

“Role of Mindfulness Programs in Stress Management for Healthcare Workers”

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Abstract

Objectives: Among efforts to improve the wellbeing of healthcare professionals are initiatives based around mindfulness meditation. To understand the value of such initiatives, we conducted a systematic review of empirical studies pertaining to mindfulness in healthcare professionals.

Design: Databases were reviewed from the start of records to January 2016. Eligibility criteria included empirical analyses of mindfulness and wellbeing outcomes acquired in relation to practice. 81 papers met the eligibility criteria, consisting of a total 3,805 participants. Studies were principally examined for outcomes such as burnout, distress, anxiety, depression and stress.

Results: Mindfulness was generally associated with positive outcomes in relation to most measures (although results were more equivocal with respect to some outcomes, most notably burnout).

Conclusion: Overall, mindfulness does appear to improve the wellbeing of healthcare professionals. However, the quality of the studies was inconsistent, so further research is needed, particularly high-quality randomised control trials.

Keywords: mindfulness; meditation; healthcare professionals; wellbeing; systematic review.

INTRODUCTION

Healthcare professionals (HCPs) can face particular challenges that can be detrimental to their physical and mental health. A wealth of research has accumulated indicating that HCPs are liable to experience a range of mental health issues, including anxiety (Gao et al., 2012), burnout (Khamisa, Oldenburg, Peltzer, & Ilic, 2015), depression (Givens & Tjia, 2002), and stress (Bidwal, Ip, Shah, & Serino, 2015). Moreover, these problems may be particularly acute among HCPs relative to people in other professions (Brooks, Gerada, & Chalder, 2011). A recent survey of over 3,700 public sector workers in the UK found that staff working for the National Health Service were the most stressed, with 61% reporting feeling stress all or most of the time, and 59% stating that stress is worse this year than last year (Dudman, Isaac, & Johnson, 2015).

Analyses of these problems include attempts to understand why HCPs are especially vulnerable to mental health issues. Some scholars explain outcomes like burnout according to the model of effort-reward imbalance, finding that HCPs face a particularly disadvantageous imbalance due to the considerable effort required by their work, emotionally and physically (Rasmussen et al., 2015). Such efforts include factors such as emotional demands (Tyssen, Vaglum, Grønvold, & Ekeberg, 2000), exacerbated by often limited resources, such as time allocation per patient (Mossialos, Wenzl, Osborn, & Anderson, 2015). Another factor is adverse events in healthcare settings, which can mean that HCPs may be ‘second victims’ (Draper, Kølves, De Leo, & Snowdon, 2014). Particular HCP populations can be especially vulnerable, such as younger and/or less experienced workers; Bidwal et al. (2015) found that levels of stress among trainees in the healthcare professions were roughly twice as high as in the general adult population. Professionals may also fare worse than others owing to their specific occupational context, such as work demands in their particular national healthcare system. For instance, a survey of general practitioners in 11 developed countries found that workers in the UK reported the highest levels of stress, with 29% saying they intended to quit general practice within five years.

These issues represent a significant problem: obviously for the wellbeing of the HCPs themselves, but also for patients, e.g., in terms of the ability of HCPs to treat them skilfully, and for the healthcare system, e.g., vis-à-vis the economic cost of staff burnout (Toppinen-Tanner, Ojajarvi, Väänänen, Kalimo, & Jäppinen, 2005). As such, efforts are underway to protect against or ameliorate work-related mental health issues in HCPs. Among the most prominent of these types of initiatives are programmes based around mindfulness meditation – mindfulness-based interventions (MBIs) – which is the focus of this review.

Mindfulness

The past few decades have seen a burgeoning interest in mindfulness in the West, spanning clinical practice, academia, and society more broadly. Originating in the context of Buddhism around the 5th century B.C.E, mindfulness came to prominence in the West through Kabat-Zinn (1982), who created a mindfulness-based stress reduction (MBSR) programme for chronic pain. ‘Mindfulness’ can refer to: (1) a state/quality of mind; and (2) a meditation practice that enables one to cultivate this. The most prominent operationalisation of mindfulness as a mental state/quality is Kabat-Zinn’s (2003, p.145) definition of it as ‘the awareness that arises through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.’ Expanding on this, Shapiro, Carlson, Astin, and Freedman (2006) deconstruct it into three components: intention, i.e., motivation for paying attention thus; attention, i.e., cognitive processes through which attention is enacted; and attitude, i.e., emotional qualities with which one imbues one’s attention).

