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# Is there a role for mindfulness-based interventions (here defined as MBCT and MBSR) in facilitating optimal psychological adjustment in the menopause?

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## Abstract

The menopause presents many challenges for middle-aged women worldwide, often highly productive women who are in the prime of their lives juggling busy careers and family responsibilities, when good quality of life and functional ability is an imperative. Some women cope well with their menopausal symptoms and seem to embrace this time of change, while others struggle psychologically to adjust to the changes. Mindfulness-based interventions have a robust evidence base in relation to their efficacy in both physical and psychological conditions. Both programs have been adapted for conditions where difficulties in psychological adjustment to change and/or loss are amongst the core mechanisms that maintain distress. I explored the potential aetiology of distress in the menopause and evaluated existing empirical literature to ascertain whether there is a role for mindfulness-based interventions to facilitate optimal psychological adjustment to changes in the menopause, paying particular attention to the mechanisms that lend themselves to mindfulness training being efficacious. Current available evidence is promising and supports the hypothesis that mindfulness-based interventions may have a role in facilitating psychological adjustment during the menopause transition. The dearth of literature specific to mindfulness-based interventions and the menopause was noted.

## Keywords

Distress in menopause, mindfulness-based cognitive therapy, mindfulness-based stress reduction, menopause, mindfulness, psychological adjustment, quality of life

## Introduction

Often referred to as the 'change of life,' the menopause is a normal physiological process that affects all women when they reach middle-age, and represents an important transition in their lives.[1] Perhaps the menopause can even be considered as one of the three markers of existence: impermanence.

According to the World Health Organisation (WHO), the age most women reach the natural menopause worldwide is between 45–55 years, with the average age in the UK reported as 51 years.[2] With increasing life expectancy, this indicates that women will spend a significant proportion of their lives being post-menopausal.[3] Furthermore, it is estimated that 1.2 billion women would have reached the menopause by 2030.[4]

Menopausal symptoms are pervasive and complex, with around 80% of women experiencing some symptoms, which typically last approximately 2–5 years after the final menstrual period.[5] Many women experience physical symptoms as a direct consequence of hormonal changes on many organ systems in the body.[6]

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The most troublesome of which include vasomotor symptoms (VMS), sleep disturbance and sexual difficulty.[7] Furthermore, some women report psychological symptoms that include depression, anxiety, irritability and mood swings.[8] Some women cope well with their menopausal symptoms and seem to embrace this time of change, while others struggle psychologically to adjust to the changes in their body and body function.[9]

Culture has been shown to greatly influence women's perception of menopausal symptoms and is in turn underpinned by the value placed on fertility, sexuality and role within society.[10] In traditional cultures, there is often a positive attitude towards menopause as women acquired certain privileges such as the 'wise woman status' and freedom from periods and pregnancy. In contrast, in the West, the menopause is more often associated with ageing, loss of youth, beauty and desirability to others.[11]

Even though the menopause is not a disease, it presents many challenges for middle-aged women worldwide, often highly productive women who are in the prime of their lives juggling busy careers and family responsibilities, when good quality of life and functional ability is an imperative.[12]

Mindfulness-based interventions (MBIs), defined here as mindfulness-based cognitive therapy (MBCT) and mindfulness-based stress reduction (MBSR), have a robust evidence base in relation to their efficacy in both physical and psychological conditions.[13,14]

MBSR was created for people with chronic health problems whilst MBCT was originally created for people with recurrent depression to reduce the risk of relapse.[15,16]

One of the key outcomes reported by participants is a change in the way they relate to their health conditions, with an increased sense of acceptance and self-compassion, as opposed to resistance, denial and rejection.[17,18]

In relation to the menopause, could the way in which women relate to menopausal symptoms contribute to their perception or experience of symptoms? Furthermore, what benefits might MBIs have for women encountering challenging physical and psychological changes brought about by the menopause transition?

