



## “Mindfulness for chronic somatic conditions”

Day: Friday 13th July 2018      Time: 9:00 – 10:15 am      Track: Clinical Applications

The first presenter, Gillian Mathews, will discuss a study to discover and describe the multi-faceted experiential process of learning mindfulness as perceived by a group of people with long-term conditions, identifying barriers and affordances to practice, and assessing whether a graded transition to self-management would embed mindfulness skills and support self-proficiency.

The second presenter is Eric Loucks. He will discuss a study testing a customized Mindfulness-Based Blood Pressure Reduction (MB-BP) in prehypertensive as well as Stage 1 and 2 hypertensive participants.

The third presenter, Barbara Pickut, will talk about a study evaluating clinical correlates secondary to mindfulness based stress reduction (MBSR) in people with Parkinson's.

Finally, Lotte Berk will discuss a mixed-methods study about an adapted mindfulness training for people with early-stage dementia and their caregivers.

### Symposium overview

- Presenter 1**      **Gillian Mathews** - The lived experience of mindfulness training in people with chronic conditions: a community-based, longitudinal phenomenological study
- Presenter 2**      **Eric Loucks** - Mindfulness-Based Blood Pressure Reduction (MB-BP) is Associated with Improved Self-Regulation and Blood Pressure: Stage 1 Clinical Trial
- Presenter 3**      **Barbara Pickut** - Mindfulness for People with Parkinson's: Emotional Well Being, Social Support and Group Effect
- Presenter 4**      **Lotte Berk** - TANDEM: mindfulness training for people with early-stage dementia and their caregivers: a mixed-methods study
- Chair:**            **Barbara Pickut**



## **The lived experience of mindfulness training in people with chronic conditions: a community-based, longitudinal phenomenological study**

Gillian Mathews<sup>1</sup>, Gerri Matthews-Smith<sup>2</sup>, Maureen Macmillan<sup>2</sup>

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### Background and objectives

Secular mindfulness courses modelled on traditional meditation practices are increasingly offered to people with enduring illness. Whilst evidence for beneficial outcomes from this approach is encouraging, knowledge on which components lead to well-being is uncertain with little information on its longer term impact, particularly from the user perspective. The aim of this study was to discover and describe the multi-faceted experiential process of learning mindfulness as perceived by a group of people with long-term conditions, identifying barriers and affordances to practice, and assessing whether a graded transition to self-management would embed mindfulness skills and support self-proficiency.

### Methods

Longitudinal, phenomenological research design underpinned by an experiential learning framework. The intervention comprised 34 mindfulness sessions, conducted in a city-centre, easily accessed, community venue. It involved a 9-week course modelled on Mindfulness Based Stress Reduction followed by structured consolidation and supported transition to participant self-led status. Twenty participants (M:10, F:10) with long-term conditions self-referred into the project, half of whom completed the full programme. Methods comprised interviews (n=62 [including embodied interviews]) and focus groups (n=6) supported by participant observation and a reflective journal. Data were analysed using the phenomenological reduction. Ethical approval was gained from Edinburgh Napier University and South-east Scotland NHS Research Ethics committees.

### Results

The longitudinal programme was valued by participants and well-being was reported to markedly improve in those who developed a consistent mindfulness practice. Embodied integration of mindfulness appeared significant to healing benefit but learning mindfulness involved multiple challenges. Gender differences were noted; and experiences arising from, and during, meditation highlighted welfare issues pointing to a need for individualised support. Several months were required to establish a basic skill-set but the consequent transition to self-led status embedded understanding and promoted confidence.

### Discussion and conclusion

Adopting an expanded empowerment approach for people with vulnerabilities supports mindfulness skills and practice. This is important because the process of learning mindfulness can be testing. Based on the theoretical underpinning, and including results from the study, a conceptual model is presented to illuminate key learning components and maximise benefits for people with long-term conditions.



## **Mindfulness-Based Blood Pressure Reduction (MB-BP) is Associated with Improved Self-Regulation and Blood Pressure: Stage 1 Clinical Trial**

Eric Loucks, Yu Li

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**BACKGROUND AND OBJECTIVES:** Impacts of mindfulness-based interventions on blood pressure were shown in a systematic review to be equivocal. This may be due to two reasons: (1) Mindfulness interventions studies to date have not been customized to deliberately engage with most modifiable determinants of blood pressure; (2) Floor effects, where most studies on the topic only included Stage 1 hypertensive or prehypertensive participants, and not Stage 2 hypertensives. Consequently, this study tested a customized Mindfulness-Based Blood Pressure Reduction (MB-BP) in prehypertensive as well as Stage 1 and 2 hypertensive participants.

**METHODS:** This was a Stage 1 single arm trial with one-year follow-up and sample size of 43 participants. Blood pressure was assessed as the mean of the second and third readings following American Heart Association blood pressure assessment criteria. MB-BP is time matched to, and adapted from, Mindfulness-Based Stress Reduction (MBSR). Participants learn MBSR self-regulation skills such as attention control, self-awareness and emotion regulation, and then are taught to direct to those skills to their relationship with modifiable determinants of blood pressure through specific in-class and home practices. The study was registered on ClinicalTrials.gov (#NCT02702258).

