Teaching patients about pain: It works, but what should we call it?

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Teaching patients about pain: It works, but what should we call it?

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It is now well established that people in pain, especially persistent pain, have a strong desire to know more about why they continue to hurt (Louw, Louw, and Crous, 2009). Using the traditional educational models, a clinician would likely teach a patient presenting with “shoulder pain” more about their shoulder, not about pain. Although such an anatomically driven educational model might have value for the patient with an acute or perioperative condition, it has been shown to be of little to no value in the case of persistent pain (Nijs et al., 2013). Pain is complex. We now understand that when scanned and tested, many people will have signs of pathology in their tissues (e.g., shoulder) with little to no pain, and conversely, many with normal scans and tests suffer from persistent pain (Spielmann et al., 1999).

The founding principle of teaching patients more about pain was introduced within the physical therapy profession in the early/mid-1990s by late Louis Gifford. Gifford’s need to understand more about pain was born out of his frustration with the biomedical and manual therapy educational models when treating patients with persistent pain (Gifford, 2014). His personal journey led to a greater understanding of pain from a biological and physiological perspective by learning from, and talking to, “people in pain” rather than physical therapists. On the clinical level, Gifford experienced success teaching his patients about pain, leading to seminars as well as the first recorded formal session called “Explaining Pain” at the International Association on the Study of Pain’s conference in 1999 in Vienna, Austria, with Heather Muncey. Then, in 2002, the first randomized controlled trial to examine teaching patients about pain was published by Lorimer Moseley (Moseley, 2002). In 2003, the textbook Explain Pain by Butler and Moseley took teaching patients about pain into the mainstream, while Moseley published several randomized controlled trials on the concept of teaching patients about pain. By 2011, there were enough research articles on the subject, and a systematic review showed us that teaching patients with chronic musculoskeletal pain more about pain from a biological and physiological perspective has a positive effect on pain, function, physical movement, and pain catastrophization (Louw, Diener, Butler, and Puente\textsuperscript{edura, 2011). Since then, there have been dozens of new articles published on this topic, exploring various research questions. While the exponential growth in research activity on this topic is gratifying, we would argue that translation of the evidence into the clinic is still in the early adaptor stage (Haines and Jones, 1994).

In this special issue of Physiotherapy Theory and Practice, our goal is to highlight some of the many clinical perspectives to assist with moving this translation of the evidence on teaching patients about their pain into the clinical world.

For this special issue covering perspectives on pain neuroscience education, we invited clinicians as well as researchers who continue in clinical practice to contribute articles with an emphasis on the clinical applications of pain neuroscience education. Given the increase in research activity, it seemed appropriate to begin this special issue with an update of the evidence. Louw, Zimney, Puente\textsuperscript{edura, and Diener (2016) lead off with a new systematic review of the evidence for the effectiveness of pain neuroscience education on musculoskeletal pain. This latest systematic review updates the studies pertaining to teaching patients about pain, but also removes lower-level articles to increase the quality of the studies in the review. Findings suggest strong evidence for effectiveness, and interestingly evidence for increased effectiveness when a combination of pain neuroscience education and movement-based interventions is used versus education-alone.

The second article by Diener, Kargela, and Louw (2016) addresses the importance of listening in the patient interview. All clinical encounters start with the patient interview, and it is here where therapeutic alliance most likely begins. The interview is the cornerstone of physical therapy, and should be seen as more
more than just an exchange of information and a screening for potential red flags. It provides the foundation and guidance for clinical decisions about the most appropriate treatment for the patient. With the increasing interest in subgrouping of patients, knowledge of pain mechanisms and recognition of psychosocial risk factors, there is a need to determine which patients are most appropriate for a pain neuroscience education approach. Diener, Kargela, and Louw (2016) take on the task of developing an interview process focusing on a pain science perspective as it relates to screening patients, establishing psychosocial barriers to improvement, and pain mechanisms’ assessment.

