**The Pain Picture – Exploring complex pain states**

Course timings, outline and objectives

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| Time | Lecture outline | Sessions aims |
| **Day 1** |  |  |
| 9.00 – 10.30 | **Introduction/landscape of the course**   * Pain quiz and pain fact finding (30 mins) * Patient video – how does pain affect life? (45 mins) * Basic pain overview (15 mins) | Reflection on current understanding of pain.  Introduction and analysis of the person in pain and their personal suffering. |
| 10.30 – 10.45 | Break |  |
| 10.45 – 12.15 | **Historical pain models**   * Specificity theory/tissue pathology models (20 mins) * Pattern theory – gate control theory of pain (20 mins) * Neuromatrix & saliency (20 mins) * Embodied cognition models – Mature Organism Model (30 mins) | Introduce basic pain relevant philosophy and biology. Compare and contrast different pain models in relation to specific pain states. Develop features and characteristics required in a pain model. |
| 12.15 – 1.15 | Lunch |  |
| 1.15 – 2.45 | **Predictive processing – developing a new model for pain**   * Top-down versus bottom-up processing (15 mins) * Prediction errors & minimization (15 mins) * Generative models (15 mins) * Precision weighting (10 mins) * Context dependency (10 mins) * Active & perceptual inference (15 mins) * Entropic states (10 mins) | Build a new model for pain utilizing the features and characteristics developed in the previous lecture.  Introduce predictive processing and the six main features required to understand it.  Offer scientific evidence for predictive processing as a new model to understand pain. |
| 2.45 – 3.00 | Break |  |
| 3.00 – 4.30 | **Exploring body perception**   * Practical 1st versus 3rd person experiences (30 mins) * Rubber Hand illusion theory and practical (30 mins) * Body perception – agency and ownership (30 mins) | Demonstrate the limitations and biases that clinicians hold in examining the person in pain. Introduce body perception and the fit with predictive processing. Demonstrate the link of body perception change and pain. |
| **Day 2** |  |  |
| 9.00 – 10.30 | **Pain debate** (45 mins)  **The complexity in complex pain states**   * CRPS (15 mins) * LBP (15 mins) * FMS (15 mins) | Critical reflection of pain. Develop a more robust understanding of pain considering different perspectives.  Introduce specific features and characteristics of complex and persistent pain states. |
| 10.30 – 10.45 | Break |  |
| 10.45 – 12.15 | **Integrating pain models into the clinical assessment**   * Bedside assessment tools   + Two-point discmination (30 mins)   + Localisation of touch (30 mins) * Interpreting responses in regard of predictive processing model (30 mins) | Introduce clinical bedside tests to explore body perception. Be comfortable with interpreting findings. |
| 12.15 – 1.15 | Lunch |  |
| 1.15 – 2.45 | **Introducing treatment options**   * Graded exposure & dose titration (30 mins) * Vulnerability & susceptibility (20 mins) * Resilience & tolerance (20 mins) * Variability & flexibility (20 mins) | In-depth analysis and critique of treatment considerations. What does the research say and how to incorporate into an individualized treatment program? |
| 2.45 – 3.00 | Break |  |
| 3.00 – 4.30 | **Patient case studies** (60 mins)   * Summing up pain models   + Feasible, realistic, testable (30 mins) | 4 complex pain states to review and specific questions to answer – group work.  Summary of the course. |

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