

The role of mindfulness-based interventions in the management of chronic pain: A brief review of the literature.

A significant proportion of patients presenting in medical practices exhibit chronic pain. Pain is the most common complaint in primary care (Gardiner-Nix et al, 2008). Chronic pain is reported in 20% of visits to general practitioners and affects 20% of adults, rising to half of those in the older age population. Chronic pain, defined as 'pain persisting longer than six months or beyond the regular healing time for a given injury' can affect patients' physical and emotional wellbeing and is often associated with disability disproportionate to degree of injury as well as depression and anxiety (Gardner-Nix, Backman, Barbati & G, Grummitt, 2008).

Chronic pain is commonly associated with depression, anxiety and also grief over pain-related losses (as is now being recognized), and psychologists play a key role in its management (Walls, 2004).

A meta-analysis of psychological interventions (Hoffman, Papas, Chatkoff and Kerns, 2007) for chronic lower back pain found positive effects of psychological interventions, contrasted with various control groups, for pain intensity, pain-related interference, health-related quality of life, and depression. Cognitive-behavioural and self-regulatory treatments were specifically found to be efficacious. Multidisciplinary approaches that included a psychological component, when compared with active control conditions, were also noted to have positive short-term effects on pain interference and positive long-term effects on return to work. The results demonstrated positive effects of psychological interventions for chronic lower back pain.

Mindfulness based interventions are among them, and have found an increasing role in conventional medicine

and psychology. Meditation, in various forms, has been practiced for at least 3500 years and has been the central practice of Buddhism for 2500 years. As defined by U.S. psychologist Jon Kabat-Zinn, director of the Stress Reduction and Relaxation Program at the University of Massachusetts Medical Center in the US, and leading researcher in the field of mind/body medicine, mindfulness meditation is "paying attention in a particular way: on purpose, in the present moment and non judgmentally. This kind of attention nurtures greater awareness, clarity and acceptance of present-moment reality" (Kabat-Zinn, 1994; p.4).

Jon Kabat-Zinn was the first to demonstrate the benefits of mindfulness meditation for chronic pain. He is continuing to lead research on conditions such as psoriasis and prostate cancer (Kabat-Zinn, 2003).

In a 1982 study of 51 patients, (Kabat-Zinn, 1982) he showed that for most chronic pain patients, training in mindfulness meditation cut their pain rating by at least a third and in some cases by more than half after a 10 week course. Large and significant reductions in mood disturbance and psychiatric symptomatology accompanied these changes and were relatively stable up to 1.5 yrs later.

In subsequent research, 90 chronic pain patients were trained in mindfulness meditation in a 10-wk stress reduction and relaxation program (Kabat_Zinn, Lipeworth and Burney, 1985). Self-report indices, including the McGill Pain Questionnaire, the Profile of Mood States, and the Hopkins Symptom Checklist, were administered to participants to assess multiple aspects of pain and certain pain-related behaviors. Results show statistically significant reductions in measures of

present-moment pain, negative body image, inhibition of activity by pain, symptoms, mood disturbance, and psychological symptomatology, including anxiety and depression. Pain-related drug utilization decreased, and activity levels and feelings of self-esteem increased. Improvement appeared to be independent of gender, source of referral, and type of pain. A comparison group of 21 pain patients did not show significant improvement on these measures after traditional treatment protocols. At follow-up, the improvements observed during the meditation training were maintained up to 15 months post-meditation training for all measures except present-moment pain.

A more recent study of 150 patients presenting at a UK pain management centre found small to moderate but significant correlations between present focus and measures of pain, pain distress, psychosocial disability, physical disability, depression, pain anxiety, medication use, GP visits, and uptime. Acting with awareness was also significantly associated with the above measures but to a lesser degree (McCracken & Thomson, 2009). These findings support those of an earlier study on a sample of 105 chronic pain patients (McCracken, Gauntlett-Gilbert & Vowles 2007). The study found a significant association between a measure of mindfulness and lower depression, pain-related anxiety, and disability scores.

A review of studies on mindfulness (Baer, 2003) examined studies dealing with chronic pain, stress-related conditions and other medical disorders. The author reported that findings for chronic pain patients showed statistically significant improvements in ratings of pain, other medical symptoms and general psychological symptoms, finding at least medium-sized effects on symptoms in most studies utilizing mindfulness-based interventions, and in some cases quite large effects.

Gardiner-Nix et al (2008) reported that a mindfulness-based chronic pain management course (conducted either face to face or via video conferencing) significantly improved the physical and mental component scores of the SF-36, usual pain levels and pain catastrophizing behaviour in face to face intervention participants, and the mental component scores and pain catastrophizing behaviour in videoconferencing participants. The intervention was delivered to patients for two hours per week for 10 weeks. Pre- and post course measures of quality of life, pain catastrophizing and usual pain ratings were collected over a period of two years.

In all, there were 99 Present site participants, 57 at Distant sites and 59 waitlist controls. Both treatment modalities resulted in similar gains in mental health (P, 0.01) and pain catastrophizing levels (P, 0.01) relative to controls. However, the Face to face treatment group obtained significantly higher scores on the physical dimension of quality of life (P, 0.01) and lower usual-pain ratings (P, 0.05) than the Distant site group.

Losses in relationships, work, and other areas of life often accompany the physical discomfort of chronic pain (Sagula and Rice, 2004). Often the depth and intensity of the grief associated with chronic pain are overlooked or possibly misdiagnosed and treated as depression. Sagula and Rice used an 8-week mindfulness meditation program to determine its effectiveness in addressing the grieving process among 39 patients diagnosed with chronic pain. Eighteen patients volunteered to be in a comparison group. The study was conducted in a regional hospital's pain clinic and patients completed the Response to Loss Scale (measuring grief), the Beck Depression Inventory, and the State Trait Anxiety Inventory. Results indicated that the treatment group advanced significantly more quickly through the initial stages of grieving than

the comparison group. In addition, the treatment group demonstrated significant reductions in depression and state anxiety.

The experience of pain is usually associated with negative thoughts and emotions, such as "Now I won't be able to do X", "the pain is getting worse", "I cannot cope with this", "I don't want to keep feeling like this anymore" and so on. These negative cognitions trigger can depression and anxiety and in turn aggravate the experience of pain. The use of mindfulness allows us to observe our negative states in a non-judgmental, accepting way, which reduces internal tension and can be associated with a decrease in the negative state or emotion.

Mindfulness based stress reduction (MBSR) and Acceptance and Commitment Therapy (ACT) are two therapeutic approaches which utilize mindfulness and acceptance. For more information on either, and on the use of mindfulness based strategies to manage anxiety, depression, stress and pain, please contact Integral Psychology Services.

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