Module 1: Lecture 2. Pain mechanisms and phenotypes

Introduction
This lecture presents and discusses models of pain set against the background of its variable clinical presentations. A mechanisms-based approach towards the classification of pain as a way to understand and explain such variability will be presented. Participants will acquire an understanding of how they might identify mechanisms-based phenotypes in individual patients and how these may influence patients' assessment, treatment, and prognosis.

Learning Outcomes Mapped to EFIC Pain Physiotherapy Curriculum
By the end of this session, participants should have an understanding of:
1. Models of pain (section 1.1.4; 1.1.5; 1.3.1)
2. The potential complexity of clinical presentations of pain (1.1.3)
3. Mechanisms-based classifications of pain (1.1.1; 1.2.2; 1.3.1)
4. The symptoms and signs associated with mechanisms-based classifications of pain (2.1.1; 2.1.5)
5. Their implications for treatment (3.1.1; 3.5.1)

Preparation
Participants should prepare by i) having spent some time thinking about how they personally conceptualise, assess, and treat patients' pain, ii) reflecting on some recent notable/perplexing/interesting clinical presentations of pain, and iii) reading this one article; (Towards a mechanisms-based classification of pain in musculoskeletal physiotherapy? Physical Therapy Reviews: Vol 13, No 1 (tandfonline.com)).

Content
The class will provide participants with a contemporary perspective on mechanisms-based classification of pain via an interactive lecture. As respected, knowledgeable, and experienced healthcare professionals, participants will be encouraged to actively contribute to the session by sharing their own knowledge and experiences and participating in a 'Q&A' and reflective moments.

Follow up / suggestions for processing and practice

Consolidating the knowledge developed in this session will provide participants with real-world, clinically applicable knowledge capable of immediately influencing clinical practice.

Key academic references are cited and which, once read and considered, will support participants to further develop their pain-related knowledge and expertise. Participants will be encouraged to reflect on the extent to which mechanisms-based classifications of pain could apply to their own work settings.

Reference material
Smart KM et al. Towards a mechanisms-based classification of pain in musculoskeletal physiotherapy? Physical Therapy Reviews 2008; 13: 1-10. doi:

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Shraim MA et al. Features and methods to discriminate between mechanism-based categories of pain experienced in the musculoskeletal system: a Delphi expert consensus study. Pain 2022; Jan 19. DOI: 10.1097/j.pain.0000000000002577. Epub ahead of print.

Smart KM, Blake C, Staines A, Doody C. The discriminative validity of 'nociceptive', 'peripheral neuropathic' and 'central sensitisation' as mechanisms-based classifications of musculoskeletal pain. Clinical Journal of Pain 2011; 27: 655-63.
DOI: 10.1097/AJP.0b013e318215f16a

Smart KM, Blake C, Staines A, Doody C. Self-reported pain severity, quality of life, disability, anxiety and depression in patients classified with 'nociceptive', 'peripheral neuropathic' and 'central sensitisation' pain. The discriminant validity of mechanisms-based classifications of low back (± leg) pain. Manual Therapy 2012; 17: 119-25. DOI: 10.1016/j.math.2011.10.002

Beales D et al. Masterclass: A pragmatic approach to pain sensitivity in people with musculoskeletal disorders and implications for clinical management for musculoskeletal clinicians. Musculoskeletal Science and Practice 2021; 51: 10221.
DOI: 10.1016/j.msksp.2020.102221

Smart KM, Blake C, Staines A, Thacker M, Doody C. Mechanisms-based classifications of musculoskeletal pain: Part 3 of 3: Symptoms and signs of 'nociceptive' pain in patients with low back (± leg) pain. Manual Therapy 2012; 17: 352-7. DOI: 10.1016/j.math.2012.03.002

Finnerup NB et al. Neuropathic Pain: From Mechanisms to Treatment. Physiological Reviews 2021; 101:259-301. DOI: 10.1152/physrev.00045.2019

Fitzcharles MA et al. Nociplastic pain: towards an understanding of prevalent pain conditions. Lancet. 202; 397: 2098-110. DOI: 10.1016/S0140-6736(21)00392-5