a PhD in Epidemiology from the University of Toronto. She teaches Community Health/Community Practice in the Physiotherapy Program which includes approaches to the prevention and management of chronic disease. She also teaches Research Methodology and a course about Chronic Disease in the Rehabilitation Science Graduate Program. Her research interests include identifying persons at risk for functional decline and rehabilitation interventions to prevent functional decline and maintain health status in persons with chronic illness. Recent work has involved clinical trials which have examined complex rehabilitation interventions in primary care settings and have included behavioural, educational and self-management interventions to maximize function, health status and quality of life for persons with chronic illness. Julie Richardson is also currently a member of the MAC H2ope clinic Executive Council.

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Keywords: Musculoskeletal disorders, Self-management

FOCSYM-234
EXERCISE PRESCRIPTION IN CHRONIC PAIN: DO MANUAL THERAPISTS NEED TO UNDERSTAND EMOTION?

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Relevance to IFOMPT and expected audience: Chronic pain produces maladaptive changes in the central nervous system, musculoskeletal system and at the cognitive level. It is important for physiotherapists to understand emotion and emotional regulation processes. Negative emotions and maladaptive cognitive factors contribute to elevated fear-avoidance beliefs in chronic pain patients. A comprehensive exercise therapy programs that include not only exercise but also emotional regulation strategies are considered important targets in the chronic pain management.

Summary of session format: In the first part, Professor Felipe Reis (Brazil) will use evidence from neuroscience studies to present the neuropsychology of emotion and pain using a functional cerebral systems approach. Interactions of these constructs may provide new insight and lead to better health outcomes. In the second part, Professor Mari Lundberg (Sweden) will discuss how assess negative emotions and also how to decrease the anticipated danger of the exercises. In the last part, professor Jo Nijs (Belgium) will provide evidence-based about the biology of exercise-induced endogenous analgesia and dysfunctional reponse in chronic pain will be discussed.

Information concerning any presentations or publications: Pain, Mind and Movement - IASP Congress (2015) – "THINKING ABOUT MOVEMENT MADE ME MORE SENSITIZED" – Best Poster Award. Memory of the painful movement resulted in a lower pressure pain thresholds. Fear of movement affects motor processes and pain even when the individual has no intention to execute the movement.

Description: First part: Emotional control of pain and its disruption in persons with chronic pain conditions. The significance of emotions and emotional regulation processes has been highlighted in conceptualization, assessment, and treatment of chronic pain. Pain is a complex condition combining nociceptive, sensory and emotional experiences that vary widely between people (Bushnell, Čeko and Low, 2013). Neuroimaging studies have allowed researches to examine the neural basis of psychological modulation of pain revealing that activity in afferent pain pathways is altered by the attentional state, positive and negative emotions (Schweinhardt and Bushnell, 2010). Recent studies showed that the anterior cingulate cortex (ACC) and insula, which have been considered exclusively as components of the limbic (emotional) part of the brain, for encoding the emotional and motivational aspects of pain (Bushnell, Čeko and Low, 2013). The activation of these regions in the absence of a pain stimulus could induce a state of 'priming' in the brain, in which a noxious stimulus given after emotionally priming a subject elicits an enhanced pain experience (Loggia, Mogil and Bushnell, 2008). These findings can also explain why a noxious insult to the body is not necessary for the experience of pain or for the activation of pain pathways.

Second part: The fear-avoidance model: How to erase pain memories? Fear and anxiety are emotional aspects that can be observed in people suffering from chronic pain. Fear is the emotional reaction to a specific, identifiable, and immediate threat and the objective is to protect the individual from danger (Vlaeyen and Linton, 2000). On the other hand, anxiety is a future-oriented affective state and the source of threat is not so clear focus. The fear and anxiety responses can be physiological (increase muscle tension), behavioral (escape and avoidance behavior), as well as cognitive (catastrophizing thoughts) (Vlaeyen and Crombez, 1999). Some dysfunctional interpretations could lead to pain-related fear, and avoidance/escape and hypervigilance. This part of the presentation focuses on fear/anxiety and memories as emotional components of worsening symptoms in chronic pain (Nijs et al., 2015). The presenter will discuss how assess negative emotions and also how to decrease the anticipated danger (threat level) of the exercises by challenging the nature of, and reasoning behind their fears, assuring the safety of the exercises, and increasing confidence in a successful accomplishment of the exercise.