## Distress in the menopause

Nosek et al.[19] described three aspects of psychological distress associated with the menopause: the primary experience of mood disturbance associated with hormonal fluctuations; distress in response to physical manifestations of the menopause such as vasomotor symptoms; and thirdly, distress from cognitive and emotional reactivity to the menopause and ageing in general. These are further complicated by attitude, perception and expectations, which are in turn determined by sociocultural and environmental influences.[20]

Beck's[21] cognitive model describes how our early experiences in life, external environmental and societal factors shape our core beliefs, as well as functional and dysfunctional assumptions, which generally determine how we give meaning to events and experiences that affect us and our view of the world. The model further explains how peoples' thoughts and perceptions of situations influence their emotional and behavioural (including physiological) reactions. When people are distressed their perceptions can often be distorted and dysfunctional.[21]

This model can be translated to women's experience and perception of the menopause. Indeed, Hunter and Mann[22] based their cognitive model of menopausal vasomotor symptoms on this theory. They proposed that women's underlying beliefs influence their appraisals of vasomotor symptoms, which in turn shapes their cognitive, emotional and behavioural reactions to them.

Multiple symptoms are attributed to the menopause, but it is often difficult to disentangle the effects of the menopause and the natural ageing process.[2] Although most of these symptoms are self-limiting, they can be considered distressing and debilitating by many women and can significantly impact quality of life.[23] Hot flushes are often reported as one of the most distressing symptoms in the menopause, causing significant reduction in health-related quality of life for women.[23] Not only is the physical discomfort caused by vasomotor symptoms unpleasant for women, there is evidence to suggest that they are associated with impaired sleep, anxiety, depressive symptoms and impaired cognitive function, which may further compound distress. These factors may in turn lead to social impairment, work-related problems and a negative impact in overall quality of life.[23]

Psychological symptoms such as depression, mood swings, anxiety, irritability, fatigue and poor concentration are often the root cause of distress, functional and inter-relational impairment.[11] Moreover, the timing of the menopause for many may coincide with a litany of midlife stresses such as relationship issues, caring for young children or elderly parents, struggles with adolescents and careers, thus adding to this already complex 'bio-psychosocial' milieu.[24]

Hormone replacement therapy (HRT) remains for many a well-established treatment of choice for menopausal symptoms.[6,25] However, since the landmark study of the WHI raised concerns about side-effects of HRT,[26] women are increasingly opting for

non-pharmaceutical therapies such as CBT, relaxation and mindfulness.[27] The results of two systematic reviews on psychosocial interventions for the menopause concluded that CBT reduced the frequency and severity of VMS, particularly when there was a psychological component such as insomnia, fatigue, anxiety and depression.[28,29] Driel et al.[30] also concluded that CBT could be used safely and effectively to reduce VMS as well as psychological distress associated with the menopause.

These interventions are purported to offer long-term effects on health, as they engender behaviour change and have synergistic influence on multiple factors.[28] Furthermore, the reduced prescribing that accompanies such approaches has been shown to reduce healthcare costs in the long term.[31] In the latest guidance, NICE recommends 'consideration of CBT to alleviate low mood and anxiety that arises as a result of the menopause.'[6]

## Is there a role for MBIs?

### *What are MBIs?*

There has been a sharp increase in publications on MBIs such as MBCT, MBSR and many others in the last 20 years, which have revealed compelling evidence in their efficacy, with additional benefits in general physical and psychological wellbeing.[15,16,32] Both programs have been adapted for conditions where difficulties in psychological adjustment to change and/or loss are amongst the core mechanisms that maintain distress.

Well documented studies have explored the benefits of MBIs in cancer, heart disease and chronic pain.[33,34] One RCT in women with breast cancer reported significant reduction in pain intensity measures and use of non-prescription pain medication as well as improvements in quality of life, which lasted beyond three months following MBCT.[35]

Consequently, these interventions have seen substantial growth in interest within both the clinical and non-clinical settings. Mindful Nation UK,[36] a report by the Mindfulness All-Party Parliamentary Group in the UK (MAPPG) provided evidence based policy recommendations for government on the use of mindfulness in health, education, the work place and the criminal justice system.

Kabat-Zinn[15] defines mindfulness as:

> . . .the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience, moment by moment.

And further states:

> . . .mindfulness based programs have become an opportunity for people to engage fully in their own movement towards greater levels of health and wellbeing as a complement to whatever medical treatment they are receiving.

With its roots in Buddhist philosophy, MBSR was developed by Kabat-Zinn in 1979 as a group program to help people suffering chronic pain from chronic health conditions and stress-related problems.

