

# Fisioterapia

Revista de salud, discapacidad y terapéutica física

6<sup>th</sup> International Conference on Physiotherapy in Psychiatry and Mental Health

# 1

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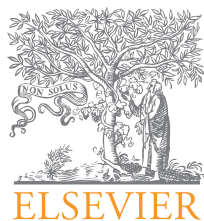
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## 6<sup>th</sup> International Conference on Physiotherapy in Psychiatry and Mental Health

Madrid, 9-11 March 2016

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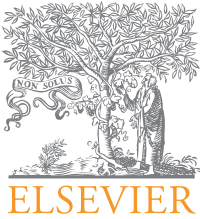
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## EDITORIAL

# Moving forward in Physiotherapy and Mental Health

Daniel Catalan-Matamoros

*6th ICPPMH Conference Chair*

The 6th edition of the International Conference on Physiotherapy in Psychiatry and Mental Health (6th ICPPMH) was held from 9-11 March 2016, in Madrid, Spain. The Conference was organized by the University Carlos III of Madrid and the International Organization of Physical Therapy in Mental Health (WCPT official subgroup). The Conference was sponsored by the Spanish Association of Physiotherapists, and the Professional Union for Physiotherapists in Madrid provided collaboration. The Conference venue was located in the historical building Hotel Tryp Atocha.

6th ICPPMH was attended by more than 200 registered participants. The attendance was split between 36 countries (Europe 21, Asia 6, America 5, Africa 3 and Australia). These numbers show how rapidly this field is growing internationally since there are about 12 countries that joined the Conference for the first time. Moreover, representatives from the World Health Organization and the Ministry of Health in Spain were present in order to explore the added value of physiotherapy in mental healthcare services and promote international collaboration.

The Conference featured seven keynote lectures, six round tables, six parallel sessions, fifteen workshops. In total, the Scientific Committee approved 133 abstracts (81 oral presentations and 52 posters). The Scientific Committee was composed by 17 members from 13 nationalities around the World and the Organisation Committee was composed by 5 members.

The 6th ICPPMH is a forum for the discussion of new developments in Physiotherapy methods and applications in the fields of psychiatry, mental health and it also includes innovative and effective strategies to address today's com-

plex health challenges in long-lasting musculoskeletal disorders, chronic pain, psychosomatics, etc. Following the trend of the last 10 years, the conference focuses more and more on the effect of exercise, body awareness and psychomotor physiotherapy interventions to improve mental health and increase wellbeing. The Conference showed more scientific research on the effect of physiotherapy in mental health disorders such as depression, anxiety, schizophrenia, eating disorders, bipolar disorders, dementia, etc. Moreover, newly introduced topics were included in the Conference program such as the role of physiotherapy in people suffering from torture, violence with especial attention to the refugee's crises that Europe is living nowadays. These topics show how mental health physiotherapy meets the needs of current society.

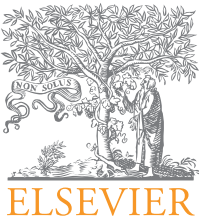
The theme for the Conference was "Communication in a Connected World". This theme reflects on the digital world where communication is now spread out throughout every aspect of healthcare, enabling greater data sharing for both patients and health professionals, which is in turn empowering health settings and it's not without challenges. The field of Mental Health Physiotherapy is growing rapidly and new communication technologies are facilitating this process.

We thank all the participants at 6th ICPPMH, everybody who helped in the organization and we are looking forward to hearing about further progress during 7th ICPPMH, which for sure will be another big success.

Further information about the 6th ICPPMH, access to the detailed program and the electronic abstract book, can be found on the congress website

[http://icppmh.org/madrid\\_home.html](http://icppmh.org/madrid_home.html)

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## 6<sup>th</sup> International Conference on Physiotherapy in Psychiatry and Mental Health

Madrid, 9-11 March 2016

Wednesday 9<sup>th</sup> of March, 2016

### Plenary session

#### 1. COMMUNICATING THE PHENOMENON OF MOVEMENT QUALITY - A RETROSPECTIVE STUDY OF DESCRIBING A PROFESSIONAL CONTENT WITHIN MENTAL HEALTH PHYSIOTHERAPY

Liv Helvik Skjaerven

*Professor in Physiotherapy, Department of Occupational Physiotherapy, Physiotherapy and Radiography, Faculty of Health and Social Sciences, Bergen University College, Bergen, Norway.  
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**Background:** Physiotherapists use the phenomenon of movement quality, often with little clarification. Even though, physiotherapists seem to have an inborn sense for movement, and the communication of movement quality mostly uses intuitive descriptions and a vocabulary rooted in anatomy, biomechanics and physiology. A profession with human movement and function as core phenomenon needs to be explicit in the communication of movement, aiming towards an increased movement identity.

**Purpose:** The purpose was to study the process of communicating a content of the phenomenon of movement quality, reaching a descriptive character for use in mental health physiotherapy.

**Methods:** A retrospective study was conducted, studying the present condition of a material of 20 years of communicating movement quality, collecting data about the past history to explain the present condition. By communication is meant the process of using words to describe movement quality to express and exchange information to another mental health physiotherapists, students, health workers and patients.

**Findings:** A material of 9 communicative forms of descriptions were identified: 1) a movement educator and psychotherapist, 2) paintings and sculptures of Fine Art, 3) PT clinicians and patients, 4) curriculum development, 5) teaching material at BA, MSc and PhD, 6) assignments, exams, and evaluations, 7) peer-reviewed interna-

tional papers, booklets, folders, 8) movement pedagogy and 9) documentary and tutorial films.

**Conclusions:** The nine communicative forms identified in the retrospective study act as a base for the vocabulary, perspectives, elements and aspects, defining the present phenomenon of movement quality.

**Implementation:** Communication is the human way of exchanging information. A nuanced communication of the phenomenon of movement quality in physiotherapy is of growing importance to reach challenges in society. To communicate perspectives, core elements and aspects of movement quality within mental health physiotherapy, includes a vocabulary that needs to be further considered and to become standardized.

**Key words:** Movement Quality. Communication. Mental health physiotherapy.

**Funding acknowledgements:** Department of Occupational Therapy, Physiotherapy and Radiography, Faculty of Health and Social Science, Bergen University College. Ethical considerations were followed, in line with the Helsinki Declaration and approved by Bergen University College.

#### 2. NEW METHODS IN DIAGNOSIS AND PHYSICAL THERAPY OF CHRONIC LUMBAR PAIN

Claus Knapp Boetticher<sup>a</sup> and Esther Eiras Taboada<sup>b</sup>

*<sup>a</sup>Head of Radiodiagnostic Department La Paz (retired), Madrid, Spain. Medical Director "Spine School". <sup>b</sup>Director, "Spine School", Madrid, Spain. E-mail: claus@knapp.net.*

**Background:** According to data from the European Health Survey in Spain (EESA) 2014, the Spanish part of the European Health Interview Survey (EHIS), 17.34% of the population aged over 15 years suffers from chronic lower back pain. Treatment is usually surgical, although this is slowly decreasing. Herein we suggest the dynamic possibilities that could be the cause of this pain. This study is conducted in more than 4,000 cases from various clinics and hospitals. Consequently, as we are yet unable to establish a definitive statistic, we suggest the basis for future studies. Herein we present the theory and our observations. Chronic lower back pain has been studied for many years, although mainly in the elderly. Its frequency is increasing in younger patients. A lack of movement is the cause

of a “painful spine”. Its relationship to weight and gravity has been demonstrated by way of almost 20 years of clinical observation.

