

## **MACP Level 2 Research Award**

**Martin Rabey**

**10<sup>th</sup> Congress of the European Pain Federation**

**September 6-9 2017, Copenhagen, Denmark**

### **Poster presentation**

I was successful in my application to present a poster at this conference. Oral presentations at this conference are by invitation only. The poster was a summary of my entire doctoral thesis, and was entitled, "An exploration of subgrouping in people with chronic axial low back pain."

Authors: Dr Martin Rabey, Assoc. Prof. Anne Smith, Dr Darren Beales, Assoc. Prof. Helen Slater, Prof. Peter O'Sullivan.

Work attributable to: School of Physiotherapy and Exercise Science, Curtin University, Perth, Australia

### **BACKGROUND:**

Although much effort has been directed towards identifying subgroups of people with chronic low back pain (CLBP) based on differential treatment effects, progress to date has been minimal. 'Unsupervised' (statistical) subgrouping without consideration of prognosis or treatment response has been recommended as a means of identifying people with common groupings of multidimensional pain-related characteristics to inform development of tailored interventions for testing in future randomised controlled trials.

### **AIM:**

To identify subgroups of people with CLBP across multiple dimensions using unsupervised statistical methodology.

### **METHODS:**

Latent class analysis of multidimensional data (demographics, pain characteristics, tissue sensitivity, psychological, social, health, lifestyle, movement) from a CLBP cohort (n=294) was attempted. No clear solution was identifiable with the numbers available. Subsequently, data reduction techniques were utilised to reduce the number of variables entered into latent class analysis, however, there was still no clear solution identifiable. Therefore, statistical subgrouping was performed separately within three single clinically-important, potentially modifiable dimensions: pain sensitivity (already published as Rabey et al. 2015, Pain), psychological scores (Rabey et al. 2016, Clinical Journal of Pain) and pain responses following repeated spinal bending (Rabey et al. 2017, Scandinavian Journal of Pain), and membership patterns of each subgroup were tabulated across all three domains.

### **RESULTS:**

Three clinically recognisable subgroups were identified from each domain analysis. When tabulated, 26 out of 27 membership patterns were represented with no clear majority pattern, the most common pattern occurring in only 16% of the sample.

## **CONCLUSIONS:**

CLBP is a variable, multidimensional disorder. Subgrouping is unlikely to adequately capture individual's multidimensional presentations. Researchers should consider alternative conceptual frameworks for heterogeneity in CLBP e.g. complexity theory. Clinicians need a multidimensional framework to examine for, and intervene across all dimensions.

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Darren Beales: NHMRC Early Career Research Fellowship.

## **The conference**

Overall the conference was variable.

There were some stand out speakers. As a physiotherapist Australia's Siobhan Schabrun stood out with her presentation regarding motor plasticity in pain. The session involving Thomas Graven-Nielsen, Stefaan van Damme and Jo Nijs covering how movement and exercise influence pain was also highly relevant to physiotherapists. Otherwise there were some excellent presentations on topics basic science topics ranging from receptors to glia, and clinical topics ranging from patient education to prognostic screening.

However, unfortunately, in the realm of low back pain, which I was particularly interested in, a number of the highly respected speakers, especially those discussing subgrouping, presented information that was not contemporary and was very limited to defining low back pain as being neuropathic or non-neuropathic in nature. There was very little consideration of other possible factors influencing the assessment and / or management of this disorder.

Also, a significant number of the plenary sessions and breakout sessions involved lectures about pharmacology and spinal cord stimulation, which were of limited value to those in the audience who do not deliver these interventions. Many such sessions were sponsored by pharmacological companies.

## **The city**

Copenhagen is a beautiful city, with some great tourist attractions. Not too large, it is easy to walk around. There is fantastic food, good shopping and the locals are very helpful and speak very good English for those of us who do not have a great command of Danish.

Unfortunately, the conference centre was distant from the city centre. However, as a conference centre it was very good.