A literature review of Breathworks and mindfulness intervention

Suraj Mehan and Julia Morris

ABSTRACT

Objective: To review and discuss the literature concerning mindfulness interventions and the Breathworks Mindfulness for Health Programme. Methods: Electronic databases used consisted of MEDLINE, PubMed, PsychINFO and Google Scholar. Search terms used consisted of ‘Breathworks Mindfulness’, ‘Mindfulness for Health’ and ‘Mindfulness for Pain’. Breathworks endorsed literature was also considered. Results: Studies found varied in mindfulness interventions used from Breathworks, Mindfulness Based Stress Reduction and Mindfulness Based Cognitive Therapy. While other studies focused on specific mindfulness techniques such as the body scan and breathing anchor. Designs varied from pre to post intervention comparisons, randomised control trials, thematic grounded theory and systematic and meta-analytic reviews. Studies predominately focused on populations with long-term conditions and chronic pain. Overall, findings indicated Breathworks and other variations of mindfulness interventions to be beneficial towards health, well-being and pain management. However, true reflection of efficacy is confounded by methodological issues presented in the research. Conclusion: There is clear potential benefit for mindfulness helping those with long-term conditions and chronic pain.

Key Words: Breathworks □ chronic pain □ health □ mindfulness

Mindfulness is the state of being present in the moment and accepting that moment for what it is instead of trying to change it (Breathworks, in press a). Often people find themselves going from one day to the next on autopilot without realising what actions they are taking (Breathworks, in press a). Individuals may find themselves in situations of pain, illness, and the ups and downs of life (Breathworks, in press a). However, mindfulness is here to help those people by providing an opportunity to develop a sense of clear insight and understanding to these situations. This is done via learned practice in recognising and distancing oneself from the sometimes unconscious, routine, psychological, emotional and physiological responses to situations in life (Breathworks, in press a).

Breathworks is an organisation that aims to raise an awareness of the uses of Mindfulness. It seeks to reduce the suffering of people worldwide regardless of their situation (Breathworks, in press b).

The origins of the Breathworks programme lie in Mindfulness Based Stress Reduction (MBSR), which was designed by John Kabat-Zinn in the 1970s (UMASS Medical School Center for Mindfulness, 2017; Breathworks, in press). This later developed to encompass Mindfulness Based Cognitive Therapy (MBCT) for severe relapsing depression (Segal et al, 2002). MBCT has an evidence base with 6 randomised controlled trials (RCTs) validating its efficacy with severe relapsing depression, and is now recommended as a treatment for severe depression in the National Institute for Health and Care Excellence (NICE) guidelines (2009).
The Breathworks programme utilises many of the core concepts of MBSR and MBCT, but uses much shorter meditations to allow for those individuals who cannot sit for 40 minutes (Burch and Penman, 2013). They have included the concept of primary and secondary suffering, and a pacing programme. This shows people how to identify their limitations and set realistic goals for activities that will reduce pain while allowing for a gradual increase in activity to improve physical functioning and avoid boom and bust cycles (Burch and Penman, 2013).

All mindfulness based intervention (MBI) programmes encourage greater self-acceptance, kindness and compassion to self, and build on this concept by encouraging people to find pleasure in life despite pain or depression (Burch and Penman, 2013). However, Breathworks take this notion one step further by including exercises to encourage kindness and compassion to others, and to increase their social connections in order to counteract the social isolation common in people with chronic and long term illness (Burch and Penman, 2013).

Lastly, there are published reviews concerning mindfulness intervention, but there have been no reviews published, to the author’s knowledge, that include a review of the Breathworks Mindfulness for Health Programme. Therefore, the rationale for this review is to address this gap in the literature.