**Purpose:** The case study relates to its initial situation and the relationship with non-surgical treatments. As this is a dynamic process, treatment should also be dynamic. Surgical results are not considered to be satisfactory.

**Methods:** The aetiopathological assumption is that the spine is correctly supported on disc L5-S1. Atrophy of the muscles means that inclination of the spine displaces this support point dorsally. This compresses the posterior facet joints, which are not prepared to support weight. The joint region becomes inflamed and the muscle environment contracts. Based on the application of a wide range of muscle rehabilitation exercises, and using trial-and-error, we have been able to develop various simple techniques that are applicable for all ages and which guarantee a cure if the patient follows the requirements of rehabilitation.

**Results:** The choice and means of performing certain exercises allowed us to establish our “Spine School”. As far as we are aware, the method from is an effective method to treat and cure, by physiotherapy, nearly all the cases of chronic lumbar pain.

**Conclusions:** The results show that we can reduce surgical interventions to a minimum. Slipped disc, canal stenosis, facet joint arthritis, protruding disc, etc. can all be successfully treated by physiotherapy.

**Implications:** In the absence of a traumatic fracture, initial treatment may involve the use of the “Spine School (Dr. Knapp)”. We suggest that this must be performed by specialised physiotherapists.

**Key words:** Back pain. Lumbar pain. Canal stenosis. Sciatic pain. Post-operative lumbar pain.

**Funding acknowledgements:** Dr. Claus Knapp Boetticher.

**Ethical considerations:** The Ethics Committee of the University WITTEN/Herdecke approved the study.

## Thursday 10<sup>th</sup> of March, 2016

### 08.00 - 09.20 Morning Round Table 1: Postgraduate education and professional issues, a needed symbiosis Chair: Anne Parker, United Kingdom

#### 3. EDUCATION IN MENTAL HEALTH AND PSYCHIATRIC PHYSIOTHERAPY AT THE BACHELOR DEGREE PROGRAMME, COPENHAGEN, DENMARK

Jannick Marschall and Jonna Jensen

*Metropolitan University College, Department of Physiotherapy and Occupational Therapy, Faculty of Health and Technology, Denmark. E-mail: jnma@phmetropol.dk*

**Purpose:** The purpose is to describe how education in mental health and psychiatry in the Bachelor degree Physiotherapy programme, Metropolitan University College, is organized and how it has become a larger part of the curriculum. The aim is to secure that future physiotherapists have larger insight into the field of mental health - at a research level as well as in practice.

**Background:** Medical treatment should not only take care of the physical symptoms and causes of the disease but also focus on the psychological challenges. There is a clear link between mental illness and poor mental health. Historically there is a challenge get-

ting the physiotherapy students interested in the field of mental health and psychiatry. It is considered a niche and not “proper” physiotherapy. It is our understanding this resistance comes from being uninformed and physiotherapy in psychiatry is “not hot”. In the current bachelor program more attention has been paid to approach the student’s skills in mental health and psychiatry to make them qualified to cope with patients in this field. By highlighting and focusing on mental health and its target groups, we hope to influence the recognition of the field.

**Description:** Until now the basic topic of the education includes resource orientated physiotherapy and holistic view of humanity and the possibility to attend psychiatric internships. This new initiative involves the students in their last third of their education program. They must work with our 4 research fields where one is mental health and psychiatric physiotherapy. This deeper knowledge of the research in the area gives the students a higher insight of the field. Another initiative are to achieve cocreation through the involvement of students as volunteer at our outgoing clinic, where we work with homeless and socially vulnerable people in cooperation between the local interest groups regarding exercise to young people with mental disorders. Focusing on systematic health checks and support for change of lifestyle. Another initiative is an elective topic in BBAT and psychosomatic physiotherapy and more involvement and participation in the lives of people with the mental disease. This is good experiences for the students where they can act as sparring partners and role models and help to promote the experience of manageability and hope.

**Results:** Final evaluation is forthcoming. Provisional findings show an increase of Bachelor projects in the field of mental health and interest in the field of mental health.

**Implications:** Mental health should be more strongly embedded in Curriculum of bachelor degree in Physical therapist.

**Key words:** Curriculum. Mental health. Psychiatry. Bachelor degree.

**Funding acknowledgements:** Metropolitan University College.

**Ethical considerations:** General regulation for ethical consideration in teaching is followed.

#### 4. CLINICAL REASONING IN THE MASTER PROGRAMME IN UTRECHT, THE NETHERLANDS

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**Background and purpose:** The number of patients with medically unexplained complaints (MUSC) is increasing and results in higher costs in public health care. As part of the master programme Physiotherapy and Mental Health at the University of Applied Sciences Utrecht (UASU), students develop diagnostic and therapeutic competences, including clinical reasoning related to patients with high complex psychosomatic complaints, MUSC. Since September 2012 the master curriculum has changed: the module ‘Clinical Reasoning’ has moved from first year’s master program to the second year. The students conclude this six-week module by writing a case report about a patient from their own practice.

**Methods:** In program 2014 a tutor group of twelve students wrote case reports according to the author instructions of the Journal of Physical Therapy after following the course ‘Clinical Reasoning’.

**Results:** Four students had chosen a new, original and interesting approach. The level was high enough to be eligible to publish in *Fysiopraxis*, a renowned Dutch Physical Therapy journal. Author instructions for this journal are similar to those of the Journal of Physical Therapy. Two of these four students actually submitted their case report for publication and were accepted. Of the other

eight students, three did not submit in time, and the others students received grades 7.2-8 (on a scale from 1-10). The first of the published reports 'Can I have your attention?!' describes the case of a 67-year-old man with chronic wide spread pain, who is hyper-vigilant for pain. The treatment consists of an eight-week Mindfulness Based programme (Brandsma), focussing on attention for other aspects in life than pain. The second published case report, describes the treatment of a 51-year-old Turkish woman, who speaks Dutch at a very low level (A1). She has non-specific complaints of her neck and dysfunctional breathing. She has an external locus of control, as we see more often in patients from a non-western culture. The treatment focused on improving selfregulation of tension, using the method described by Dixhoorn, and health education specifically taking into account cultural differences.

**Conclusions:** Master students develop competences in clinical reasoning in high complex levels of complexity according to DAPTT. Writing a casereport in the second year of the master program and the possibility to choose an interesting and new topic could lead to more publishable case reports.

