind works, from psychodynamic and behavioural to neuro-cognitive models of the mind, I would expect there to be a consensus among psychology professionals that our minds do not generally work like a muscle. While there are characteristics of the mind that can be trained, like attention or memory, to conceive of our minds as a muscle is to fail to recognise the complexity of psychological, social and biological processes that make us unique individuals. How can this kind of facile metaphor be

used to justify a study involving thousands of children, and how did this not immediately raise alarm bells within the psychological community, particularly with clinicians?

Adding to this theoretical mist, there are other reasons of concern. By 2016, there was no clear evidence that mindfulness could help children deal with mental health problems to justify such a colossal study, and the enthusiasm for mindfulness as a universal mental health tool was being vigorously shaken. The most comprehensive meta-analysis of controlled clinical trials published in 2014 showed a rather nuanced picture of the effects of mindfulness, with moderate improvements for depression, but no verifiable effects for variables such as attention or stress, and no evidence that it was superior to any other therapeutic intervention (Goyal et al., 2014).

But the most serious challenge to mindfulness came from the study of its adverse effects. Mindfulness researchers had been *strangely* oblivious to the past research on meditation adverse effects, stretching back to the mid-1970s. The first handbook of meditation included contributions from leading cognitive psychotherapists (e.g. A Lazarus and A Ellis) about the occurrence of adverse events associated with these practices (Shapiro & Walsh, 1984). And by 2016, there were fresh reports or reviews of adverse effects of meditation practices, including mindfulness (Farias & Wikholm, 2015) to at least temper the enthusiasm and urge caution, particularly when applying these techniques to vulnerable populations or children.

As the wider public became aware of these potential adverse effects, leading research centres defended the overall safety of mindfulness practices. Using the 'gym model of the mind' metaphor, Baer and Kuyken (2016) suggested that harm was more likely to arise through 'misguided or inappropriate forms of mindfulness practice', as harm might occur to the body through excessive or unsafe physical exercise. Presenting mindfulness as a muscle-like innate cognitive capacity, instead of a meditation practice which was developed to produce nonordinary states of mind that can lead to challenging and harmful experiences, is not only scientifically and historically baseless but ethically dubious.

Why ethically dubious? Because the interests of promoting a particular technique have distorted its presentation, including the potential for harmful effects, which are depicted both in the scientific and in the historical literature (for a review of such effects in the Buddhist literature, see Ahn, 2021).

The results of MYRIAD indicate that mindfulness might have had a detrimental effect on children who were at risk of mental health. This was not statistically significant considering the analyses ran with the overall sample, but it almost certainly means that some children became significantly worse after doing mindfulness meditation – were there any adverse effects? These were not assessed. The research only assessed *serious* adverse effects, which do not cover the myriad of potential detrimental effects that do not lead to death, significant disability, or to hospitalisation. This means that it did not take into account significant increases in depression, anxiety and stress, neither the occurrence of cognitive anomalies nor trauma reexperience (for a systematic review of meditation adverse events, see Farias, Maraldi, Wallenkampf, & Lucchetti, 2020).

How can such oversight be justified when testing thousands of children? And why hasn't been there a public debate on the overall findings? Mindfulness-based clinical programmes have been promoted to help individuals with mental health problems, particularly depression, anxiety and stress. Previous studies with depressed adults had even suggested that the most vulnerable individuals (with higher childhood trauma) benefited more from mindfulness (Williams et al., 2014). The MYRIAD results are telling us the opposite. What can the study leaders tell us about these puzzling findings?

The MYRIAD study has exposed many faults within the current science and practice of mindfulness, and we can be grateful for that. The decline of mindfulness as a form of therapy is inevitable. What lessons can we learn from it? One important lesson is that we should beware of unverified enthusiasm, particularly when fuelled by utopian beliefs. There is ample evidence that leading mindfulness scholars believe(d) that this meditation practice would change the world. The foreword by Jon Kabat-Zinn to the Mindful Nation UK report (2015) well expresses such enthusiasm: Mindfulness has the potential of making us healthier, more compassionate and altruistic, 'going beyond the limitations of... who we are as human beings and individual citizens, as communities and societies, as nations, and as a species' (p. 10).

Secularising religious techniques, such as Buddhist mindfulness meditation, and using it in clinical practice, is not a problem in itself; the problem arises when researchers hold beliefs, which show little permeability to scrutiny or criticism: It too easily leads to overhyped claims of effectiveness, disregard of criticisms and limitations, and a sense of triumphalism which is inimical to the making of good, humble science.

There is a second lesson to be learned from the rise and decline of mindfulness: Read about the history of what you're studying. The literature on mindfulness pre-

dates by centuries the trials on its clinical effectiveness. If this homework had been properly done, the heightened enthusiasm about mindfulness would have been tempered, discussion of potential adverse effects would have taken place from the moment secularised therapeutic models were being developed, there would be an overall awareness that children are typically not taught meditation practices within Buddhist or other religious traditions, and £6.4 million could have been more wisely spent in assisting with the mental health of children.

Acknowledgement

The author has declared that they have no competing or potential conflicts of interest.

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Accepted for publication: 7 September 2022