**Methods**

**Literature search**

An electronic search was conducted using the databases: MEDLINE, PubMed, PsychINFO and Google Scholar from 2010–2017. Key phrases and terms used in the search were: ‘Breathworks Mindfulness’, ‘Mindfulness for Health’ and ‘Mindfulness for Pain’. Breathworks endorsed research from 2010–2017 on their website was also included. However, internal research conducted by Breathworks was included regardless of the timeframe. This decision reflects the rationale of this article, which is to provide an initial picture of review for Breathworks research, as other mindfulness reviews have not yet included this aspect.

**Inclusion criteria**

The authors agreed to keep the inclusion criteria lenient as this article is thought to be the first to review Breathwork literature, and this would allow insight into the initial state of the Breathworks literature base. Therefore, studies which included or contained a form of mindfulness intervention based off the Breathworks programme, MBSR and MBCT were included. Furthermore, studies which only included certain interventions from the Breathworks programme were also included. Studies written in English, included participants over the age of 18, used an outcome measure related to well-being were also included.

**Results and recommendations:**

From an initial 38 studies retrieved, 14 were suitable in accordance to the inclusion criteria (for a summary of the studies see Table 1).

Henriksson and Möller (2013) conducted a randomised control trial of an online mindfulness programme for chronic pain. A sample of 107 participants, 100 female and 7 male, underwent the Breathworks programme called ‘Mindfulness living with pain’, which encompassed exercises in breathing, body orientation, acceptance, self-compassion, pleasure, being whole, compassion and living with choice. In this study, the control was a discussion group with topics not related to mindfulness, such as personal experiences of healthcare systems. The results suggested that those who completed the online mindfulness programme scored lower in a self-report of affective distress and chronic pain intensity, distress and interference to their lives; however, they scored higher in acceptance of pain and life satisfaction compared to control. Consideration is warranted for this sample, as the majority of participants were female, but reflections from male participants are also needed. Another factor that should be approached with caution is how 46% of those involved with the study had previous experience of mindfulness intervention (providing a mixed sample). Thus, having participants with differing levels of mindfulness experience may have affected the results.
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Further support of online versions of the Breathworks pain programme is shown by Henrikkson et al (2016). The results suggested that chronic pain suffering participants with online mindfulness training rated higher in pain acceptance, lower in distress and were more satisfied with life than the control group. Though the pre- to post-test measures were taken 8 weeks apart, these findings can only argue mindfulness to be effective in the short term. Vesa et al (2016), although not using a full Breathworks programme, saw participants report lower scores of stress, anxiety and depression over a 2-week span compared to the control group.

A PhD by Long et al (2016) provided a qualitative insight into mindfulness. They interviewed individuals with long-term conditions, who completed the Breathworks Mindfulness for Pain programme. Participants were from all over England and had attended the Breathworks programme for 6 months before participating in the research. Positive attitudes arose from interview transcripts and revealed that the Breathworks Mindfulness for Pain programme helped them to accept and cope with their conditions, reduce symptoms, and improve their quality of life. However, a theme of dissatisfaction with the programme emerged: learning mindfulness was difficult, requiring hard work and practice.

A further qualitative study showed that the Breathworks Mindfulness for Pain programme involved themes of being able to understand, to a greater depth, the notion of the participant's pain, changes in their relationship to pain, reduced self-labelling as sick or disabled, promote acceptance and compassion towards pain and improve functioning and quality of life (Doran, 2014).

There has been some research that has focused on specific aspects of the Breathworks Mindfulness for Health and Pain courses, one being self-compassion. This was found to be an important variable in a hierarchical linear regression when predicting positive (7% variance) and negative affect (20% variance), pain catastrophising (9% variance) and pain disability (5% variance) in chronic musculoskeletal pain (Wren et al, 2012). Thus, those with high self-compassion were found to possess low levels of negative affect, pain catastrophising and disability, but a higher level of positive affect compared to their low self-compassionate counterparts (Wren et al, 2012). The design of this study lends itself to limitations, one of those being the predominately middle-aged female sample limiting generalisability to other populations (71.6%; 53.93yrs) (Wren et al, 2012). While another is the cross-sectional design in which a common limitation to this design is the lack of cause that can be inferred. Therefore, it is uncertain whether self-compassion causes these benefits for those with chronic musculoskeletal pain.

