### **RADAR**

### Research Archive and Digital Asset Repository



Warriner, S, Hunter, LJ and Dymond, M

Mindfulness in maternity: evaluation of a course for midwives.

Warriner, S, Hunter, LJ and Dymond, M (2016) Mindfulness in maternity: evaluation of a course for midwives. *British Journal of Midwifery*, 24 (3).

doi: 10.12968/bjom.2016.24.3.188

This version is available: https://radar.brookes.ac.uk/radar/items/e24a464d-0450-47cf-aa28-a3466d738073/1/

Available on RADAR: March 2016

Copyright © and Moral Rights are retained by the author(s) and/ or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This item cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder(s). The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

This document is the postprint version of the journal article. Some differences between the published version and this version may remain and you are advised to consult the published version if you wish to cite from it.

## Title Page

### Mindfulness in Maternity

### **Corresponding Author**

1. Dr Sian Warriner

Consultant Midwife & HETV Post-Doc Clinical Fellow Oxford University Hospitals NHS Foundation Trust John Radcliffe Hospital Level 7; Women's Centre Oxford

OX3 9DU

Sian.Warriner@ouh.nhs.uk

Tel: 01865 851188/851096

#### 2. Dr Louise Hunter

Senior Lecturer
Faculty of Health and Life Sciences
Oxford Brookes University
Marston Road
Oxford
OX3 0FL

<u>lhunter@brookes.ac.uk</u>

Tel: 01865 482689

#### 3. Dr Maret Dymond

MBCT Teacher & Trainer

Mindfulness-Based Childbirth and Parenting (MBCP)

Oxford Mindfulness Centre

University of Oxford, Department of Psychiatry

Warnford Hospital

Oxford

OX3 7JX

maret.dymond@psych.ox.ac.uk

Tel: 01865 613158

# Mindfulness in Maternity

### **Key Points**

- 1. Stress within the midwifery profession has a negative impact on the health and wellbeing of individual midwives, as well as negatively impacting patient care.
- 2. The neurological benefits of mindfulness meditation have been linked to an increase in emotional intelligence, specifically empathy and self-regulation.
- 3. Participants reported a sustained positive impact on stress (83%), anxiety (68%), resilience (70%), self-compassion (74%) and mindfulness (91%) 4-6 months after completing a Mindfulness course.
- 4. Investing in Mindfulness training for maternity staff has been beneficial on an individual and organisational level.

### **Abstract**

Stress and burnout are endemic within the NHS and midwifery profession and have a negative impact on the health and well-being of individual midwives and on retention and recruitment for the profession as a whole. Furthermore, stress can have a negative impact on the care of childbearing women as midwives seek to manage their stress levels by employing strategies such as task orientation. As part of a larger project to engage staff in personal and workplace wellbeing, The Oxford University Hospitals NHS Foundation Trust (OUHFT) maternity services provided staff with the opportunity to learn the practice of mindfulness meditation. An eight week course was made available with the intention of

supporting staff to manage stress and anxiety, increase resilience and self-compassion and improve the culture of the organisation as a whole. Evaluations carried out immediately post course and after 4-6 weeks indicated a positive impact in both personal and organisational domains.

### Introduction

There is increasing literature to suggest that Mindfulness-based interventions may address a variety of psychological problems (e.g. Grossman et al., 2004; Dimidjian and Goodman, 2009; Duncan and Bardacke, 2010; Dunn et al., 2012; Liu et al., 2103; Surawy et al., 2014). Mindfulness-Based Stress Reduction (MBSR) is a particularly helpful intervention for stress (Shapiro et al., 2005; Chiesa & Serretti, 2009;). As well its impact on specific problems, mindfulness has been shown to have effects on underlying emotional and social skills; these include the ability to feel in control, to manage difficult feelings, and to be calm, resilient, compassionate and empathic (Baer, 2003; Salmon et al., 2004; Jha et al., 2007; Chambers et al., 2008; Zeidan et al., 2010). The neurological benefits of mindfulness practice have been linked to an increase in emotional intelligence, specifically empathy and self-regulation (Kabat-Zinn, 2003; Taren et al., 2013; Tang et al., 2014). The development of these areas contributes to an ability to listen, be more responsive, and communicate more effectively. Mindfulness training therefore has the potential both to help midwives cope with workplace stress and to enable them to provide more compassionate care. This paper defines and discusses the concept of mindfulness before outlining its relevance to midwifery practice. Mindfulness courses offered to midwives at the OUHFT are then described, and the results of the course evaluations are presented.

