

Mindfulness for older adults with chronic low back pain

Michelle Barrow (MSc, BSc Hons, RN) & Dr Chad Taylor (Pain Medicine Consultant)

Introduction

Non-pharmacological interventions should be an essential component in the management of chronic low back pain (CLBP) in older adults.

- ▶ Chronic low back pain in the older adult is physically disabling, as well as being associated with issues such as anxiety and depression
- ▶ The management of CLBP differs from the management of younger adults due to co-morbidities, polypharmacy, age-related changes such as pharmacokinetics, pharmacodynamics, frailty and cognitive decline
- ▶ Social isolation due to the loss of loved ones poses further challenges in the management of the older adult

What is Mindfulness?

Mindfulness is described as a process of becoming more aware of present experience and, through this awareness, being more able to reduce physical and emotional distress (Kabat-Zinn 1982). An ancient practice rooted in the Buddhist tradition, it was introduced to the Western world and its medical community in a secular form several decades ago. Mindfulness is taught in an 8-week programme, referred to as mindfulness-based stress reduction (MBSR), which has been found to be effective for various chronic pain conditions in the general population (Kabat-Zinn 1990).

Aim

A literature review was undertaken to search for, retrieve and assess the literature to explore the efficacy and safety of mindfulness practice in the management of the older adult with CLBP and to consider how the evidence may inform local clinical practice.

Methods

- ▶ Three databases accessed: Cinahl, PsychInfo, Medline
- ▶ Search terms: mindfulness, mbsr, mindfulness-based stress reduction, mindfulness intervention, older adults, elderly, geriatric, ageing, seniors, older people, chronic low back pain, clbp.
- ▶ Boolean operators 'AND' and 'OR' were used
- ▶ Included articles: from 2005 to 2019, aged over 65 years, English language only
- ▶ Excluded articles were commentaries, reports, reviews
- ▶ Search produced 30 journal articles

Results

All three RCTs focused on community-dwelling older adults with CLBP and used adapted forms of the MBSR programme developed by Kabat-Zinn at the University of Massachusetts. All three studies cite Morone as the principal researcher and author, but they are different studies thus justifying including them in the literature review.



Alan, Margaret and Darryl pictured, with their permission, taking part in a mindfulness meditation session

Morone et al (2008):

- ▶ Pain acceptance significantly improved in the intervention group ($p=.04$) while the control group worsened over the 8-week period ($p=.08$)
- ▶ Physical function showed significant improvement ($p=.03$)
- ▶ However, no significant effects on pain severity scores, disability or quality of life for the MBSR group.
- ▶ The MBSR group was able to adhere to attendance and the required home practice

Morone et al (2009):

- ▶ Pain severity and disability improved in both groups and there was a statistically significant difference at the end of the 8-week sessions ($p< 0.05$)
- ▶ Improvement in disability for the MBSR group was maintained at the 4 month follow-up. Control group showed less improvement.

Study characteristics

Study	Number of participants	Inclusion criteria	Intervention	Control	Outcome measures
Morone et al 2008	37	Chronic low back pain, age >65 years, MMSE = >24	MBSR modelled on work by Kabat-Zinn	Wait-list	Pain Intensity: MPQ-SF, SF-36. Pain Acceptance: CPAQ. Quality of Life: SF-36 – Health Status Inventory. Physical Function: RMDQ, Sf-36, Physical Function Scale
Morone et al 2009	40	CLBP age > 65 years MMSE = >24	MBSR (adapted form)	Health Education Programme	Disability: RMDQ. Pain Intensity: SF-MPQ. Quality of Life: SF-36 – Health Status Inventory. Mindfulness: MAAS and FFMQ.
Morone et al 2016	282	65 years or older, spoke English, MMSE score > 24, CLBP	MBSR (adapted form)	8-week programme based on 10 keys for healthy Ageing	Disability: RMDQ. Pain Intensity: NRS. Quality of Life: RAND-36 – Health Status Inventory. Depression: GAD. Self-efficacy: PSEQ. Pain Catastrophising: CPSS. Mindfulness: MAAS.

- ▶ Differences for pain severity and disability between the 2 groups were not statistically significant

Morone et al (2016)

- ▶ The intervention group reported improved function immediately on completion of the 8-week programme, but not maintained by 6 month follow-up
- ▶ Effect sizes between the groups at 8 weeks and 6 months were: 0.23 and 0.08 respectively ($p=0.01$).
- ▶ The intervention group showed significant reduction of pain severity post intervention and by follow-up.
- ▶ Self-efficacy showed improvement immediately post-intervention compared to the control group, but not sustained by the 6-month follow-up
- ▶ No differences between groups with mindfulness measures
- ▶ Changes in quality of life, and catastrophising did not reach clinical significance.
- ▶ Excellent retention of participants on the intervention programme

Conclusions

MBSR appears feasible and effective for older adults coping with CLBP, as demonstrated in the Morone et al (2008) study, but particularly in the Morone et al (2016) study. Pain reduction was sustained at the 6 month follow-up in the Morone et al (2106) study, suggesting that mindfulness may be effective in the long-term.

Implications for practice:

- ▶ MBSR 8-week programme feasible and acceptable to older adults with CLBP
- ▶ Professionals, other than psychologists, such as nurses physiotherapists and occupational therapists, could deliver such an intervention with appropriate training
- ▶ Older adults could take part in such a programme while waiting for other treatment such as PMP or can do alongside treatment such as physiotherapy.
- ▶ Group work such as the MBSR programme has been shown to reduce social isolation, while home meditation practice can alleviate loneliness in the older adult

References:

Kabat-Zinn (1982) An outpatient program in behavioural medicine for chronic pain patients based on the practice of mindfulness meditation: theoretical considerations and preliminary results. *General Hospital Psychiatry* 4: 33-47
Kabat-Zinn (1990) *Full catastrophe living: using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delacorte
Morone N, Greco C and Weiner D (2008) Mindfulness meditation for the treatment of chronic low back pain in older adults: A randomized controlled pilot study. *Pain* 134: 310-319
Morone N, Rollman B, Moore C, Qin L and Weiner D (2009) A Mind-Body program for older adults with Chronic Low back pain: Results of a Pilot Study. *Pain Medicine* 10(8): 1395-1407
Morone N, Greco C, Moore C, Rollman B, Lane B, Morrow L, Glynn N and Weiner D (2016) A Mind-Body program for Older adults With chronic low back Pain. A Randomised Clinical Trial. *Journal of the American Medical Association* 176(30): 329-337