**Implications:** Patients will benefit if therapist have access to standardised, high quality case reports.

**Key words:** Clinical reasoning. High complex psychosomatics. Case report.

## 5. THERAPEUTIC RELATIONSHIP AND WORKING ALLIANCE

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**Background:** In many areas of health care and particularly psychotherapy the development of a therapeutic relationship (TR) or working alliance (WA) has been established as a key component for treatment outcomes. TR is considered potentially an important factor in physiotherapy. The concept is variably defined and several terms are used interchangeably. This lack of consensus regarding the definition of the TR in physiotherapy may suggest a lack of conceptual clarity, limiting research in this field (Besley 2011). Most research is based on the concept of Bordin (1979). Bordin, three way classificatory division: therapist-patient agreement on goals; therapist-patient agreement on interventions; affective bond between patient and therapist. We developed a workshop on the topic based on preliminary literature research and field research. Participants evaluated the workshop as clinically relevant for practice and future research.

**Purpose:** To highlight the importance of the concept of TR and WA in physiotherapy context. The learning objectives of this workshop are related to the importance of the relationship between therapist and patient. Furthermore we would like to trigger thoughts of physiotherapist in mental health about the importance of this topic (TR). Consequently, to foster the debate about this subject. We like to have collaboration and research with colleagues in Psychiatry and Mental Health in the world.

**Methods:** Patients and physiotherapist in primary care were asked to rate on a scale (VAS) from 0-10 the importance of TR. Workshop: Interactive program: participants rated the importance and showed elements of the TR. Theory: recent literature of TA and WA in the physiotherapy. Interactive: a video showing the limited and enhanced clinician/patient interactions used in the study of Fuentes and discussion.

**Results:** Patients (n = 50): range 8-10. Physiotherapist (n = 15): range 7-10. Results workshop: the audience have an insight in their

own perceptions and relevant recent literature about TR and WA in physiotherapy.

**Conclusions:** TR is important in physiotherapy. Patients in our practices in physiotherapy in Psychiatry and Mental Health named trust, safety and relationship the number one condition towards their therapist due to their vulnerability as you have to expose yourself physically as well as emotionally.

**Implications:** WA is directly to use in practice. More study about the elements of WA is needed.

**Key words:** Therapeutic relationship. Work alliance. Working alliance inventory physical therapy. Physiotherapy.

**Funding acknowledgements:** None.

**Ethics approval:** There are no ethical concerns.

## 6. THE CHALLENGE OF GLOBAL MENTAL HEALTH AND LIFE-STYLE EPIDEMICS IN OUR TIME- WHAT ROLE SHALL PHYSIOTHERAPISTS HAVE IN THE FUTURE?

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**Background:** According to Norwegian Agency for Development Cooperation (NORAD) report 3/2014, Mental Health problems represent the greatest health challenges in the world today. It is the major cause of disability and years out of working life worldwide. There is a strong relation between mental health illness and life-style diseases. Mental health patients have an average of 20 years shorter life span than the average population. These statistic facts have earlier not been part of general knowledge among health care professionals, and it will be highlighted in this presentation. Early death due to life style conditions can be prevented with inducing a healthier life style. Physiotherapists can have an important role in training mental health patients, in motivating them and helping them to change lifestyle.

**Purpose:** To focus on the global mental health situation, present evidence for the benefits of using physical activities and training as an approach in mental health work, and advocate for how physiotherapists might take on a more active role in this field. Present evidence for how physical training might be beneficial for mental health patients who suffer extra hard in the world wide epidemic of life style conditions which we see in the world today.

**Methods:** 2 methods included. 1. Systematic literature search for clinical evidence and systematic reviews in Cinahl, PsychInfo, Cochrane Library, Pub Med. 2. Own qualitative research on how psychotic inpatients experience and relate to own body; using dialogic Interviews on psychotic inpatients.

**Results:** 1. Literature search shows strong evidence that patients with schizophrenia and depression improved their condition after participating in training and physical activities. 2. Own research showed a majority of the patients had poor relationship with their own bodies. Taking part in physical activities, helped them to greater well - being and better mental and physical functioning.

**Conclusions:** Mental Health problems represent a huge social, personal and socioeconomic problem in the world today. Evidence show that Training and Physical activity have a genuine positive effect on both physical and mental health of the participants, and should routinely be offered to mental health patients both as intervention and prevention.

**Implications:** Mental Health is an increasing problem in the world today, and should have a greater impact in physiotherapy education. Physiotherapists need to be able to meet the epidemic of life-style conditions in mental health patients. Assessment of physical condition and motivation for life-style changes should be a natural part of physiotherapists' work.

**Key words:** Training and physical activity in mental health. Mental-health patients and life expectancy. Physiotherapy in psychiatry and mental health.

**Funding acknowledgements:** Soer-Troendelag University College, Physiotherapy Program

**Ethical considerations:** Authors research project on psychotic patients' relation to own body was approved by the Mid-Norway ethical board.

## 7. ATTITUDES OF QUEENSLAND PHYSIOTHERAPISTS TOWARD PSYCHIATRY

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**Purpose:** To compare the attitudes of Queensland and Western Australian Physiotherapists toward psychiatry, and to determine whether a physiotherapy specific tool is required for further research in the field.

**Relevance:** The rate of mental illness within Australia is at an all-time high. Australian physiotherapists are involved in the management of patients with comorbid mental illness. It is imperative for physiotherapists to hold positive attitudes toward psychiatry in order to deliver optimal health care to these patients. Attitudes toward psychiatry scale (ATP-30) has been used to evaluate the attitudes of physiotherapists and physiotherapy students. However, having been designed for occupational therapy and medical students, its utility within physiotherapy cohorts has not yet been validated.

**Methods:** Participants: Queensland general practice physiotherapists (n = 56) were invited to complete an online survey. Instrument: A questionnaire including demographic details, exposure to mental illness, the Attitudes to Psychiatry (ATP-30) and open ended questions was developed based on a similar study in Western Australia. Individual telephone interviews with some online survey participants were conducted to evaluate the utility of the ATP-30 within physiotherapy cohorts. Analysis: Attitudes to psychiatry were determined using the guidelines for the ATP-30. Statistical analysis was undertaken to determine the associations between demographic variables and attitudes toward psychiatry. Online survey open ended question responses and interview transcripts were thematically analysed.

**Results:** The response rate to the online survey was 11.2% (n = 56). Overall scores for the ATP-30 revealed that Queensland physiotherapists have positive attitudes to psychiatry. There were no significant differences found between the overall scores of male and females, age groups, years of experience and exposure to psychiatry. However, there were significant differences between these groups across a number of statements within the ATP-30. The responses to open ended questions revealed that prior to commencing clinical work, physiotherapists would have liked to know more about the prevalence of mental illness and skills to better manage patients with comorbid mental illnesses. Participants also indicated that a postgraduate course should include information on common mental health conditions and medications used to treat them. The variability in responses to the individual telephone interviews suggest that more research is required to determine the utility of the ATP-30 within physiotherapy cohorts.

**Conclusions and implications:** Queensland and Western Australian physiotherapists have positive attitudes toward psychiatry. They also report that they would have liked to know more about psychiatry and mental illnesses prior to commencing clinical work as a physiotherapist. Some statements within the ATP-30 were considered irrelevant to physiotherapists and recommendations for a future tool were given.