‘Mindfulness’ is also deployed for meditation practices which facilitate this state.

Meditation broadly refers to mental activities which share a common focus on training the self-regulation of attention and awareness, thereby enhancing control of mental processes, and consequently increasing wellbeing (Walsh & Shapiro, 2006). According to Lutz, Slagter, Dunne, and Davidson (2008), most practices feature either ‘focused attention’ or ‘open-monitoring’ processes. Focused attention can be operationalised in terms of the coordination of various attention modalities (Posner & Petersen, 1990), including sustained, executive, and selective attention. By contrast, open-monitoring delineates a broader receptive capacity to detect events within an open ‘field’ of awareness (Raffone & Srinivasan, 2010). Mindfulness – as a practice, and a state of mind – is commonly presented as a case of open-monitoring (Kabat-Zinn, 2003). However, in practice, mindfulness meditation usually involves both focused attention and open-monitoring, e.g., beginning with a period of focused attention on the breath, in order to stabilise one’s awareness, followed by the more receptive state of open-monitoring (Chiesa, Calati, & Serretti, 2011).

According to Shapiro et al. (2006), the main significance of mindfulness – as a quality/state, and a practice – is that it involves a meta-mechanism known as *reperceiving*. The three components of mindfulness combine to generate a ‘fundamental shift in perspective,’ in which ‘rather than being immersed in the personal drama or narrative of our life story, we are able to stand back and witness it’ (p.377). This process, also known as ‘*decentring*,’ is defined as ‘the ability to observe one’s thoughts and feelings as temporary, objective events in the mind, as opposed to reflections of the self that are necessarily true’ (Fresco et al., 2007, p.234). This ability is theorised as having a positive impact upon wellbeing. In MBIs, the aim is not to change participants’ thoughts/feelings per se, as cognitive therapy might seek to, but to help people ‘become more aware of, and relate differently to’ this content (Shapiro, Astin, Bishop, & Cordova, 2005, p.165). For example, in Mindfulness-Based Cognitive Therapy (MBCT), designed to prevent depressive relapse, people are taught to *decentre* from their cognitions, thus helping prevent a ‘downward spiral’ of negative thoughts and worsening negative affect which could otherwise trigger relapse (Segal, Williams, & Teasdale, 2002). Thus MBCT, and MBIs generally, involve ‘retraining awareness’ so that people have greater choice in how they relate and respond to their subjective experience, rather than habitually responding in maladaptive ways (Chambers, Gullone, & Allen, 2009, p.659). For instance, the development of *decentring* can help people tolerate distressing qualia, which is important given that *inability* to tolerate such qualia is a transdiagnostic factor underlying diverse psychopathologies (Aldao, Nolen-Hoeksema, & Schweizer, 2010).

Mindfulness interventions were initially limited to clinical settings, such as Kabat-Zinn’s (1982) MBSR program and subsequent adaptations like MBCT (Segal et al., 2002). However, since the late 1990s, there has been increasing use of mindfulness in occupational contexts, not only for staff who may be suffering with stress and mental health issues, but for workers ‘in general,’ e.g., as a protective measure against future issues. To assess the state of this literature with regard to HCPs, we conducted a systematic review of relevant research.

Although a number of reviews have already been conducted in this area, these have tended to have fairly narrow remits in terms of population and/or outcome. These include reviews focused only on certain healthcare professions, such as General Practitioners (Murray, Murray, & Donnelly, 2016), social workers (Trowbridge & Lawson, 2016), and nurses (Botha, Gwin, & Purpora, 2015), all of which featured small numbers of studies. Or, such reviews have concentrated on HCPs more generally, but have only been concerned with specific outcomes, such as stress in the case of Burton, Burgess, Dean, Koutsopoulou, and Hugh-Jones (2017), who only included nine studies, or empathy and emotional competencies in the case of Lamothe, Rondeau, Malboeuf- Hurtubise, Duval, and Sultan (2016), which focused just on MBSR, and identified 14 such studies. By contrast, the current paper aims for greater inclusivity, reporting the results of a far broader systematic review, encompassing: (a) workers across all HCP contexts; (b) a wide range of wellbeing outcomes; and (c) the impact of mindfulness generally (not limited to any one intervention).

