Individual patient responder analysis of the effectiveness of a pain neuroscience education programme in chronic low back pain

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Results: Reach: Two clinics received CPG implementation and two served as controls representing 20 and 13 clinicians respectively. During the study period, sixty out of 270 patients receiving care met the inclusion and exclusion criteria with 31 cases at the CPG implementation sites. Most cases (135) were lost due to incomplete or low (<10%) OD1 codes. Effectiveness: No differences at the patient level were found for LBP disability (OD1) or pain scores (NPRS) between CPG implementation and control clinics. Adoption: Strategies included training local clinical champions, hands on manipulation sessions (81% attendance of staff at implementation sites for live training), clinical rounds, electronic medical record (EMR) algorithms, peer audit, and staff meetings to address barriers. Implementation: Average of 15 separate training contacts of approximately 1 hour each provided per site. At the clinician level differences were found in charge code behavior comparing CPG trained versus control sites (p<0.05) for all patients with LBP diagnoses, however this may be a low indicator of treatment fidelity. Maintenance: One year after trainings retrospective charge data for both CPG training sites remain above target of 75% active codes.

Conclusion: Each strategy was evaluated with RE-AIM criteria at both the clinician and patient levels which is burdensome but necessary to guide next QI steps. Strengths of phase one included use of clinical champions, EMR changes to prompt users, and adapting education needs for each site. Opportunities for improvement include assessment of implementation fidelity, audits to capture outcome measures and database development to provide more meaningful feedback. Multiple levels of complexity exist that demand a pragmatic approach to adapt to each site to maximize effectiveness. Selecting universal key data points, which are easily understood by clinicians and organizational stakeholders is necessary to promote continual site/system-wide readiness to change.

Implications: The gap between current practice and evidence will continue to widen and costs of health care may continue to skyrocket unless active educational strategies are implemented to incorporate evidence-based CPG services. Use of the RE-AIM framework is beneficial to organize the knowledge to action implementation process and clarify pragmatic outcomes for all stakeholders.

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Integrating Research into practice PO1-LB-039

INDIVIDUAL PATIENT RESPONDER ANALYSIS OF THE EFFECTIVENESS OF A PAIN NEUROSCIENCE EDUCATION PROGRAMME IN CHRONIC LOW BACK PAIN

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Background: Chronic low back pain (CLBP) is a common health problem to which a large number of types of treatments seem to produce similar mean improvement in patient’s symptoms. Individual responder analyses offer the possibility of providing patients and clinicians with supplementary information about the chance of achieving particular degrees of pain relief, which may improve the decision-making process as well as communication with patients.

Purpose: To examine the effectiveness of a combined programme of pain neuroscience education and aquatic exercise (EDU+EXE) versus aquatic exercise alone (EXE) in pain intensity in CLBP patients, and to determine the time course of response in pain intensity and the time course of effectiveness for clinically significant improvements.

Methods: A single blind randomized trial, was conducted in patients with CLBP lasting >3 months. The EDU+EXE group (n=30) received 2 sessions of pain neuroscience education followed by 12 sessions of a 6-week aquatic exercise programme, whereas the EXE group (n=32) received 12 sessions of the aquatic exercise programme alone. Patients were assessed at baseline, 3 and 6 weeks after the beginning of the aquatic exercise programme and then at a 12 weeks follow-up. The primary outcome was pain intensity (Visual Analogue Scale). Clinically significant treatment response was defined as a pain relief over baseline of >50%.

Results: Analysis using mixed-model ANOVA revealed a significant treatment condition interaction on pain intensity at the 3 months follow-up, favouring the EDU+EXE group (mean SD change: -25.4 ± 26.7 vs -6.6 ± 30.7, p<0.05). At patient-level response, there were differences in the response rates and patterns. In the EDU+EXE group, the proportion of patients that experienced substantial pain relief (>50%) raised from 47% to 70%, at 3 and 12 weeks, respectively. In the EXE group this proportion raised from 25% to 34% (Relative risk of 1.87, and 2.04 respectively). At 3 weeks, 41% of the participants in the EXE group achieved a level of response of “no important change” (<15%) compared to 27% in the EDU+EXE group. In the EDU+EXE group, and for those who achieved a pain relief of at least 50% at 3 weeks, the rate of sustained pain relief response was approximately 93% and 86%, at 6 and 12 weeks respectively. These rates were higher than those of 63% and 50% found in the EXE group.

Conclusion: This study’s findings support the provision of pain neuroscience education as a clinically effective addition to aquatic exercise. Individual response analysis showed that the patients receiving EDU+EXE achieved an early response to pain, had higher response rates at all the endpoints and were also more likely to achieve a sustained response over time compared to those receiving EXE only.

Implications: Intervention studies should examine patient-level responses in addition to average treatment effects in order to enhance the clinical decision-making and patient communication.

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THE LIVED-THROUGH EXPERIENCES OF PERSISTENT RADICULAR LEG PAIN: A PHENOMENOLOGICAL DESCRIPTIVE STUDY

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Background: Low back pain (LBP) with or without radicular leg pain is still a topical issue today, as it is considered the leading cause of years lived with disability in the United Kingdom. While there is a plethora of quantitative research around the topic, qualitative research on the lived-through experiences of radicular leg pain, or spinally referred persistent leg pain in general, is lacking. Currently most LBP research is still situated in a positivist paradigm, where randomised controlled trials are considered the gold standard for judging the benefits of treatment. This empirical research model, however, is becoming more and more challenged by alternative (qualitative) approaches.

Purpose: In this study, a phenomenological, qualitative enquiry was implemented into the lived experiences of persistent radicular leg pain, attempting to clarify the phenomenon of interest from a physotherapeutic perspective. The aim of the study was to gain an in-depth understanding of the persistent radicular leg pain experience, from the perspective of those who are living and going through the phenomenon in their daily lives.

Methods: The methodology of the study is drawing from the phenomenological philosophy of Edmund Husserl, and Giorgi’s (2009) modification of his phenomenological method. Currently, most of the phenomenological research in the field of health sciences is based on interpretative (hermeneutic) phenomenology, highlighting the idiographic approach. For