**Key words:** Attitudes. Psychiatry. Physiotherapist.

**Ethical considerations:** Ethical approval was granted from Griffith University Human Research Ethics Committee.

**Funding acknowledgements:** This project was unfunded.

## 8. PERCEPTION OF MULTIDISCIPLINARY HEALTH REHABILITATION PROGRAM; PATIENT SATISFACTION STUDY

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**Background:** Quality of care is of a major concern of healthcare providers. However, satisfaction, as a multidimensional concept, of consumer of provided service is an important outcome measure that reflects the level of quality of the service. It helps determine the gap between practice and expectations of provided service. Although compound health rehabilitation service is running in Saudi Arabia over 30 years no previous study has been conducted to investigate the quality of the service provided.

**Methods:** 179 male and female subjects aged 18-80 years (mean  $\pm$  SD, 42.6  $\pm$  16.8 years) who received compound health rehabilitation program in any of its four forms; physiotherapy, occupational therapy, speech and hearing therapy or prosthetic and orthotics services, at least for three consecutive sessions, completed and returned the Client Satisfaction Questionnaire (CSQ-8) at Rehabilitation Center, Taif, Saudi Arabia. The CSQ-8 consists of 8 items that is rated on Likert Scale from 1 to 4 with total scores of 32. For each item, the response was expressed as "Strongly agree", "Agree", "Agree somewhat", "Disagree somewhat", "Disagree", and "Strongly disagree" matched to their equivalent score 1-4.

**Results:** High satisfaction levels were scored by respondents, 86.1% (Mean  $\pm$  SD, 27.5  $\pm$  4.3). The highest was scored for Q8 (returning to the center in future) with 93.9% (Mean  $\pm$  SD, 3.8  $\pm$  0.6) while the lowest was scored for Q3 (meeting client needs) with 77% (Mean  $\pm$  SD, 3.1  $\pm$  0.7). The orthotics has the highest score and physiotherapy has the lowest score with no statistical significance  $r = 0.097$ ,  $p > 0.05$ . The satisfaction level was increased with age but it was not statistically significant  $r = 0.73$ ,  $p > 0.05$ . Females scored higher satisfaction levels (86.3%, mean  $\pm$  SD, 27.6  $\pm$  4.2) than males (85.9% mean  $\pm$  SD, 27.5  $\pm$  4.2) but not statistically different  $r = 0.83$ ,  $p > 0.05$ .

**Conclusions:** This study showed that compound health rehabilitation service in Saudi Arabia possesses high satisfaction level in all of its categories. The orthotics service scored the highest level of satisfaction. Females and older clients were more satisfied than males and younger populations.

## 08.00 - 09.20 Morning Round Table 2: Torture, violence and refugees Chair: Joanne Connaughton, Australia

## 9. CROSS-CULTURAL ADAPTATION AND VALIDATION OF THE PAIN CATASTROPHIZING SCALE (PCS) AMONG VICTIMS OF TORTURE

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**Background:** The role of pain catastrophization in the development of chronic pain has gained a considerable amount of attention in

research over the past few decades. Pain is one of the many problems to be addressed in survivors of torture, given the intricacy of the health and social consequences of torture, refugee trauma and a life in exile. Pain-related fear, avoidance behaviour and hyper vigilance are all concerns that affect the refugee that has been tortured, and can lead to disuse and disability. It is recognized that accurate outcome measures are important but also that populations across the world differ in language, lifestyle, values, behavior and perceptions of life and expression of disease.

**Purpose:** To cross-culturally adapt and validate the original PCS among Swahili-speaking victims of torture by means of a repeated measures study design.

**Methods:** Permission to cross-culturally adapt and translate the original PCS was obtained from the original developer, Prof M.J. Sullivan. Two physiotherapists, two occupational therapists working with refugees/victims of torture and 10 English speaking refugees attending Center for Victims of Torture were invited to assist in the cross-cultural adaptation of the original PCS. A professional and independent freelance Swahili translator and native speaking Swahili-speaking health professional were consulted for the forward and back translation process. Fifty refugees/victims of torture visiting CVT were recruited for the reliability study in a repeated measures design. Analysis: The psychometric testing included face and content validity; internal consistency; and test-retest reliability (intraclass coefficient correlations - ICC).

**Results:** The cross-culturally adapted Swahili PCS showed good face and content validity. The Swahili PCS also showed excellent internal consistency (with Cronbach's alpha = 0.91 as a whole. The ICC's (95% CIs) and mean differences (MD) to establish test-retest reliability for the subsections of the PCS (rumination, helplessness and magnification) were as follows: rumination: 0.823 (0.737-0.888), MD -0.02; helplessness: 0.886 (0.833-0.928), MD -0.44; magnification: 0.772 (0.658 - 0.857), MD -0.28. ICC values of 0.6 to 0.8 are regarded as evidence of good reliability.

**Conclusions:** The Swahili-version of the PCS can be recommended as a simple, valid and reliable tool for use among Swahili-speaking torture survivors with chronic pain.

**Implications:** With a simple, valid and reliable tool, it is possible to compare the outcomes related to chronic pain among refugees and victims of torture across different countries in Africa.

**Key words:** Chronic pain. Catastrophization. Refugees. Victims of torture.

**Funding acknowledgements:** None.

**Ethical considerations:** The University of the Western Cape Research Committee, Center for Victims of Torture and the Institutional Research and Ethics Committee (IREC) at Moi University, Kenya.

## 10. AROUSAL REDUCING TECHNIQUES APPLIED FOR DANISH VETERANS OF WAR

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**Background:** For almost 30 years outpatient clinic for Posttraumatic Stress Disorders (PTSD) Aarhus, Denmark, has been treating traumatized refugees and since 2011 also Danish veterans who have been deployed to areas of war and conflict. A multidisciplinary team including psychiatrists, psychologists, nurses, social workers, and physiotherapists, offers highly specialized treatment for PTSD. The focus of the physiotherapy treatment is on the psychosomatic symptoms of PTSD. Inspired by BBAT and basic physiological mechanisms, we have developed a 'toolbox' of techniques, which the veteran can use in their daily lives to relieve arousal. Through psycho-education the veterans are made familiar with the PTSD symptoms: hyper vigilance, elevated arousal, quick temper, flashback

etc. The training forms a "toolbox" of arousal reducing techniques, which can be used by the patients to master their PTSD symptoms.

**Purpose:** To describe the practical techniques which are used to relieve elevated arousal in Danish veterans of war.

**Methods:** Three kinds of intervention: Diverting Techniques: based on bodily sensations these techniques help the veteran to move attention away from stressful thoughts (snowball effect). Discharging Techniques: through simple, highly structured physical techniques, the veteran try to match the physiological mobilization, associated with elevated arousal and thereby reducing 'system overload'. Arousal reducing techniques: the treatment modality of Basic Body Awareness Therapy is implied on a daily basis to prevent increase in arousal and thereby creating a better base for meeting situations where PTSD symptoms might occur.

**Results:** In general there is a decrease in the SCL 90 somatization score, although the data have not been analyzed statistically. Patients express positive experiences in using the techniques, comprising both decrease in symptom levels and better coping with their arousal symptoms. On this behalf patients increase their activity and participation in daily life.