Overall, MBIs had a positive impact upon most outcome measures, although some outcomes were rather equivocal, such as burnout. Moreover, a fairly large evidence- base regarding the use of mindfulness in healthcare settings is gradually accumulating, with 81 papers included in the current review, comprising a total of 3,805 participants. Together, these studies suggest mindfulness can potentially reduce mental health issues, enhance wellbeing-related outcomes (e.g., job satisfaction), and improve aspects of job performance. These outcomes appear to be fairly evenly distributed across different healthcare professions. For instance, one might speculate that occupations which potentially have greater familiarity with psychological interventions like mindfulness, such as those in the mental health arena, might be more amenable to its effects. However, that appears to not be the case. Of the 81 papers analysed here, 32 (39%) specifically involved people working in mental health.

These percentages were roughly reflected in the patterns of findings with respect to the various outcomes. For instance, in terms of anxiety, mental health professionals were involved in three of the nine interventions that reported a significant improvement, and two of the seven that found no such improvement (including one that found a worsening impact). Thus, it appears that mindfulness might be helpful to HCPs generally, regardless of their particular occupational role.

However, there are a number of issues with the research which limits the conclusions that can be drawn. In terms of the QATQS quality assessment, few studies scored highly in all respects, as shown in supplementary table 1. For instance, of the 66 intervention studies, only 26 (39%) involved a control group, while just 20 (30%) conducted an RCT. Without a control group, it is harder to ascribe any positive changes observed to mindfulness per se.

Then, even when controls are included, unless participants are randomised into groups, it is possible that differences in baseline characteristics between the groups generated interaction effects, thereby compromising the results. For example, in Barbosa et al. (2016), the 16

participants who entered the experimental group – reduced to 13 on attrition – did so after an invitation email was sent to the entire student population of around 1300; by contrast, the control group consisted of individuals who were subsequently selected as matching the composition of the experimental group, and were paid to take part. Thus, it is conceivable – and indeed likely – that the experimental participants already had an interest in mindfulness, although whether they did so was not reported by the study. Furthermore, there were baseline differences in anxiety, with moderate levels among the experimental group – which also perhaps accounts for their interest in participating – compared to mild levels in the control group. Such factors complicate the assessment of the efficacy of MBIs, which is why RCT designs are generally preferable. A further issue is heterogeneity with respect to both the type of MBI and the outcome measures looked at, which makes it difficult to conduct comparative or meta-analytic assessments, and hence to draw robust conclusions about the research as a whole. Finally, the research is currently biased towards psychiatric outcome measures, with little attention exploring other outcomes relevant to the work arena, such as work engagement or creativity.

Based on these critiques, the following recommendations can be made vis-à-vis future work in this area. First, where possible, studies should implement an RCT design, ideally with large numbers of participants, determined by a *priori* power calculations drawing on estimated effect size). Second, in addition to a wait-list control protocol, it would be useful if trials included an ‘active’ control group, such as an exercise programme. This will better enable any positive effects to be ascribed to mindfulness per se, rather than merely an absorbing group activity.

Third, it would be good to see a diversification of outcome measures, with studies looking beyond ‘negative’ psychiatric issues, such as depression and anxiety, and also focusing on more ‘positive,’ i.e., non- clinical outcomes, such as work engagement, social capital, and creativity. Finally, where possible, trials should involve established MBIs, rather than bespoke adaptations, to better enable comparison across studies. However, there is also a need to move beyond MBIs developed for clinical contexts (e.g., MBSR), and to explore MBIs created specifically for the workplace. Nevertheless, despite the issues with the current research base, the evidence of the value of mindfulness for HCPs is strong, and one might speculate that this will only strengthen over the years ahead.

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