MBCT was developed by Segal et al.[16] with the aim of reducing the risk of recurrence in those with depression. It incorporates cognitive science, psychoeducational aspects of CBT with principles of MBSR. Individuals learn to recognise negative thoughts and feeling as early warning signs of depression and to disengage from automated repetitive unskillful thinking (rumination) and habits by having a different relationship to their thoughts, feelings and body sensations.[16]

Both programs have been extensively researched and shown to be effective in conditions ranging from affective disorders such as anxiety and depression,[32,37,38] chronic physical conditions such as chronic pain and cancer,[39–41] to stress and burnout in healthcare workers.[42,43] Consequently, MBCT has been incorporated into NICE guidance for the management of recurring depression.[44]

### *What are the mechanisms of action?*

How MBIs actually work remains a question that has received little empirical attention.

Teasdale et al.[45] postulated that the *intentional control of attention* that is cultivated during mindfulness training disrupts the strong links between depressive affect and the automatic negative thinking that makes patients vulnerable to recurrence of depression. Consequently, participants become increasingly *aware* of their relapse signature, they learn to shift their *attention* from unhelpful habitual mode of mind to more experiential present moment focus. In addition, they learn to *de-center*, which enables participants to distance themselves from their thoughts by seeing them simply as mental events, thus gaining a different perspective to their experience.[45,46]

While the menopause is not conceptualised here as an illness, parallels can be drawn in challenges associated with psychological adjustment to changes in the menopause. It could therefore be argued that through similar mechanisms of action, namely increased mindfulness, compassion, emotional regulation, metacognitive awareness and reduced rumination the benefits conferred by MBIs can also be accessible in the

menopause transition. Integral to these mechanisms is a non-judgmental and compassionate attitude towards change, thoughts, feelings and bodily sensations.[47]

Furthermore, through mindfulness, alleviation of suffering and distress in the menopause can be achieved by relating to the self as 'process' rather than a fixed identity, and through cultivation of acceptance of impermanence, acceptance of what is, self-compassion, as well as an attitude of being with experiences as they arise and cease. By embracing a willingness for things to be as they are and allowing, we can let go of the fear that accompanies craving and aversion.[48] Through mindful contemplation, the sense of identity is replaced by an appreciation of continuity that comes about from change.

## What is the evidence?

There is a noteworthy dearth of evidence on studies evaluating the effects of MBIs on menopause symptoms as a primary outcome. Only two published MBSR studies were identified and none for MBCT. Possibly because MBIs are relatively novel, while the evidence base is growing rapidly, studies in specific populations remain few.

Carmody et al.[49] investigated the effect of MBSR on degree of bother, intensity and psychological distress from VMS in a RCT of women experiencing moderate to severe VMS who were randomised to either MBSR or a wait-listed controls. In their overall findings, there was significantly greater reduction is hot flush bother in the MBSR group (14.77%, $p < 0.0001$) compared to the WLC (6.79%, $p = 0.062$) at the end of the intervention (week 9), which was maintained at 20 weeks. However, there was no statistical significance noted in the difference between the two arms at 9 weeks ($p = 0.116$) and 20 weeks ($p = 0.07$). There was significant reduction in hot flush intensity in both groups at 20 weeks (MBSR 44.56%, $p < 0.0001$ and WLC 26.97%, $p < 0.0001$) although the difference between the groups was also not statistically significant. In terms of changes in psychological outcomes between the groups there were significant improvements reported in quality of life ($p = 0.022$), anxiety ($p = 0.005$), sleep quality ($p = 0.009$) and perceived stress ($p = 0.001$) in the MBSR group at nine weeks.

In a more recent RCT, Wong et al.[50] explored the effectiveness of MBSR in reducing menopause-related symptoms by randomly allocating 197 women to MBSR or a Menopause Education Control (MEC) as an active control group. The intervention group had the standard eight-week MBSR course and the control group received health information on the menopause, education and exercises in small groups, ensuring non-specific factors such as group interaction, instructor attention and home practice commitments were matched. The Greene Climacteric Scale (GCS), which measures anxiety, depression, somatic symptoms, VMS, sexual and urogenital symptoms, was used as the primary outcome measure. Secondary outcome measures included perceived stress, health-related QOL and change in mindfulness.

The findings revealed a significant reduction in total GCS in the MBSR group with a significant mean difference between the groups ($p = 0.005$) at eight months. Furthermore, MBSR showed significant reduction in anxiety ($p = 0.007$) and depression ($p = 0.031$) subscales but not on VMS, somatic, sexual and urogenital subscales. There was no significant difference noted between the groups in the secondary outcome measures.