Finally, a randomised control trial (RCT) by Ussher et al (2014) selected to use the body scan element on 55 chronic pain suffering participants. The body scan intervention was a 10-minute audio recording encouraging focus on the body and breathing and being non-judgemental and accepting of thoughts and emotions in the moment. A participant’s experience of pain was measured before and after practicing the body scan within a clinic and in their own surroundings at home. Compared to controls the body scan group presented lower reports of pain related distress and
pain interference towards social interactions. However, there was no difference compared with the control on measures of pain severity, daily activity engagement, pain acceptance, and focus on the present and decentering oneself from the moment. Thus, mixed results on the efficacy of this one component of the Breathworks model suggesting the variety of methods used in the model are needed to provide better outcomes for peoples' management of pain.

Alternatively, there has been systematic and meta-analytic reviews of MBIs such as those following or adapting from MBSR, MBCT and Acceptance and Commitment Therapy (ACT) which can be sourced from three articles (Reiner et al, 2013; Bawa et al 2015; Skaer, 2015). Bawa et al (2015) analysed 11 randomised control studies. The majority of studies are dominated by samples of white females with a variety of chronic pain such as: fibromyalgia, rheumatoid arthritis, musculoskeletal pain and back pain. Control groups used to compare mindfulness interventions consisted of waiting list, standard care, education, cognitive behavioural therapy and massage. They found that from the 11 studies MBIs were the only beneficial interventions to help with pain control.

However, there was no evidence to suggest MBIs to be beneficial to help with pain intensity or depressive feelings. Conversely, when solely analysing studies comparing MBIs to inactive control groups, such as waiting lists or standard care, there was some indication of benefit for ratings of physical functioning and quality of life. However, the authors argue the mixed results could be explained from the methodological issues of the studies which included the small self-selected sample sizes, high drop-out rates, and low participant retention of mindfulness and lack of consistency in the MBIs employed.

Skaer (2015) reviewed previous literature and meta-analyses of MBIs for chronic pain. Skaer argues that the results are mixed with only a few studies exhibiting MBIs to help with pain intensity, physical functioning, psychological functioning and quality of life. Again, Skaer argues that the mixed findings could be from the methodological limitations of research in the field. Giving examples of small and caucasian female dominated samples, high drop-out rates, lack of consistency in mindfulness interventions used and lack of long-term follow-ups. Thus, there is no certainty on MBIs efficacy and Skaer calls for more rigorous investment using higher methodological quality research to rectify this.

Other systematic review authors have found MBIs to be positive in reducing pain intensity in chronic pain populations (Reiner et al, 2013). Yet, they found the same issues with the research methodology similar to Skaer (2015) and are calling for more attention to the quality of research before certainty can be established on MBIs efficacy for chronic pain (Reiner et al, 2013). One of 2 studies carried out by Cusens et al (2010) reports on a 'pilot investigation of the impact on well-being of the Breathworks Mindfulness-based Pain Management programme.' Significant positive change was found on self-report measures of depression, outlook, catastrophising and pain self-efficacy in the intervention group, but not the comparison group. Particularly, large effects were found for pain acceptance in the absence of reduced pain intensity. The findings provide further support for the role of acceptance rather than cure in mindfulness pain management. At the end of the study they say that the implementation of an RCT represents a fundamental next step for the Breathworks programme.