**Conclusions:** With an emphasis on basic physiological mechanisms, it has been possible to develop a toolbox with arousal reducing techniques, which immediately gives patients greater mastery of their PTSD symptoms. This 'toolbox' can easily be implemented to other groups of patients with PTSD symptoms. Based on the promising clinical experiences it would be highly relevant to design a research project to evaluate the effects of these arousal reducing techniques.

**Application:** PTSD is in many ways a very physical anchored bodily state. Understanding the basic physiological mechanisms may help to develop techniques to help patients with PTSD. Furthermore, it is possible to apply the techniques in the training of soldiers or even in a war zone.

**Key words:** PTSD. War veteran. Arousal. Physiology.

**Funding acknowledgements:** None.

**Ethical considerations:** This project is not implementing clinical research and used no related patient information.

## 11. TREATMENT OF TRAUMATISED REFUGEES: EXPERIENCES OF USING BASIC BODY AWARENESS THERAPY

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**Background:** For the last 2.5 years we have included 348 patients in a RCT on the effect of Basic Body Awareness Therapy (BBAT) versus mixed physical activity as add-on treatment for traumatised refugees. Currently, there is a lack of studies on treatment effect in the target group of traumatised refugees. The majority of studies on PTSD have been carried out on road victims, rape victims and war veterans. The first Cochrane review made about physical activity as treatment for PTSD from 2010 concluded that no studies fulfilled the inclusion criteria, underlining the limitations of previous studies in this field. Despite little evidence, physical activity is widely used as an integrated part of treatment of traumatised refugees.

**Purpose:** To describe my clinical experience with the use of BBAT in treatment of traumatised refugees through case reports and give examples of the patients' own experience of BBAT.

**Methods:** All patients in the RCT were randomised into one of three groups: 1) Control group (TAU), 2) BBAT or 3) Mixed physical activity, running parallel to the TAU once a week, in a total of 20 sessions. Two patients treated with BBAT were chosen for the case

reports because they had a stable attendance and did their home exercises. They also were able to describe what changes their experienced from doing BBAT. In November 2014 a physiotherapist student conducted a qualitative study on traumatised refugees' experiences of BBAT and the transference into daily life. Three patients participated in a semi-structured interview. Malterud's version of Giorgi's 4-step analysis was used to analyze data.

**Results:** The case reports show that the two patients experienced reduction of pain, better balance and peace of mind. They report that their interaction with their family changed to be more positive. The interview study documents that traumatised refugees experienced relief of pain, peace of mind and body and better sleep. They also experienced transference into daily life. The clinical impression is that the exercise "contact to the ground" shows to be effective for many patients. Especially in the beginning of treatment due to fear of demands.

**Conclusions:** The clinical experience from treating 66 patients shows that BBAT decreases the feeling of pain, promotes better sleep and contact to themselves and their family. The patients who are most stable in their attendance and in their practice of home exercises seem to be those who benefit most from the treatment. 6. **Implications:** The clinical experience points to that physical activity programs should be included in the management of traumatised refugees.

**Key words:** Traumatized refugees. BBAT. Everyday life.

**Funding acknowledgements:** TrygFonden, Mental Health Centre Ballerup.

**Ethical considerations:** The National Committee on Health Research Ethics has approved the study.

## 08.00 - 09.20 Morning Round Table 3: Physical therapy in chronic pain Chair: Rutger IJntema, The Netherlands

### 12. PAIN IN PEOPLE WITH PSYCHOSIS: FINDINGS FROM A META-ANALYSIS AND LARGE MULTICENTRE STUDY

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**Background:** People with psychosis experience a range of physical health problems. The issue of pain among people with psychosis has received minimal attention. In particular, it is not known how common pain is and how this relates to quality of life (QOL) and mental health in people with psychosis.

**Purpose:** 1) Meta analyse the prevalence of pain in people with psychosis. 2) Investigate how pain influences QOL and mental health in people with psychosis.

**Methods:** This study presents data on a meta-analysis of clinical pain in people with psychosis. Secondly, cross sectional data from a large multisite RCT is presented from among 450 people with established psychosis.

**Results:** The meta-analysis demonstrates that one third of people with schizophrenia experience clinically relevant pain. The final sample in the primary study included 438 individuals with psychosis (47.5 years, SD 10.1, 193 females (42.9%)). 160 participants reported pain (36.5%) and compared to the non-pain group (N = 278) they had significantly higher depressive symptoms (MADRS 14.91 vs 8.68), total (51.8 vs 47.9) and general PANSS scores (26.8 vs. 23.5) and lower overall QOL (54.7 vs 68.3). The final regression analysis (n = 387) demonstrated that lower levels of pain were a predictor

of better QOL ( $\beta = 0.173$ ) after adjusting for the PANSS, MADRS and GAF. Depressive symptoms were the largest predictor of QOL ( $\beta = -0.486$ ). Only 1-2% of the sample were in receipt of analgesic medication suggesting pain is greatly overlooked despite its wider deleterious impact on QOL.

**Conclusions:** Pain is common among people with psychosis and is associated with worse QOL and more depressive symptoms. Little attention is given to pain in practice.

**Implications:** Physiotherapists have an important role in identifying and managing clinical pain in practice. There is a need for the development of bespoke physiotherapy interventions to address pain in clinical practice.

**Key words:** Pain. Psychosis. Physiotherapy.

**Funding acknowledgements:** None.

**Ethical considerations:** Ethical approval was obtained from the SLaM ethical committee.

### 13. COACHING OUT OF THE PANIC INTO AN INDEPENDENT LIFE WITH SYSTEMATICALLY INTEGRATED PHYSIOTHERAPY OF ADL IN THE FRAME OF ICF

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**Purpose:** Is coaching into an independent life with systematically integrated physiotherapy of daily living in the frame of ICF. Could it be a part of the physiotherapy in mental health for the future in the 21<sup>st</sup> Centuries?

**Methods:** A history of a more than two year physiotherapy integrated in the daily living with a young woman running her own Hairdresser Shop, responsible for two young apprentices. She lives in an apartment connected with her Salon. Her Mother is living in the same house. A girlfriend went in and out the door and often parked her dog there. Her mother and friends of her often were sitting drinking coffee and smoked in the backroom. During the day she only took pauses to smoke and drink coffee/water. She did not take time to eat and a real midday-pause. In the night she used to eat chocolate-biscuit. In her home, the kitchen was unorganised and not used for cooking. The only persons she let in her flat, was family and her girlfriend and they came unexpected. Several times a day she was in contact with her mother her girl-cousin and girlfriend not to get into panic. The television in the flat and the radio in the salon were always running. She used to buy things pr. Internet and order pr. Telephone. In the job as Hairdresser and master she was good; but she could not go out of the door doing her banking, shopping, go with her two dogs to the veterinary. Those things were done by her girlfriend her mother and others. Her wish was: to be more extrovert and open, dare to go out into the town, visiting cafés, to do something with other people, to have a boyfriend and courage to dare making new things. If she did not have her clients she would stay in bed. **Therapy:** On the 7<sup>th</sup> of October 2013 "Coaching out of the Panic into an independent life with systematically integrated physiotherapy of daily living in the frame of ICF" started in her flat and salon.