### **Mindfulness**

Mindfulness meditation originates from Eastern traditions and its recent popularity in Western psychology is largely due to the development and wide-spread application of standardised mindfulness-based interventions (MBIs). MBIs integrate the essence of traditional mindfulness practice with contemporary psychological practice, in order to improve physical and psychological functioning and wellbeing (Gu et al., 2015). Mindfulness-based approaches in healthcare are often accredited to beginning in the United States of America (USA) with Jon Kabat-Zinn's pioneering Mindfulness-Based Stress Reduction (MBSR) programme. A development of this programme, Mindfulness-Based Cognitive Therapy (MBCT), is now a recognized way of reducing the risk of recurrence in depression (National Institute for Health and Clinical Excellence (NICE), 2009).

Mindfulness is cultivated through a range of formal and informal meditation practices, which include mindfulness of breath, thoughts, bodily sensations, sounds, and everyday activities. Cultivating mindfulness enables practitioners to examine the way they think and feel about their experiences, especially stressful experiences, and increases engagement with

which include mindfulness of breath, thoughts, bodily sensations, sounds, and everyday activities. Cultivating mindfulness enables practitioners to examine the way they think and feel about their experiences, especially stressful experiences, and increases engagement with the present moment, allowing for a clearer understanding of how thoughts and emotions can impact on health and quality of life (Warriner et al., 2012). As a capacity of attention and awareness oriented to the present moment, Mindfulness is now widely considered to be an inherent quality of human consciousness. The capacity for Mindfulness varies in degree within and between individuals, and can be assessed empirically and independent of religious, spiritual, or cultural beliefs (Black 2011). Mindful awareness was characterized by

Kabat Zinn (2005) as purposeful and non-judgemental, and it is defined by the Oxford Mindfulness Centre as

"the awareness that emerges through paying attention on purpose, in the present moment, with compassion, and open-hearted curiosity. Through cultivating mindful awareness, we discover how to live in the present moment rather than brooding about the past or worrying about the future" (Oxford Mindfulness Centre, 2016, online).

Studies involving a range of conditions from anxiety and depression through to cancer have found that people who learn mindfulness are less likely to get anxious or depressed and more likely to experience positive changes in well-being (Teasdale et al., 2000; Kuyken et al., 2008; Godfrin & van Heeringen, 2010; Hofmann et al., 2010; Green & Bieling, 2012). Mindfulness-based interventions do not target symptom reduction as a goal, but rather their primary aim is to increase people's 'psychological flexibility' (Dunn et al., 2012). Psychological flexibility refers to an individual's capacity to make choices in accordance with their authentic values, despite the symptoms they may be experiencing (Hayes et al., 1999). It also helps participants to be calm, resilient, compassionate and empathic (Baer, 2003; Salmon et al., 2004). Paradoxically, research continues to demonstrate that often as a result of improved psychological flexibility there is a reduction in symptoms (Williams et al., 2007).

Brain imaging studies on adults are showing that mindfulness meditation reliably and profoundly alters the structure and function of the brain to improve the quality of both thought and feeling (Davidson and Lutz, 2008). Although the most striking changes are observable in long-term meditators, brain changes are clearly observable in people who have only been meditating for eight weeks for an average of half an hour a day.

### **Work Place Stress**

Work place stress has been a feature of both nursing and midwifery practice for many years, with observational studies repeatedly stating that inpatient care in particular is often provided in a fragmented fashion by time-pressed staff juggling competing demands in a highly pressured, chaotic environment (McGrath et al., 1989; Deery, 2005; Kirkham, 2007; McLachlan et al., 2008; Deery and Hunter, 2010; Kessler and Griffin, 2013). These challenges have been exacerbated in midwifery in the United Kingdom (UK) in recent years by a rising birth rate, a national shortage of midwives, and a growing number of women entering pregnancy with complex social and physical needs (Hunter and Warren, 2014). Overstretched maternity services are a trend shared with other countries, and have resulted in time-pressed, frustrated and exhausted midwives and a rushed, brusque and chaotic approach to care (Lindberg et al., 2005; Dykes, 2006; McLachlan et al., 2008; McKellar et al., 2009; Deery and Hunter, 2010). Recent observational research found that time pressures on a UK postnatal ward were exacerbated by midwives having very little control over their time, of the organisation of their space, or of access to the women in their care (Hunter, 2014; Hunter et al., 2015). This was evidenced in constant interruptions to the midwives' work by colleagues wanting information or assistance, and a large number of professional and lay visitors to inpatients, which sometimes prevented midwives accessing women to provide care (Hunter et al., 2015).