Finally, internal Breathworks research (2017a; b) exhibits findings from recent course evaluations. One evaluation was on the Breathworks Mindfulness for Health programme (2017a) which focused on a sample of 32 chronic pain sufferers. They found no statistically significant differences from before and after the course on measures of pain severity, interference to life and acceptance. Even though mean scores revealed there to be improvement in these domains. However, pain catastrophising was found to show statistically significant improvement. In a sample of 79 chronic pain and non-pain sufferers such as fatigue and anxiety, there were statistical improvements in post course reports of fatigue severity, interference, staying asleep, waking early, quality of life, emotional distress and self-compassion. Furthermore, a 3–12 month
follow-up unveiled long-term improvement from the post course completion reports in quality of life, self-compassion, emotional distress and pain catastrophising. However, there was a high rate of withdrawal in these follow-ups and so these long-term results are reflected from an 8–25 sample size. Additionally, Breathworks biases their longitudinal results by only choosing to follow-up results which they deem in their internal publication as ‘highly significant’ and so ignores the other measures from post course completion. Hence, caution is warranted when interpreting this internal study.

The other course evaluation was on the Breathworks Mindfulness for Stress programme (2017b). Nearly a third (28%) of a 39 participant sample showed a reduction in perceived stress and reports of life satisfaction were higher. In a replication and expansion of this Breathworks’ study using an even smaller sample of 23 they found reports of perceived stress reduced. While reports of life satisfaction did improve, it did not reach statistical significance most likely due to the small sample size. In the replication, Breathworks included measures of anxiety, depression, quality of life, self-compassion and fatigue. They discovered post course participants reporting lower anxiety, depression, fatigue severity and interference to their daily life and higher ratings of quality of life and self-compassion. Again there needs to be caution when inferring from this study as no statistical significance levels are reported in the publication and no details are given on the participant sample. This makes it difficult for researchers outside the Breathworks organisation to replicate the study and validate the findings.

Lastly, there was high withdrawal with only 39 out of an original 67 individuals completing pre and post measures.

Finally, Breathworks in 2009 showcased a table of quantitative results presenting pre and post comparisons of their mindfulness intervention for the Breathworks ‘Living Well Programmes: Mindfulness Approaches to Health and Well-being’. The table of results indicate a decrease in issues such as depression, anxiety, self-judgment, rumination, helplessness and isolation and increases in activity engagement, self-compassion, self-kindness, positivity, humanity, pain coping, social and role functioning and general physical and mental health. Yet, these results are based on a lack of consistent numbers in response rates. For example, 48 participants responded back on measures of depression, anxiety, positive outlook, while 239 responded to measures of pain coping.

**Discussion**

An issue encountered when reviewing the Breathworks Mindfulness Programme is that the programme itself has undergone several title changes on their website. Examples include ‘Living Well with Pain and Illness Programme’, Breathworks ‘Living Well Programmes: Mindfulness Approaches to Health and Well-being’, ‘Mindfulness Based Pain Management Programme’, ‘Mindfulness for Health programme’ and ‘Mindfulness for Stress Programme’. The manuals for these 8 week courses are not in the public domain unlike the MBCT 8 week course. Therefore, it is difficult to know what the key differences between the programmes are.

Another issue is that it is important that a RCT is carried out if the Breathworks programme is to get into the NICE guidelines. If this were to happen it would potentially be available for the NHS, the general population, and not only available to those who can afford to pay for it.

Nonetheless, research on the Mindfulness for Health and Stress Programme has been shown to be very helpful for people with severe chronic pain and illness especially in the short term. Plus it is helpful for the general population to cope with pain as a result of accidents and illness through their book Mindfulness for Health by Burch and Penman (2013).

**Conclusion**

To conclude, it is clear mindfulness courses have potential to benefit people with chronic pain but this potential lacks certainty due to some of the methodological issues of the research in the field. More attention into providing research with sound methodology and using more RCTs...
in the area would provide the needed clarity on mindfulness programmes benefit to pain. Furthermore, more research is needed on the web based Breathworks Mindfulness for Health course. As there is already some good quality RCTs showing that web based mindfulness courses are effective for pain management. This would make it more accessible to audiences who otherwise would not be able to access them.

References