In summary, these studies showed some positive and indeed promising results on the effect of MBSR on physical and psychological symptoms of the menopausal. The reduction in hot flush bother would suggest women may be coping better with their hot flushes.[49] There was 45% reduction in hot flush intensity at 20 weeks,[49] which compares favourably with the 49% to 55% reduction in hot flush intensity achieved with citalopram (an SSRI), which has been recommended as an effective treatment for VMS.[51] The North American Menopause Society (NAMS) recommends MBSR for the management of VMS with caution, highlighting the need for further research (NAMS).[52]

Furthermore, in a large cross-sectional study of 1744 mid-life women, Sood et al.[53] explored the association of mindfulness and stress on menopausal symptoms using Menopause Rating Scale (MRS), Perceived Stress Scale-4 (PSS-4) and the Mindfulness Attention Awareness Scale (MAAS) questionnaires. They concluded that higher mindfulness and lower stress scores independently correlated with lower menopausal symptom scores. Whilst the limitations of cross-sectional studies and the use of self-questionnaires are well known, their conclusions highlight the potential role of MBIs in the menopause which warrants further exploration.

However, in the two MBSR studies, there was over-reliance on self-reporting, which is very subjective, and likely to be influenced by other psychosocial factors not accounted for. In the Carmody et al.[49] study, there was no active control and the population was largely white educated women, which limits generalisability to other communities. Both studies also lacked long-term follow up data which is required to determine long term effects. Future studies will have to tease out the exact elements that mediate the changes and also offer comparisons with existing treatments to provide valuable insights.

### Further considerations

There are specific considerations to be borne in mind if MBIs were to be considered therapeutically for women during the menopause.

*Would menopausal women be interested in engaging with these interventions?* In the light of concerns raised about the safety of HRT as well as worries about side-effects of non-hormonal treatments women are already seeking out mind–body interventions.[30] In their qualitative study, exploring how women experienced CBT-based intervention for hot flushes and night sweats, Balabanovic et al.[54] reported that all 20 women in the study evaluated their overall experience of the intervention as positive. MBCT incorporates aspects of cognitive therapy so it could therefore be argued that women would be willing to engage.

*Are there any potential barriers?* The issues of accessibility, diversity and adherence are likely to be prevalent, as has been the case within other MBI studies. This highlights the possibility that MBI may not be accessible to women of low socioeconomic status. In addition, this age group is often time pressured, as such, future programs would need to accommodate these challenges.

*Would it be necessary to adapt the existing MBIs in order to meet the needs of this population?* The current literature indicates that MBIs are efficacious for a wide-ranging spectrum of physical and psychological conditions regardless of the aetiology, it therefore could be argued that existing programs would suffice. However, to ensure greater potency, as well as acceptability, accessibility, effectiveness and safety, these programs could be adapted, with emphasis on a heuristic approach.

## Conclusion

In conclusion, it could be argued that there is a valid case for exploring MBIs for the symptoms and experiences of the menopause. Through MBIs women can develop a different relationship with their symptoms, thus reducing psychological distress from menopausal symptoms. Through mindfulness training, women can learn to *see* the relationship between their thoughts, emotions and body sensations (hot flushes), and develop self-compassion and a metacognitive stance, which would enable them to respond more skilfully to their symptoms. Moreover, women would learn to be more accepting of the impermanent nature of their physical symptoms, and therefore manage and experience them in a more positive way, thus further reducing distress. The NAMS recommends MBSR for the management of vasomotor symptoms with caution and highlights the need for further research.[52]

A holistic understanding of the complex relationship between the 'biopsychosociocultural,' cognitive and environmental factors provides health care professionals with information to develop and provide individualised care and also has potential to address the socioeconomic impact.[55] This emphasis on a comprehensive, multifaceted and individualised care was recommended by Hunter and Liao[56] and is supported by organisations such as NICE (2015).[6]

There is a growing body of evidence in support of the efficacy and cost-effectiveness of MBIs in a wide variety of physical and psychological conditions. The current available evidence is promising and supports the hypothesis that MBIs may have a role in facilitating psychological adjustment during the menopause transition.

Of course, MBIs are not a panacea, but they can complement existing treatments to support women in cultivating greater self-compassion and equanimity in the menopause. More robust empirical evidence is required to support these assertions.

Future studies will need to focus not only on efficacy of MBIs for supporting psychological adjustment to the menopause but also on other important issues such as diversity, access, adverse effects and long term effects.

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