**Results:** After two years therapy this young woman has nearly no panic attacks, she can be alone at home without a running television, her flat is organised, in the kitchen she cook and eat, she go out door with her dogs, into the Bank, go shopping, dance, go by bike, bus and spend hours by her family with her and she has a one hour pause midday. The relations to her mother, girlfriend and family are much better. She has a bought a flat away from her salon.

**Key words:** Mental Health. Coaching. Panic. Systemically integrated physiotherapy. Activity of daily living. ICF.

#### 14. PSYCHOLOGICAL FLEXIBILITY, MINDFULNESS AND ACCEPTANCE, AN INNOVATIVE MODEL AND TECHNIQUES FOR PSYCHOSOCIAL MANAGEMENT OF CHRONIC PAIN: IMPLICATIONS FOR PHYSICAL THERAPY

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**Background:** Psychological Flexibility (PF) model is a new development from a biopsychosocial perspective. Acceptance and Commitment Therapy (ACT) is a form of cognitive-behavioral therapy based on PF which is considered a well-established psychological treatment for chronic pain. Growing evidence in chronic pain field shows accepting pain and discomfort combined with engaging in goal-directed actions in the presence of ongoing pain, can be more effective in the long run than trying to avoid or fighting to control pain, or to disconnect from it by suppressing pain experience or related thoughts. Mindfulness-based approaches and other acceptance techniques can help to improve quality of life and pain tolerance by increasing PF.

**Purpose:** The aim of this work is to disseminate recent data on mindfulness and acceptance applied to chronic pain among physiotherapists. Our aim is also to make them aware these new developments represent an opportunity for professionals to further develop their skills. As it has been mentioned in scientific literature, there is evidence for the benefits in clinicians in terms of their own wellbeing and their treatment delivery.

**Methods:** A literature review on PF, mindfulness and physical therapy was conducted.

**Results:** Basic and applied studies show acceptance-based strategies are related to higher tolerance to pain and lower believability of experienced pain. A few studies have showed brief training based on PF can help physiotherapists working with complex patients presenting emotional distress and pain-related disability, and point at potential barriers and facilitators to embedding an ACT philosophy within a physiotherapy setting.

**Conclusions:** New developments on acceptance and mindfulness are promising models and techniques which could significantly increase effectiveness of physiotherapists' interventions.

**Implications:** Further research is required. It is worth exploring usefulness of specific training.

**Key words:** Psychological flexibility. Physiotherapy. Chronic pain. Acceptance and Commitment Therapy. Mindfulness.

#### 15. EFFECTS OF MULTIMODAL PAIN REHABILITATION AND A WEB-PROGRAM FOR BEHAVIOR CHANGE FOR ACTIVITY - AN RCT IN PRIMARY HEALTHCARE

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**Background:** Persistent musculoskeletal pain is defined as pain that has lasted past normal tissue healing time, and involves a complex interaction of sensory and emotional components, with duration of at least three months. Such pain has an impact on the individual's quality of life, and imposes high societal costs with large health-care consumption and sick-leave. Multimodal pain rehabilitation (MMR) is the recommended treatment for persistent pain, and includes both physical and psychosocial components. Treatment effects of MMR have been reported, but the evidence is ambiguous

with mixed results. MMR is based on cognitive behavior therapy (CBT) principles to help the individual to understand how thoughts, emotions, and behavior can affect pain, as well as to provide tools for self-management. Internet-based programs based on CBT-principles with focus on behavior change and skills acquisition have been developed for pain management. Positive treatment effects, such as pain reduction, and increased self-efficacy and coping with pain have been reported from studies recruiting participants from waiting-lists and/or advertisement. Effects on internet-based programs integrated in clinical practice are lacking.

**Purpose:** To evaluate the effects of a web-program for behavior change for activity in a primary healthcare multimodal pain rehabilitation context, on pain, self-efficacy, and coping, as well as beliefs to play an active role in rehabilitation. In addition, web-program adherence and feasibility was studied.

**Methods:** RCT with two arms: 1) intervention with MMR and the web-program; 2) treatment with MMR. The web-program consisted of eight modules: Pain, Activity, Behavior, Stress and thoughts, Sleep and negative thoughts, Communication and self-esteem, Solutions, Maintenance and progress. The participants were 99 men and women, 43 (m) years, with persistent musculoskeletal pain for 78 (m) months, and with a Linton-score > 90. Data was collected with a questionnaire at baseline, 4 months and 12 months. Outcome measures were VAS, Arthritis Self-Efficacy Scale, General Self-Efficacy Scale, Coping Strategies Questionnaire, and four questions on beliefs to play an active role in rehabilitation. Web-program adherence was assessed as time spent in the program, and feasibility was measured with a set of eight questions. Data analyses were performed with SPSS.

**Results:** Significant treatment effects for the intervention with MMR and web-program were found for self-efficacy for pain, and the CSQ subscales catastrophizing and ignoring sensations. The average time spent in the web-program was 304 minutes (range 0-1,142). Participants in the upper quartile of time spent in the web-program improved more.

**Conclusions:** Adding a self-monitored web-program with focus on behavioral change for activity to MMR can improve treatment effects.

**Implications:** Internet-based programs have a place in the clinical practice of persistent pain.

**Key words:** Coping. Internet-based medicine. Pain. Rehabilitation. Self-efficacy.

**Funding acknowledgements:** The Swedish Research project REHSAM.

**Ethical considerations:** The Regional Review Board of Umeå University, Sweden.

#### 16. PERSONAL TRAITS IN RELATION TO CHRONIC PAIN

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**Background:** With chronic pain there is always some kind of correlation to human personality. In researches there has been found a connection through personal traits and different chronic pain disorders. Understanding personal traits of patients could be helpful in choosing the suitable ways of treatment for the successive therapy results.

**Results:** In psychological area there are five different personal traits called Five Factor Model (FFM) by McCrea and Costa (1992). In these traits has been perceived habituation of the pain. Lack of good early infantile relationship will cause experiences in body memory. Implicit and explicit memories are part of the body memory, obviously implicit memory has a big role in chronic disorders. With the genes body memory will develop major part of our personal traits.

**Conclusions:** Understanding personal traits to be connected with a chronic pain could be useful for better therapy results.

**Key words:** Personal traits. Body memory. Chronic pain. Temperament. Infantile relationship.

### 17. THE EMBODIED NATURE OF ACCEPTANCE: A PHENOMENOLOGICAL DESCRIPTION OF THE DIFFERENT WAYS OF LIVING WITH CHRONIC NON-SPECIFIC MUSCULOSKELETAL PAIN

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**Background:** Acceptance-based interventions have strong evidence in the context of chronic pain, but the complexity of acceptance and adjustment to a chronic condition such as persistent pain, requires further understanding.

**Purpose:** The overall aim was to investigate the experience of and meaning given to acceptance from a bodily existential perspective.

**Methods:** Six women and 3 men (between 18-52 y/o) were interviewed prior to-, halfway through- and at the end of a sixteen week-long pain rehabilitation program. To explore the embodied nature of acceptance and to bring out the diversity and variation in the individuals' experiences at different time points through the rehabilitation program, interpretative phenomenological analysis (IPA) was chosen.

