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Title: Preliminary outcome evaluation one year after the introduction of a chronic pain education seminar (BASE)

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Introduction:

Chronic pain is a highly debilitating and prevalent condition affecting one in five New Zealand adults. It not only affects the individual, but also poses a burden on family and friends, as well as a significant economic burden on society and the healthcare system. Chronic pain is defined as pain that persists longer than expected healing time and can often not be resolved by traditional biomedical approaches. It must be considered holistically through a biopsychosocial lens, focusing on providing patients with skills to manage pain and live active lives despite pain; rather than focusing on pain reduction or cure. The current best-evidence management requires a biopsychosocial approach carried out by an interdisciplinary team. Whilst this is the ideal model, it is often intensive and not always feasible given the large number of people with chronic pain. This often leads to long waiting lists and declined referrals at pain services. To address this, different ways of providing interventions to cater for a large population need to be considered.

An approach that targets a large amount of people in a short time is through education about chronic pain. Education has become of increasing focus in chronic pain management as it allows patients to gain a deeper understanding of the neurophysiological mechanisms involved in chronic pain, the factors that influence pain, and strategies for pain self-management. To provide these services, many international pain management clinics have developed education programs for their patients. Such programs exist throughout Australia, e.g. STEPS (Self Training Educative Pain Sessions) in Western Australia, and Hunter Integrated Pain Service in New England, Australia.

Based on these education programs, the Burwood Advancement Screening Education Seminar (BASE) was developed by the Burwood Pain Management Centre (BPMC). Before the introduction of BASE, 65% of patients referred to BPMC were declined at referral due to a limited service capacity. Since introducing BASE, no referrals have been declined solely due to capacity limitations. Although BASE has received positive clinical and patient feedback, no research has yet been conducted evaluating the impact of BASE on key domains identified as important for enhancing quality of life in people with chronic pain.

Aim:

The aim of this project is to evaluate the effect of BASE on key psychosocial variables implicated in chronic pain and identified as important predictors of quality of life and reduced suffering with pain.

Impact:

This evaluation can provide further evidence for the value of BASE, which will be beneficial for enhancing services to a broader population of people with chronic pain in New Zealand.

Method:

Participants were 216 patients with chronic pain, aged 18-84 years, who attended a BASE seminar between 1 July 2016 and 31 July 2017. As per standard protocol, patients were required to complete a set of pain psychometric questionnaires upon referral to BPMC, prior to attending BASE. Novel to this study, the questionnaires were also administered two weeks following their attendance. The questionnaires measured several key psychosocial variables implicated in the experience of chronic pain. These included: Brief Pain Inventory (BPI) which assesses self-reported measures of pain severity and interference on various aspects of life; Depression, Anxiety, Stress Scales (DASS-21) which assess the extent to which patients experience symptoms associated with psychological distress; Pain Self-Efficacy Questionnaire (PSEQ) which assesses patients' beliefs about their confidence to perform daily functional and social activities despite pain; and the Pain Catastrophising Scale (PCS) that assesses patient rumination, magnification and helplessness involved with chronic pain. The pre-BASE (T1) and post-BASE (T2) data were analysed for statistical and clinical significance.

Results:

Analysis of the psychometric data revealed significant improvements in several psychosocial variables from T1 to T2. Results from the BPI revealed a statistically significant reduction in pain interference, although no significant change in pain severity. Analysis of the DASS-21 scores revealed a statistically significant change only within the Depression subscale. Clinically significant changes, however, were observed by 28% of patients in depression, 17% of patients in anxiety, and 22% of patients in stress. Statistically significant improvements were also seen in PSEQ scores and PCS subscale scores (Rumination, Magnification and Helplessness).

Conclusion:

Our findings are consistent with our hypotheses of improvements in psychosocial variables following BASE. These findings suggest that the addition of pre-clinic education to chronic pain management is beneficial in not only catering for a large population of chronic pain patients, but also on improving key psychosocial variables implicated in chronic pain. Improvements in these variables demonstrate reduced pain interference and increased coping abilities in various aspects of life that contribute to improved quality of life for patients with chronic pain. In line with prior research, these outcomes provide further evidence supporting the value of education in chronic pain management. Future investigations on clinical outcomes at six and 12 months (T3 and T4 respectively) should be conducted to evaluate if the positive outcomes identified are sustained over a longer period.