**RESULTS:** One year follow-up demonstrated mean 6.1 mmHg reduction in systolic blood pressure (SBP) in participants overall ( $p=0.008$ ). Effects were most pronounced in Stage 2 uncontrolled hypertensives, demonstrating 15.1 mmHg SBP reduction ( $p<0.001$ ) at one-year follow-up. Participants with prehypertension or controlled hypertension (120/80-140/90 mmHg systolic/diastolic blood pressure) showed no significant SBP change (0.6 mmHg decrease;  $p=0.65$ ). A priori selected self-regulation targets showed significant improvements at one-year follow-up vs. baseline, including a measure of attention control (Sustained Attention to Response Task correct no-go score,  $p<0.001$ ), emotion regulation (Difficulties in Emotion Regulation Score,  $p=0.02$ ), and self-awareness (Multidimensional Assessment of Interoceptive Awareness,  $p<0.001$ ).

**DISCUSSION AND CONCLUSION:** This study suggests that MB-BP may be effective, particularly for those with Stage 2 hypertension. The self-regulation mechanisms may be improved attention control, self-awareness and emotion regulation. Major threats to causal inference remain with this study being a single arm trial, including regression to the mean, and the Hawthorne effect. A Stage 2a randomized controlled trial is underway to address these limitations.



## **Mindfulness for People with Parkinson's: Emotional Well Being, Social Support and Group Effect**

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**Background and Objectives:** Parkinson's disease (PD) is a neurodegenerative syndrome consisting of motor and non-motor signs and symptoms. Previously, we observed that People with Parkinson's (PwP) may benefit from a Mindfulness based intervention (MBI), interpreted on the basis of self-reported measures and supported by neuroimaging findings. The current study evaluated clinical correlates secondary to mindfulness based stress reduction (MBSR) in PwP.

**Methods:** Five self-report questionnaires were administered for pre- and post-testing to 10 PwP (5 female). Pre- and post-test scores were analyzed using paired Student t-tests. Tests were compared using a p-value threshold of 0.05 for significance determination and results presented with 95% confidence intervals. All statistical analyses were conducted in SPSS version 20.

The Focus Group recording was transcribed and reviewed individually by three members of the research team who sought after topics of spirituality, empowerment, and coping then triangulated their findings.

**Results:** Significant improvements in the Parkinson's Disease Quality of Life (PDQ-39) improvements in emotional wellbeing, and social support ( $p=0.022$ ,  $p=0.05$ , respectively), the Five Facet Mindfulness Questionnaire non-judgmental element facet ( $p=0.022$ ), and the Beck Depression Inventory-II score decrease by 5.2 ( $p=0.058$ ). The Focus Group analysis indicated strong support for topics of spirituality, empowerment, and coping as well as an unexpected fourth, the group effect.

**Discussion and Conclusions:** Significant improvements in emotional wellbeing, and social support were evident on the Parkinson's disease Quality of Life (PDQ-39) questionnaire indicating that mindfulness training is associated with improving a person's sense of emotional wellbeing and increasing the perception of social support. Analysis from the Five Facet Mindfulness Questionnaire revealed a significant difference in the non-judgmental facet indicating that participants experienced an increase in the ability to not judge their own inner experience. Analysis from the Beck Depression Inventory-II found a marginally significant difference in the level of depression experienced enough to change to a milder depression category. Finally, there was strong support for topics of spirituality, empowerment, and coping as well as the group effect. The latter is of particular interest in light of the growing interest in Web-based mindfulness training programs.



## **TANDEM: mindfulness training for people with early-stage dementia and their caregivers: a mixed-methods study**

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**Background and objectives.** The world population is aging and the prevalence of dementia is increasing. The number of people with dementia worldwide is estimated to double every 20 years, to 65 million in 2030 and 115 million in 2050, with a global prevalence of 5%-7%. There is no cure for dementia. The progression of symptoms with no hope of improvement is difficult to cope with, both for people with dementia and their caregivers. Research has showed promising preliminary support for mindfulness-based interventions to benefit people with dementia and caregivers. However, studies suggest that the standard 8-week mindfulness training could be adjusted to better suit the needs of this population. Moreover, the feasibility of couples participating together in a group is unclear.

**Methods.** The 8-week MBSR training was adjusted based on a literature review and interviews with experts (clinicians and mindfulness trainers). The first attention training for people with dementia and their caregivers (TANDEM) was completed in December 2017 and consisted of four couples. A second group will be completed by June, 2018. Semi-structured qualitative interviews were conducted after completion. Questionnaires (before and after the program) assessed quality of life, psychological distress, mindfulness, self-compassion, positive mental health, worry symptoms, and perceived burden (for caregivers).

**Results.** All participants completed the mindfulness program and reported positive effects of the training (e.g. coping, acceptance, and serenity). Most had managed to integrate both informal and formal exercises into their daily lives and planned to continue their practice. Participating in a group was considered very valuable and supportive. Furthermore, it was appreciated that they could participate as a couple. Most individuals with dementia did not use the handouts, but could follow the instructions during the sessions and also practiced at home. There was a clear need for a continuation of the program. The quantitative results showed decreased stress and depressive symptoms, and increased mindfulness.

**Discussion and conclusion.** The results suggest that this program is feasible and well received among couples consisting of persons with early-stage dementia and their caregivers. Participating together is preferred. Results will be updated upon completion of the second group.