Workplace stress is generally understood to result from a combination of a high level of demand and little control over one's activities (Savery and Luks, 2001; Hunter and Warren,

2013). Furthermore, coping with daily 'hassles', such as constant interruptions is more strongly correlated with stress than facing major life events (Lazarus and Folkman, 1987). Prolonged exposure to stress can lead to burnout, a syndrome particularly associated with caring professions, characterised by exhaustion, a lack of motivation and accomplishment, and depersonalisation of, or even callousness towards, service users (Haslam and van Dick, 2011). Even without burnout, stress can negatively impact patient encounters, as midwives struggle to marry a professional philosophy of being 'with woman' with a daily requirement to meet institutional demands (Hunter, 2004). This struggle is evident in the following quotation from a Maternity Support Worker:

'you're trying to help somebody breastfeed but you're also running the clinic, and you've got buzzers going off, and you're meant to be doing this, and you're doing that – you haven't – even when you're standing with somebody trying to help, in your head you're going 'oh my God, I should be doing this, I should be doing this, I should be doing this' – and you just can't .. relax and actually .. be able to give that woman the help that you're meant to be' (Hunter et al. 2015, p802).

A number of strategies are reportedly used by midwives to cope with workplace stress, including task-orientation and reductionism. Task orientation involves reducing ones workload to a series of tasks such as dispensing drugs and performing routine observations, while neglecting the provision of emotional support. In a reductionist approach, verbal encounters with women are reduced to a series of set-piece monologues, brilliantly described by Mavis Kirkham (1989, p125) as the 'linguistic non-touch technique' (Hunter et al., 2008; McLachlan et al., 2008; McKellar et al., 2009; Deery and Hunter, 2010; Hunter et al., 2015). Both these strategies impact negatively on patient care. More recently, resilience has

been explored as a coping mechanism for midwives (Hunter and Warren, 2014). However, although not compromising care, resilience arguably enables midwives to cope with what is, rather than improving their working environment or the care they provide. Mindfulness offers an alternative coping strategy which has the potential to improve working conditions and patient care by enabling midwives to exercise more control over their working day and make different choices (Hunter, 2016).

Mindfulness has been found to reduce stress and lessen symptoms of burnout in different populations of health professionals, including student and qualified doctors, nurses and psychologists (Collard et al., 2008; Warnecke et al., 2011; Di Benedetto et al., 2014; Gauthier et al., 2014; Song and Lindquist, 2015). However, only one study to date, conducted in Australia, has specifically included midwives (Foureur et al., 2013). This study looked at the effects of a one-day mindfulness workshop and undertaking to meditate daily for eight weeks on resilience in 20 nurses and 20 midwives. Participants completed a number of psychological questionnaires before and after the mindfulness training. Although significant improvements were registered in participants' general health, sense of coherence and stress even after this very limited amount of training, the effects on the midwives are not differentiated from those on their nursing colleagues. Given the unique stressors faced by midwives as autonomous practitioners seeking to provide holistic care within a very medical model, there is a need to investigate the potential of mindfulness training for midwifery practice.

### **OUHFT Mindfulness in Maternity Project**

Since 2010 The OUHFT maternity service in conjunction with the University of Oxford Mindfulness Centre (OMC) has been running a small but innovative project, the first in the UK, to introduce and research the Mindfulness-Based Childbirth and Parenting (MBCP) programme. The midwives working on the antenatal project have all reported personal benefit from learning Mindfulness skills and seen first-hand, in the teaching of the antenatal programme, the benefits it offers to pregnant women and their families (Warriner et al., 2012). Offering the opportunity to learn Mindfulness skills to the wider maternity workforce provided a training pathway for midwives increasing awareness of Mindfulness, improving understanding of the project as well as potentially providing individual and organisational benefit. This latter aspiration also aligned well with a current OUHFT maternity services initiative aimed at improving personal and workplace wellbeing. Funding enabling the Mindfulness course to be offered to midwives was made available though a Health Education Thames Valley Post-Doctoral Clinical Fellowship award and the OUHFT maternity directorate approved the project.

### The Frantic World Course

The Mindfulness: finding peace in a frantic world course, by Mark Williams and Danny Penman (2011) has been delivered to students at Oxford University and to OUHFT staff by the OMC. This course is particularly designed for individuals who do not have a clinical diagnosis of stress or depression but who nevertheless may be experiencing stress in their lives. It is an adapted form of the traditional Mindfulness-Based Cognitive Therapy (MBCT) programme and runs over eight weeks, typically 60-90 minutes a week, providing an introduction to Mindfulness for beginners. Participants are taught formal and informal Mindfulness practices at a weekly class. They are encouraged to follow the course outline in

Williams and Penman's book and commit to 30 minutes of home practice daily for six days of the week. At each weekly class participants are invited to discuss their experience of home practice but no formal measure of compliance is used.