**Results:** Key findings were the qualitatively different meanings given to acceptance, prior to and during the rehabilitation program; acceptance as liberation, acceptance as change for better and worse, acceptance as an equivocal and ambiguous project and acceptance as a personal failure. These findings have been reported elsewhere. In the current presentation focus will be on the bodily existential challenges in relation to the different meanings given to acceptance and how body awareness could be understood as an important resource in the process of to achieve acceptance, and thus move focus from pain and pain management to living a meaningful life.

**Conclusions:** In pain rehabilitation health professionals, especially physiotherapists, should be aware of that individuals with long-term pain conceptualize and hold different meanings of acceptance and that these meanings were associated with how the individual related to the lived body and the need for changes in the sense of self. Further, the process of achieving acceptance seems to embrace different processes which can be understood as, and facilitated by, an embodied learning process.

**Implications:** A wide range of competencies in rehabilitation clinics seemed to be needed. The bodily existential challenges presented in the present study, for example to develop an integrated and cooperative relationship with the painful body, can inspire physiotherapists to develop interventions and communication strategies focusing on the lived body. These findings might inspire the use of the full potential of the physiotherapists' role in pain rehabilitation program.

**Key words:** Acceptance. Chronic pain. Embodiment. Lived body. Interpretative phenomenological analysis.

**Funding acknowledgements:** The study received no specific grant from any funding agency, but was supported by the Rehabilitation Clinic, Danderyd Hospital, Sweden.

**Ethical considerations:** Ethical approval was obtained from the regional ethical board in Stockholm (Dnr 2010/138-31/1).

### 09.30 - 10.30 Session 1: Basic Body Awareness Therapy Chair: Liv Helvik Skjaerven, Norway

#### 18. BBAUM: CALMING TREATMENT FOR PEOPLE WITH DEMENTIA AND BEHAVIORAL/PsYCHIATRIC SYMPTOMS

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**Background:** As dementia generates nine out of ten patients develop behavioral or psychiatric symptoms such as anxiety, apathy, hallucinations, physical/verbal/sexual hyperactivity, physical/verbal aggression, sleeping problems etcetera. Usually these symptoms are primarily treated with drugs. Sometimes the drugs aren't sufficient to calm the symptoms and the behavioral symptoms cause great problems for the person with dementia and the surroundings. In Denmark there is no tradition for using physiotherapy treatment to people with moderate to severe dementia. This report presents the calming treatment BBAUM which is developed to reduce behavioral and psychiatric symptoms in subjects with moderate to severe dementia.

**Purpose:** BBAUM was developed from a clinical need of having a treatment to calm a person with severe dementia and an extremely restless and aggressive behavior besides severe psychiatric symptoms.

**Methods:** BBAUM is developed from BBAT. BBAUM is a passive treatment in which the therapist works with the vertical axis, center, respiration and body boundaries by making a combination of pressure massage and gentle facilitation. The person receives daily treatment(s) for about three weeks. After that period the behavioral/psychiatric symptoms are reduced to an acceptable level. To maintain the effect the daily treatment continues in a smaller scale. The treatment can also be used preventively. The effect is evaluated through observations and a 24 hours behavioral registration. BBAUM has shown to be so effectually that it's now used as a calming treatment in many nursing homes in Denmark.

**Results:** The results are based on clinical experience by more than 50 patients. The experiences show that the person's body tonus reduces and the balance improves. The respiration and the digestion become better functioning. Mentally the person appears more happy and relaxed as the anxiety, sadness, frustration, anger or apathy is reduced. The person's sleep quality increases. It becomes easier for the person to perform daily living activities as the hyperactive, aggressive or apathetic behavior is reduced. The person's ability to cooperate with the caregivers and be together with other people without having negative reactions increases. Overall the person and the neighbors get a higher quality of life, the caregivers get a better working environment and the organization gets a better cost-benefit.

**Conclusions:** It's possible to reduce behavioral and psychiatric symptoms in people with moderate to severe dementia by using BBAUM. For future work it's interesting to investigate to which extent it's possible to reduce behavioral and psychiatric symptoms in this patient group by using physiotherapy treatment instead of drugs.

**Implications:** Calming treatment should be used more often as a physical therapist treatment to people with moderate to severe dementia and behavioral/psychiatric symptoms.

**Key words:** Calming treatment. Dementia. Behavioral symptoms. Psychiatric symptoms. BBAT.

**Funding acknowledgements:** Unfunded.

**Ethical considerations:** Ethical behavior in accordance with applicable legislation.

## 19. THE PHENOMENON OF MOVEMENT QUALITY - A PHENOMENOGRAPHIC STUDY OF EXPERIENCED PHYSIOTHERAPISTS' MOVEMENT EXPERIENCES

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**Background:** Human movement is a principal component in physiotherapy, and the phenomenon of movement quality is frequently used in physiotherapy practice when observe, describe, analyze, promote and assess. But at the same time it has been little attention to how aware the physiotherapist self is about her own movement quality. In clinical practice it is important to consider how physiotherapists can be aware of their own movement quality.

**Purpose:** The aim of this study was to understand movement quality from the experienced physiotherapists' point of view.

**Methods:** Fifteen experienced physiotherapists volunteered to participate, representing physiotherapy practice in different years. Two sets of qualitative data were collected: The first was the written essays pages, and the second was a group interviews pages. All data were transcribed and analyzed according to phenomenographic analysis.

**Results:** The results revealed four descriptive categories of physiotherapists' experiences of own movement quality and the relationships among the categories were organized on the basis of expansive variation and themes of physiotherapists' movement quality conceptions.

**Conclusions:** These findings raise professional challenges and suggest the need for the value of physiotherapist's own movement quality in clinical practice. **Implications:** In physiotherapy the phenomenon of movement quality is one of the core principals. Ultimately, physiotherapists' awareness of different movement quality conceptions and promoting their experiential learning process by being in own movement will benefit both themselves and their clients.

**Key words:** Movement quality. Physiotherapist's conceptions. Phenomenographic.

**Funding acknowledgements:** With the support of the Education Fund.

**Ethical considerations:** The committee for educational research ethics approved the study. The participants' anonymity was safeguarded.

## 20. A PILOT STUDY ON THE RELATION BETWEEN MENTAL STATE AND MOVEMENT QUALITY IN WALKING ON A WOMAN WITH BIPOLAR DISORDER

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**Background:** In our clinical experience in mental health physiotherapy we have observed how people suffering from psychiatric illness have different walking patterns depending on their mental state; it made us wonder how we could measure these changes and encouraged us to make this study.

**Purpose:** The purpose of this study is to have a first pilot on the hypothesis that current mental state of a person influences the postural balance and walking pattern. To do this we decided to investigate the relation between these parameters with one woman with bipolar disorder in both depressive and manic phases.