The third article by the Belgium team of Wijma, van Wilgen, Meeus, and Nijs (2016) takes it a step further by discussing the clinical biopsychosocial physical therapy assessment of the patient with chronic pain. Here, they describe the use of the pain–somatic factors–cognitive factors–emotional factors–behavioral factors–social factors–motivation model (PSCEBSM model) during the intake, as well as a pain analysis sheet. This model attempts to clearly establish what the dominant pain mechanism is (predominant nociceptive, neuropathic, or non-neuropathic central sensitization pain) as well as assess the provoking and perpetuating biopsychosocial factors in the patient with chronic pain. This approach not only helps clinicians identify if a patient should be taught more about pain but take it a step further by tailoring the plan of care, including pain neuroscience education, to the individual patient.

Next, Louw, Zimney, O’Hotto, and Hilton (2016) gather material from randomized controlled trials, systematic reviews, case series, case studies, and expert opinion and provide a proposed layout of the clinical application of teaching people about pain. The article systematically discusses key elements of this approach including examination, educational content and delivery methods, merging of pain neuroscience education with movement, goal setting and progression.

A key element of “teaching people about pain” appears to be the combination of this education with active/movement strategies. This combination underscores why professions such as physical and occupational therapy may be ideal for this approach. In the fifth article, Blickenstaff and Pearson (2016) outline a conceptual framework of kinesthetic education that is consistent with and reinforces pain neuroscience education. They also provide some specific guidance for integrating pain neuroscience education with exercise and movement in a more congruent manner, enhancing the effectiveness of specific movement approaches such as graded exposure techniques. What is often overlooked, however, is the consistency between the messages of pain neuroscience education and those of other therapeutic interventions, including movement therapies. The addition of guided purposeful movement performed in a manner consistent with pain neuroscience education may be vital to the desired behavioral changes, and when inconsistent messages are delivered between education and movement interventions, outcomes may be adversely impacted.

With pain neuroscience education aiming to shift a patient’s focus from the tissues as the source of their pain to the brain’s interpretation of inputs, many clinicians could mistakenly believe that pain neuroscience education should be a “hands-off,” education-only approach. Furthermore, it may be inferred that providing manual therapy or exercise to address local tissue pathology could focus the patient’s attention back to the tissues as the source of their problem, thus undermining the pain neuroscience education narrative. In their narrative review of the literature, PuenteDura and Flynn (2016) present an approach that combines pain neuroscience education with manual therapy and exercise in patients with chronic low back pain. They propose that in addition to local mechanical effects, providing manual therapy within a pain neuroscience education context may improve or enhance patient expectations, and also refresh or sharpen the patient’s body schema maps within the brain, ultimately leading to better outcomes in patients with chronic low back pain.

Finally, the last article in this issue by Schmidt (2016) reviews factors which may confound the process of setting and achieving rehabilitation goals using a biopsychosocial framework and provides recommendations to enhance program effectiveness. It has been argued that one of the biggest problems faced by people in pain is lack of goals, be it poorly defined goals to goals so far out of reach they are not worth pursuing, to no goals at all. Defining and developing personal individualized goals provide the proverbial “reason to get out of bed,” a key element in buying into the pain neuroscience education model. Although goal setting in rehabilitation is considered a fundamental and requisite skill, it is frequently reported as a very challenging element of clinical practice.

We sincerely hope that this special issue will help clinicians gain additional skills in the clinical application of pain neuroscience education. The process of gathering these authors and articles for this issue highlighted a growing problem with this topic. That problem is determining what we should call it. This approach of teaching people about pain has been referred to as: “Explaining Pain to Patients”


Louv A, Puentedura E 2013 Therapeutic Neuroscience Education: Teaching Patients about Pain. Minneapolis, MN, OPTP.


Van Ittersum MW, van Wilgen CP, Groothoff JW, Van der Schans CP 2011 Is appreciation of written education about pain neurophysiology related to changes in illness...