### **Course Participants**

In 2015, three Frantic World courses were offered to OUHFT maternity staff. The courses were advertised across the service and 46 participants were recruited with 43 completing the course. Participants were a mixture of hospital (30%), community (30%) and research midwives (9%), maternity support workers (18%) student midwives (9%) doctors (2%) and lecturers (2%). One participant did not complete due to sickness and two participants left the course after week two. The 43 participants completing the course attended an average of 87% of available sessions (range 50-100%). Non-attendance was a mixture of unavailability due to work shifts, holidays and sickness.

### Method

Immediately post-course participants were asked to evaluate the course; response rate 79% (n=34). Four to six months after attending the Mindfulness course participating staff were invited to complete a follow up questionnaire of their experience of taking part; response rate 53% (n=23). Completion of the post-course evaluation and follow-up was voluntary and anonymous.

### **Results**

### **Immediate Post – Course Evaluation**

Immediate post-course evaluation of satisfaction was very positive with 97% of participants reporting they found the course helpful, useful and would recommend it to others.

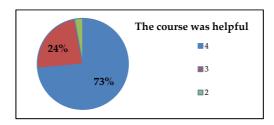
Participants were asked to rate the course using a 1-5 Likert Scale

0	1	2	3	4
never or very	rarely	sometimes	often	very often or
rarely true	true	true	true	always true

#### 1. The course was helpful to me:

97 % (n-33) of respondents answered either 3 or 4 indicating they thought this true or always true with 1 participant feeling this was sometimes true 97% (n=33) answered either 3 or 4

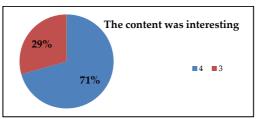
3% (n=1) answered 2



### 2. The content of the course was interesting

100% (n=34) of respondents answered either 3 or 4 indicating they thought this true or always true

0% (n=0) answered 0, 1 or 2

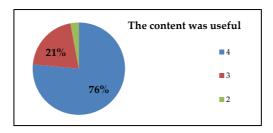


#### 3. The content of the course was useful

97 % (n-33) of respondents answered either 3 or 4 indicating they thought this true or always true with 1 participant feeling this was sometimes true 97% (n=33) answered either 3 or 4

3% (n=1) answered 2

0% (n=0) answered 0 or 1

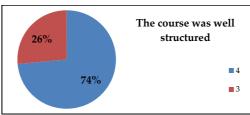


#### 4. The course was well structured

100% (n=34) of respondents answered either 3 or 4 indicating they thought this true or always true

100% (n=34) answered either 3 or 4

0% (n=0) answered 0, 1 or 2

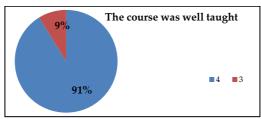


### 5. The course was well taught

100% (n=34) of respondents answered either 3 or 4 indicating they thought this true or always true

100% (n=34) answered either 3 or 4

0% (n=0) answered 0, 1 or 2



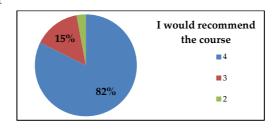
#### 6. I would recommend the course to others

97% (n-33) of respondents answered either 3 or 4 indicating they thought this true or always true with 1 participant feeling this was sometimes true

97% (n=33) answered either 3 or 4

3% (n=1) answered 2

0% (n=0) answered 0 or 1



### 4-6 Month Post-Course Questionnaire Results.

23 participants responded = 53% response rate

On-going benefit was demonstrated at 4 – 6 months with the majority of participants reporting a sustained positive impact on stress (83%), anxiety (68%), resilience (70%), self-compassion (74%) and mindfulness (91%). Of the participants who reported that depression was relevant to them 50% reported a positive impact (table 1). Participants reported benefit in home life (87%) work-life (91%) and the culture of their work place (59%) (table 2) with the majority of participants using the skills they had learnt either weekly or daily (table 3).