Third part: Is it really safe to prescribe exercise for chronic pain patients? Although regular exercise programs might be considered as a central component of the treatment, it is difficult to prescribe or recommend exercises for chronic pain patients. In some cases, chronic pain patients encounter exercises as a potential risk for increasing in the sensory (intensity) and the affective (unpleasantness) components of pain (Nijs et al., 2015). In the last part of this presentation, we will present the principles of exercises prescription in chronic pain patients applying graded exposure in vivo. The third part of this presentation will focus on appropriate exercise therapy and recovery in patients with chronic pain. Specifically, in this presentation the current knowledge of the biology of exercise-induced endogenous analgesia and dysfunctional response in chronic pain will be discussed. In the end, the findings will be summarized in terms of clinical practice allowing manual therapist to prescribe exercise in chronic pain.

Learning objectives: · To understand the latest developments concerning emotion interactions in chronic pain and their implications for PT and manual therapists.

· To understand fear/anxiety and memories as emotional components and how these negative emotions contribute to anticipated danger (threat level) of the exercises.

· To understand the latest evidence-based developments to elaborate an effective exercise program in chronic pain management considering cognitive/affective/emotive aspects of the pain experience.

Implication/Conclusions: This symposium will be cover chronic pain as the world's most burdensome health issue. By focussing on the most recent and important studies, this symposium will give attendants an account of current concepts of emotion and emotional regulation in chronic pain and an important biopsychosocial view for applying effective exercise therapy. These concepts should influence physiotherapists and manual therapist clinical reasoning, and thereby their clinical practice, immediately.

Biography: Felipe Reis is a Brazilian Physiotherapy graduated from the Federal University of Rio de Janeiro (1999), specialist in Manual Therapy and Orthopedics Physical Therapy. He has received his Master and Doctoral degree in Science from Federal University of Rio de Janeiro. Actually, he is professor at Federal Institute of Rio de Janeiro. Since 2008, as a Pain Researcher Coordinator at the Federal Institute of Rio de Janeiro, he is responsible for researches in motor control and pain. He is also responsible for the Musculoskeletal Physiotherapy Department. He is professor of Manual Therapy in post graduation courses and continued education. At Federal University of Rio de Janeiro as an invited researcher he develops studies about Neuropathic pain, Neuroscience Education and Brain Mapping. He presented an average of 20 lectures on pain and per year. Most of them have been delivered to colleagues in the other University Hospitals of Brazil and at the national Physical Therapy Symposia. In addition, he given invited lectures or presentations in international conferences in the following countries: Holland, Canada, Colombia, South Africa. He

published as author or co-author about 15 original articles and reviews in peer-reviewed in medical journals including Leprosy Review, Tropical Medicine and Pain Management. He contributes in some medical journals as a reviewer such as Leprosy Review, The Journal of Orthopaedic and Sports Physical Therapy (JOSPT), Brazilian Journal of Sports Medicine, Journal of Orthopaedic Surgery and Research, Biocybernetics and Biomedical Engineering, Research and Reports in Tropical Medicine.

Mari Lundberg is a physical therapist and she holds a PhD in Orthopaedics. She is a university lecturer at Karolinska Institutet (Stockholm, Sweden) where she is responsible for the pain education at the physical therapy program. She is engaged in clinical research at the Orthopaedics Department Sahlgrenska University Hospital, Gothenburg. Her main research interest is clinical research and how to translate research results into clinical practice, and how to get the clinical ideas into research. She has lectured more than 600 hrs at the basic level, advanced level, research level and post-doc level within various health care sciences since 2006. She has clinical experience from physical therapy pain management within the field of orthopaedics, rheumatology and sports medicine. She is a frequent speaker within clinical research. Mari is member of the executive board in: The Special Interest Group of Pain, Mind and Movement of the International Study on Pain; The Swedish Physical Therapy Association and The Swedish Pain Association.

Jo Nijs holds a PhD in rehabilitation science and physiotherapy and master of science degrees in physiotherapy / rehabilitations sciences as well as manual therapy. He is full-time appointed as associate professor at the Vrije Universiteit Brussel (Brussels, Belgium), physiotherapist/manual therapist at the University Hospital Brussels, and holder of the Chair 'Exercise immunology and chronic fatigue in health and disease' funded by the European College for Decongestive Lymphatic Therapy. He is the Scientific Chair of the executive committee of the Pain, Mind and Movement Special Interest Group of the International Association for the Study of Pain (IASP). Jo runs the Pain in Motion international research group (www.paininmotion.be) and a physiotherapy-based treatment program for patients with chronic pain in the University Hospital Brussels. His research and clinical interests are patients with chronic 'unexplained' pain / fatigue and pain-movement interactions, with special emphasis on the central nervous system. The primary aim of his research is improving care for patients with chronic pain. At the age of 39, he has (co-)authored more than 150 peer reviewed publications, has obtained over €4.7 million of grant income, served more than 150 times as an invited or keynote speaker at national and international meetings in 17 different countries, and supervised 6 PhD projects to completion. His work has been cited >1700 times (h-index: 25; ISI Web of Knowledge).