Table 1: Please rate how you feel participating in the Mindfulness course impacted on you

Response rate 53% (n=43)	Not relevant	Negative impact	No impact	Positive impact	Total
Stress	4.35%	0.00%	13.04%	82.61%	
	1	0	3	19	23
Anxiety	13.64%	0.00%	18.18%	68.18%	
	3	0	4	15	22
Depression	42.86%	0.00%	28.57%	28.57%	
	9	0	6	6	21
Resilience	0.00%	0.00%	30.43%	69.57%	
	0	0	7	16	23
Self-Compassion	4.35%	0.00%	21.74%	73.91%	
	1	0	5	17	23
Mindfulness	0.00%	0.00%	8.70%	91.30%	
	0	0	2	21	23

Table 2: Do you feel participating in the Mindfulness course has been of benefit to

Response rate 53% (n=43)	Yes	No	Total
Your home-life	86.96%	13.04%	
	20	3	23
Your work-life	91.30%	8.70%	
	21	2	23
The culture of	59.09%	40.91%	
your workplace	13	9	22

Response rate 53% (n=43)	Yes	No	Total
Your home-life	86.96%	13.04%	
	20	3	23
Your work-life	91.30%	8.70%	
	21	2	23
The culture of	59.09%	40.91%	
your workplace	13	9	22

Table 3: Are you still using the Mindfulness skills you were taught?

Response rate 53% (n=43)	Not at all	Occasionally	Weekly	Daily	Total
At Home	8.70%	34.78%	39.13%	17.39%	
	2	8	9	4	23
At Work	8.70%	52.17%	21.74%	17.39%	
	2	12	5	4	23

### Discussion

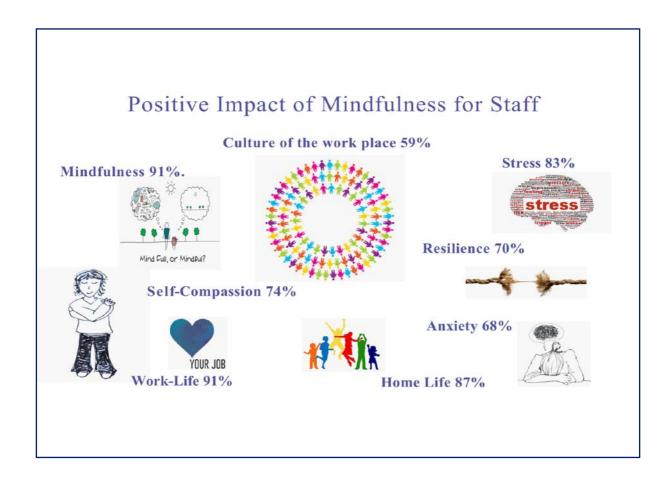
The impact of workplace stress has been extensively reported and researched over the last decade but it is only more recently that organisations have been taking active steps to improve the culture of the workplace. Midwifery is about human relationships and the

development of coping and interpersonal skills necessary to deal with the sometimes stressful nature of midwives work is essential. This project is the first to evaluate the effects of mindfulness training on midwives in the UK. Findings indicate that midwives found mindfulness training helpful and useful, and that it benefitted their home and work lives and workplace culture. The sustained impact found on stress, anxiety, resilience, selfcompassion and mindfulness resonates with other pre- and/or post-test research on the impact of mindfulness on health professionals in other countries. In the only other study to date to include midwives, Foureur et al, (2013) found that a brief mindfulness intervention reduced stress in participants. Studies on nurses and medical students have also noted decreased stress in participants after taking a mindfulness course (MacKenzie et al., 2006; Penque, 2009; Bond et al., 2013; Lan et al., 2013; Gauthier et al., 2014; Harwani et al., 2014). Similarly, studies on nursing and medical students, and qualified nurses have found decreased levels of anxiety and increased self-compassion (MacKenzie et al., 2006; Penque, 2009; Bond et al., 2013; Chen et al., 2013; Lan et al., 2013; Erogul et al., 2014). Mindfulness levels were found to increase in nurses undergoing mindfulness training in three studies, one of which (Palmer, 2010) was conducted in the UK (Penque, 2009; Palmer, 2010; Lan et al., 2013). Resilience is the one factor with less positive results elsewhere: Erogul et al. (2014) found no change in responses on a resilience scale pre and post attendance at an eight-week mindfulness course amongst 58 first year medical students. Findings from randomized controlled trials (RCTs) are also more varied, perhaps because of the difficulties inherent in measuring wide-ranging and non-specific changes using a very precise instrument, and because to date mindfulness interventions have been trialled using small sample sizes. A Columbian RCT involving 83 health care professionals (including doctors, nurses, other helping professionals and scientists) noted reductions in stress and anxiety amongst those

receiving mindfulness training (Manotas et al., 2014). Similarly, in the USA, Shapiro et al. (2005) noted significant reductions in stress in a pilot RCT of a mindfulness intervention which included 28 health care professionals. However, Moody et al. (2013) found no significant improvements in burnout or perceived stress in the intervention group of their RCT looking at a mindfulness intervention for a group comprised mainly of nurses in the USA and Israel.

The weight of quantitative research supports the findings of the current project and indicates that mindfulness can positively impact midwifery practice. There is currently a paucity of qualitative research looking at the effects of mindfulness on nursing and midwifery practice, however. Such research could illuminate the mechanisms through which mindfulness facilitates change. The evidence that is available suggests that mindfulness training reduces stress and anxiety amongst nurses and midwives by initiating a positive cascade whereby increased control over thoughts and emotions creates a calm mental space. This in turn facilitates agency (the ability to plan, focus and reflect) and perspective (the ability to step back, value and appreciate ones self and ones surroundings) (Hunter, 2016).

This project has demonstrated that investing in Mindfulness and staff well-being has been beneficial on an individual, organisational and cultural level amongst a group of midwives in the UK. The Mindfulness project at Oxford University Hospitals NHS Foundation Trust continues to provide training in Mindfulness for midwives and Mindfulness-Based Childbirth and Parenting classes for expectant women and their families. Future qualitative research is planned to explore the impact that midwives perceive mindfulness has on their practice in more detail, and further to evaluate the benefits of the Mindfulness-based antenatal classes.



### References

Baer RA (2003) Mindfulness training as a clinical intervention. A conceptual and empirical review. *Clinical Psychology: Science and Practice;* 10 (2): 125-43.

Black DS (2011) A brief definition of mindfulness. *Mindfulness Research Guide*. Accessed from <a href="http://www.mindfulexperience.org">http://www.mindfulexperience.org</a>

Bond A, Mason H, Lemaster C, Shaw S, Mullin C, Holick E, Saper R (2013) Embodied health: the effects of a mind-body course for medical students. *Med Educ Online*; 18: 1-8.

Chambers R, Chuen Yee Lo B, Allen NB (2008) The impact of intensive mindfulness training on attentional control, cognitive style, and affect. *Cognitive Therapy and Research*; 32: 303-322.

Chen Y, Yang X, Wang L, Zhang X (2013) A randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Educ Today* 33(10):1166-72.

Chiesa A, & Serretti A (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *The Journal of Alternative and Complementary Medicine*; 15 (5): 593–600.

Collard P, Anvy N, Boniwell I (2008) Teaching mindfulness based cognitive therapy (MBCT) to students: the effects of MBCT on the levels of mindfulness and subjective well-being. *Counselling Psychology Quarterly* 21(4): 323-36

Davidson, R. and Lutz, A. (2008) Buddha's brain: neuroplasticity and meditation. *IEEE Signal Process Mag*; 25 (1): 176–174.

Di Benedetto M, Swadling M (2014) Burnout in Australian psychologists: correlations with worksetting, mindfulness and self-care behaviours. *Psychology, Health and Medicine* 19 (6): 705-15.

Dimidjian S, Goodman S (2009) Nonpharmacologic intervention and prevention strategies for depression during pregnancy and the postpartum. *Clin Obstet Gynecol*; 54: 498–515.

Deery R (2005) An action-research study exploring mindwives' support needs and the effect of group clinical supervision. *Midwifery* 21: 161-76.

Deery R & Hunter B (2010) Emotion work and relationships in midwifery: enhancing or challenging? In Kirkham (Ed) *The midwife-mother relationship. Second edition.* Basingstoke, Palgrave Macmillan: 37-65.

Duncan LG, Bardacke N (2010) Mindfulness-based childbirth and parenting education: Promoting mindfulness to reduce stress during the perinatal period. *J Child Fam Stud*; 19(2): 190–202

Dunn C, Hanieh E, Roberts R, Powrie R (2012) Mindful pregnancy and childbirth: effects of a mindfulness based intervention on women's psychological distress and well-being in the perinatal period. *Arch Womens Ment Health*; 15:139–143

Dykes F (2006) Breastfeeding in hospital. Mother, midwives and the production line. London, Routledge.

Erogul M, Singer G, McIntyre T, Stefanov D (2014) Abridged mindfulness intervention to support wellness in first year medical students *Teach Learn Med*. 26(4): 350-6.

Foureur, M, Besley, K, Burton, G, Yu, N, Crisp J (2013) Enhancing the resilience of nurses and midwives: pilot of a mindfulness-based program for increased health, sense of coherence and decreased depression, anxiety and stress. *Contemporary Nurse* 45(1): 114–125.

Gauthier T, Meyer R, Grefe D, Gold J (2014) An on-the-job mindfulness-based intervention for pediatric ICU nurses: a pilot study. *Journal of Alternative and Complementary Medicine* 20(5): A87.