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Disclosure of Interest: None declared.

Keywords: Chronic pain, Exercise, Neuropsychological approach

FOCSYM-260
THE ROLE OF PHYSIOTHERAPY IN THE MANAGEMENT OF OSTEOPOROSIS & BONE HEALTH

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Relevance to IFOMPT and expected audience: Osteoporosis is a global health issue with 1 in 3 women and 1 in 5 men over the age of 50 predicted to break a bone as a result of osteoporosis. There is increasing evidence that physical therapies including manual techniques and exercise interventions have an important role in people with osteoporosis. Many of the delegates attending IFOMPT will be clinicians seeing clients with osteoporosis or giving guidance on bone health.

Summary of session format: The session will provide an overview of the current state of evidence based knowledge about the physiotherapy management of osteoporosis.

Karen will introduce the topic and give an overview of exercise strategies. Meena will discuss exercise as a preventative strategy for bone health and falls prevention, Kathy will discuss the paradox in optimal exercise for osteoporosis and pelvic floor dsysfunction. Jane will use case studies drawn directly from practice to discuss clinical reasoning and practical management strategies underpinned by the current evidence base. The presentations will be followed by a focused discussion with the audience and concluding remarks.

Information concerning any presentations or publications: Karen Barker – Non Surgical management of vertebral fracture - AGILE Conference, UK October 2015.

Description: Introduction [Professor Karen Barker, 10 minutes]

Karen will provide a context for the symposium by briefly overviewing the current extent and quality of evidence for the management of osteoporosis by physiotherapy and ongoing research.

Dr Meena Sran – Exercise for fracture prevention in adults and optimising bone health [15 mins].

Meena's presentation will focus on the findings of research including many trials she has conducted herself and show how this information can be applied in clinical practice to understand whether exercise can influence bone mineral density, bone strength and fall prevention and what types of exercise has been shown to have positive impacts on these. She will draw on her experience developing and using the Osteofit exercise, education and falls prevention programme for individuals with osteoporosis in Canada.

Professor Kathy Briffa – Exercise for osteoporosis unmasking pelvic dysfunction [15 mins]

It is important when prescribing exercise for chronic conditions that the approach is holistic, particularly in ageing populations where multiple and complex comorbidities are likely. Urinary incontinence and osteoporosis are conditions that are likely to coexist, particularly in post-menopausal women because of shared risk factors and the age-related increase in incidence of both conditions. Our data show that almost half of women participating in organized recreational exercise classes have stress urinary incontinence, albeit with most having only slight to moderate leakage. However, only 15% reported being screened for pelvic floor muscle dysfunction in their pre-exercise screening appraisals. While appropriate exercise can be beneficial for pelvic floor dysfunction, exercise that loads the pelvic floor such as high impact exercise and exercise that raises intra-abdominal pressure as resistance training is known to do can be aggravating factors. Herein lies a paradox. High impact exercise and resistance training are the two modes of exercise most widely cited as beneficial for osteoporosis. Therefore, screening for pelvic floor dysfunction prior to commencing a new exercise program and periodically during a progressive exercise program to avoid aggravating any pre-existing pelvic floor dysfunction and associated symptoms is recommended. For those who are symptomatic or at high risk of pelvic floor dysfunction the exercise program should commence with pelvic floor safe exercises while specific pelvic floor assessment and treatment is undertaken. In the symposium the emerging research in this area will be reviewed and methods of implementing it in practice will be discussed.

Dr Jane Simmonds – What do case studies tell us? [15 mins]

Through a series of carefully selected case studies of individuals drawn directly from practice the clinical reasoning and practical management strategies underpinned by the current evidence base will be presented and discussed. Cases will include individuals with both primary and secondary osteopenia and osteoporosis who have underlying medical conditions such as Ehlers Danlos Syndrome, Juvenile Idiopathic Arthritis and female athletic triad.

Discussion [30 mins]

The symposium will finish with a structured discussion with the audience given the opportunity to comment on the remarks made by the speakers, contribute additional points of view and ask questions followed by concluding remarks by the convenor.

Karen will summarise the main points made in the presentations and the Discussion session 5 mins].