Godfrin KA, & van Heeringen C (2010) The effects of mindfulness-based cognitive therapy on recurrence of depressive episodes, mental health and quality of life: A randomized controlled study. *Behaviour Research and Therapy*; 48 (8): 738–746.

Green SM, & Bieling PJ (2012) Expanding the scope of mindfulness-based cognitive therapy: Evidence for effectiveness in a heterogeneous psychiatric sample. *Cognitive and Behavioural Practice*; 19(1): 174–180.

Grossman P, Niemann L, Schmidt S, Walach H (2004) Mindfulness-based stress reduction and health benefits. A meta-analysis. *J Psychosom Res*; 57(1):35-43.

Gu J, Strauss C, Bond R, Cavangh K (2015) How do Mindfulness-Based Cognitive Therapy and Mindfulness-Based Stress Reduction Improve Mental Health and Wellbeing? A Systematic Review and Meta-Analysis of Mediation Studies. *Clinical Psychology Review*; 37: 1–12

Harwani N, Motz K, Graves K, Amri H, Harazduk N, Haramati A (2014) Impact of changes in mindfulness on perceived stress and empathic concern in medical students. *Journal of Alternative and Complementary Medicine*; 20(5): A7.

Haslam S & van Dick R (2011) A social identity approach to workplace stress. In De Cremer D, van Dick R, Murnighan J (Eds) *Social psychology and organisations*. Hove, Routledge: 325-52.

Hayes S C, Strosahl K D, Wilson K D (1999) Acceptance and commitment therapy: an experiential approach to behavior change. Guilford, New York

Hofmann SG, Sawyer AT, Witt AA, & Oh D (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*; 78: 169–183.

Hunter B (2004) Conflicting ideologies as a source of emotion work in midwifery. *Midwifery* 20: 261-72.

Hunter B, Berg M, Lundgren I, Olafsdottir O, Kirkham M (2008) Relationships: the hidden threads in the tapestry of maternity care. *Midwifery* 3(1): 10-15.

Hunter B & Warren L (2013) Investigating resilience in midwifery. Final report. Cardiff, Cardiff University.

Hunter B and Warren L (2014) Midwives' experiences of workplace resilience. *Midwifery* 30(8): 926–934

Hunter L (2014) Supporting teenage mothers to initiate breastfeeding and developing a support intervention to increase breastfeeding rates in a vulnerable group – the importance of place. *Doctoral thesis*. London, University of West London.

Hunter L, Magill-Cuerden J, McCourt C (2015) 'Oh no, no, no, we haven't got time to be doing that': Challenges encountered introducing a breast-feeding support intervention on a postnatal ward. *Midwifery* 31(8): 798–804.

Hunter L (2016) Making time and space: the impact of mindfulness training on nursing and midwifery practice. A critical interpretative synthesis. *Journal of Clinical Nursing*; doi: 10.1111/jocn.13164

Jha AP, Krompinger J, Baime MJ (2007) Mindfulness training modifies subsystems of attention. *Cognitive Affective and Behavioural Neuroscience*; 7: 109-119.

Kabat-Zinn J (2003) Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*; 10:144-156

Kabat-Zinn J (2005). Coming to Our Senses. New York, NY: Hyperion

Kessler I & Griffin R (2013) *A study on the pay and conditions of employment amongst members of the Royal College of Midwives.* London, RCM.

Kirkham M (1989) Midwives and information-giving during labour. In Robinson S & Thomson A (Eds) *Midwives, research and childbirth. Volume 1.* London, Chapman and Hall: 117-138.

Kirkham M (2007) Traumatised Midwives [online]. *Aims Journal* 19 (1). *Available at http://www.aims.org.uk*.

Kuyken W, Byford S, Taylor RS, Watkins E, Holden E, White K, et al. (2008). Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *Journal of Consulting and Clinical Psychology*; 76: 966–978.

Lan H, Subramanian P, Rahmat, N, Kar P (2013) The effects of a mindfulness training program on reducing stress and promoting well-being among nurses in critical care units. *Australian Journal of Advanced Nursing* 31(3): 22-31.

Lazarus R & Folkman S (1987) Transactional theory and research on emotions in coping. *European Journal of Personality* 1: 141-69.

Lindberg I, Christensson K, Ohrling K (2005) Midwives' experience of organisational and professional change. *Midwifery* 21(4): 355-64.

Liu X, Xu W, Wang WY, Williams JMG, Geng Y, Zhang Q & Liu X (2013) Can inner peace be improved by mindfulness training: A randomized controlled trial. *Stress and Health.* doi: 10.1002/smi.2551.

MacKenzie C, Poulin P, Seidman-Carlson R (2006) A brief mindfulness-based stress reduction intervention for nurses/ nurse aides. *Applied Nursing Research*; 19(2): 105-9.

Manotas M, Segura C, Eraso M, Oggins J, McGovern K (2014) Association of brief mindfulness training with reductions in perceived stress and distress in Colombian health care professionals. *International Journal of Stress Management*; 21(2): 207-25.

McGrath A, Reid N, Boore J (1989) Occupational stress in nursing. *Journal of Nursing Studies* 26: 359-68

McKellar L, Pincombe J, Henderson A (2009) Encountering the culture of midwifery practice on the postnatal ward during action research: an impediment to change. *Women and Birth* 22: 112-8.

McLachlan H, Forster D, Yelland J, Rayner J, Lumley J (2008) Is the organisation and structure of hospital postnatal care a barrier to quality care? Findings from a state-wide review in Victoria, Australia. *Midwifery* 24: 358-70.

Moody K, Kramer D, Santizo R, Magro L, Wyshogrod D, Ambrosio J, Castillo C, Lieberman R and Stein J (2013) Helping the helpers: mindfulness training for burnout in pediatric oncology - a pilot program. *Journal of Pediatric Oncology Nursing:* **30**(5): 275–84.

NICE (2009) Depression in adults: recognition and management. Available at <a href="https://www.nice.org.uk/guidance/cg90">https://www.nice.org.uk/guidance/cg90</a>. [Last accessed 22.1.16].

Oxford Mindfulness Centre (2016). About Mindfulness. Available at http://www.oxfordmindfulness.org/about-mindfulness/. [Last accessed 22.1.16].

Palmer E (2010) Compassionate caring: an evaluated pilot of mindfulness-based cognitive therapy training for hospice at home nurses (conference abstract). *Journal of Palliative Care*; **26**(3): 111–2.

Penque S (2009) Mindfulness-Based Stress Reduction: effects on registered nurses. Doctoral thesis: University of Minnesota, Minnesota.

Salmon P, Sephton S, Weissbecke I, Hoover K, Ulmer C, Studts JI (2004) Mindfulness meditation in clinical practice. *Cognitive and Behavioural Practice*; 11: 434-46.

Savery L & Luks J (2001) The relationship between empowerment, job satisfaction and reported stress levels: some Australian evidence. *Leadership and Organisational Development Journal* 22(3): 97-104.

Shapiro SL, Astin J, Bishop SR, Cordova M (2005) Mindfulness-Based Stress Reduction for Health Care Professionals: Results From a Randomized Trial. *International Journal of Stress Management*; 12 (2):164-176.

Song Y, Lindquist R (2015) Effects of Mindfulness-based Stress Reduction on depression, anxiety, stress and mindfulness in Korean nursing students. *Nurse Education Today* 35 (1): 86-90.

Surawy C, McManus F, Muse K, & Williams JMG. (2014) Mindfulness-Based Cognitive Therapy (MBCT) for Health Anxiety (Hypochondriasis): Rationale, Implementation and Case Illustration. *Mindfulness*, 1-11.

Tang YY, Posner MI, Rothbart MK (2014) Meditation improves self-regulation over the life span. *Ann N Y Acad Sci*; 1307: 104–111.

Taren AA, Creswell JD, Gianaros PJ (2013) Dispositional Mindfulness Co-Varies with Smaller Amygdala and Caudate Volumes in Community Adults. *PLoSONE*; 8 (5)

Teasdale JD, Segal ZV, Williams JMG, Ridgeway VA, Soulsby JM, & Lau MA (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology*; 8: 615–623.

Warnecke E, Quinn S, Ogden K, Towle N, Nelson M (2011) A randomised controlled trial of the effects of mindfulness practice on medical student stress levels. *Medical Education* 45 (4): 381-8.

Warriner S, Williams JMG, Bardacke N, Dymond, M (2012) A mindfulness approach to antenatal preparation. *Br. J. Midwifery*; 20 (3): 194 – 198

Williams M, Teasdale J, Segal Z, Kabat-Zinn J (2007) The Mindful Way through Depression: freeing yourself from chronic unhappiness. Guilford, New York

Williams M, Penman D (2011) Mindfulness: a practical guide to finding peace in a frantic world. Piatkus

Zeidan F, Johnson SK, Diamond, BJ, David Z, Goolkasian P (2010) Mindfulness meditation improves cognition: evidence of brief mental training. *Conscious Cognition*; 19(2): 597-605.