**Methods:** Participants: One female (n = 1) suffering from bipolar disorder, not using medication. She is 37 years of age and has a rapid cycling bipolar disorder, hypomare type 2. She is on sick leave from work due to her disease for 1 week every 5-6 weeks. Instruments: to assess the movement quality and experiences in walking the Body Awareness Rating Scale (BARS) and footscan (RS-scan and F-scan) were used. To assess quality of mental state we used questionnaires Research and Development 36 item Health Survey (RAND-36), Manchester Short Assessment of Quality of Life (MANSA) and Profile Of Moods State (POMS) and Body Awareness Scale - Interview (BAS-I). Analysis: We have used both quantitative and qualitative data analysis: Qualitative: from BARS the experience of movement has been analyzed with a phenomenological approach. Quantitative: BARS scoring, data from foot-scans, RAND-36, MANSA and POMS.

**Results:** The preliminary results show a strong variety in experienced mental state between the depressive and manic phase on both movement quality and experienced health. In correlation we can see a change in walking pattern in parameters; speed, stability and position of the balance line.

**Conclusions:** The results indicate a tentative relation between the mental state of a person with bipolar disorder and the movement quality in walking. It is necessary to reconsider the methods to follow up with research on the hypothesis. Secondary, results open the suggestion to investigate if promotion of movement quality leads to an improvement of quality of life for people with bipolar disorder.

**Implications:** These results suggest that one should be aware that the outcome of the analysis of walking is affected by the current state of mental well being. Therefore it can change, which has implications for the interpretation of outcome.

**Key words:** Bipolar disorder. Movement quality. Walking.

**Funding acknowledgements:** The research has not been funded, the F-scan and software has been provided for use by MSK, the Netherlands. The RS-scan was provided by Hallux BV, the Netherlands.

**Ethical considerations:** The authors have taken into account the ethical considerations consisting in a written consent from the patient.

## 21. UNDERSTANDING AND INTEGRATING FUNCTIONAL MOVEMENT IN HIP OSTEOARTHRITIS - A QUALITATIVE STUDY OF MULTIDIMENSIONAL LEARNING EXPERIENCES

Aarid Liland Olsen<sup>a</sup>, Liv Inger Strand<sup>b</sup>, Liv Helvik Skjaerven<sup>c</sup>, Mary-Anne Sundal<sup>c</sup> and Liv Heide Magnussen<sup>d</sup>

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**Background:** Osteoarthritis (OA) contributes highly to years lived with disability worldwide and is characterized by pain, dysfunction and reduced health related quality of life. It affects both mental and physical functioning. Basic Body Awareness Therapy offers a movement awareness training program aiming to involve the whole person, and includes physical, mental and relational perspectives on human movement and function. A combined program of patient education (PE) and physiotherapy with Basic Body Awareness Therapy (BBAT) was tried out in a group of patients, aiming for empow-

erment and strengthening of their ability to move and act functionally in daily life.

**Purpose:** To capture patients' experiences from participating in PE and BBAT groups, from the movement learning process and from using those experiences in daily life on short and long term.

**Methods:** Two women and three men, aged 52-78 years were recruited from the waiting list for hip replacement. They participated in PE (two hours) followed by weekly BBAT group sessions of 90 min over a period of 3-4 months. Qualitative data based on individual semi-structured interviews at four months and ten months were used. Data was analysed by systematic text condensation.

**Results:** Three main themes emerged: "Feeling motivated and involved" reflected experiences of feeling encouraged and supported in communication with the other group participants, and from the information given by the physiotherapists. In "Movement learning", the patients described features of their learning processes that included becoming aware of and improving movement aspects related to functional movement habits, and how they practiced movements to alleviate symptoms and increase daily functioning. "New movement strategies in a long-term perspective" described patients' experience of being physically and mentally empowered and being more able to take care of themselves and their condition.

**Conclusions:** The patients felt involved in a learning process, gaining deeper understanding of disease symptoms and their relation to movement habits after participating in Patient Education and Basic Body Awareness Group Therapy. They described finding resources for good movement quality by exploring and practising movements, thus feeling empowered to handle daily life challenges in a more functional and economic way.

**Implications:** Patients suffering from hip OA can gain insight in their disease process and develop more functional movement habits when offered information about the condition, followed by a practical movement awareness learning program. The data have implications for tailoring physiotherapy approaches that target mental and physical dimensions of daily life functioning. The findings have been used in the preparations of a larger randomized controlled trial presently performed.

**Ethical considerations:** The Norwegian Regional Committee of Ethics approved the study.

**Key words:** Hip osteoarthritis. Patient education. Basic Body Awareness Therapy. Movement quality. Mental health.

**Funding acknowledgements:** Bergen University, The Norwegian Fund for Post-graduate Training in Physiotherapy.

## 22. ONE-YEAR FOLLOW-UP OF BASIC BODY AWARENESS THERAPY IN PATIENTS WITH POSTTRAUMATIC STRESS DISORDER. A PILOT STUDY OF TREATMENT EFFECTS

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**Background:** Emotionally traumatic events have profound effects on the body and the nervous system. Suffering from unresolved trauma can entail pain, muscle tension and other physical sensations, the effect of strong emotions triggered by reminders of the trauma.

**Purpose:** The aim of the present study was to evaluate the effects of a Basic Body Awareness Therapy (BBAT) intervention with 12 sessions for patients with PTSD, concerning quality of movements, body experiences, pain and PTSD symptoms, and also to study long-term effects 1 year upon completion of the treatment.

**Methods:** Eighteen patients were consecutively recruited from two clinics in mid Sweden during 2012 and 2013. The patients included in this study had been exposed to one or more traumatic events still influencing their daily life, diagnosed with PTSD using DSM-5. The

patients also showed bodily symptoms. A concurrent experimental mixed methods design was used in this non-controlled pilot study integrating quantitative and qualitative data from baseline (T0), after a treatment intervention with 12 individual sessions of BBAT (T1) and at a one year follow-up (T2), using Body Awareness Scale Movement Quality and Experience (BAS MQ-E), Visual Analog Scale (VAS) and Impact of Event Scale - Revised (IES-R). Analysis: The quantitative data was analyzed by the Wilcoxon Signed Rank Test and the Holm-Bonferroni correction was applied for adjusting the p-values of the BAS MQ movement test. The semi-structured interviews were analyzed with a manifest qualitative content analysis.

**Results:** Fourteen patients completed the 12 BBAT sessions and thirteen patients had complete data for analysis. The results at T1 showed significant improvement in the quality of movement ( $p = 0.001$ ), body experience ( $p = 0.007$ ) and symptoms ( $p = 0.001$ ). At T2 the improvements were sustained. Pain in stillness ( $p = 0.017$ ) and during movement ( $p = 0.007$ ) had decreased at T2. The ability to describe the body experiences in words were poor at T0, but became more detailed at T1 and even more so at T2.

**Conclusions:** Our findings suggest that BBAT may be a viable physiotherapeutic treatment for patients with PTSD. Through body movements the patients may increase movement quality, body awareness, ability to manage both physiological arousal and affect regulation and decreasing pain. Results also indicate an increase in the possibilities of resuming working life.

**Implications:** This knowledge may influence future treatment strategies for patients with PTSD and be of guidance to PTs working in psychiatry or mental health.

**Key words:** Body function. Breathing. Mixed methods. Pain. Physiotherapy.

**Funding acknowledgements:** This study was supported by grants from the Swedish Association of Physiotherapists and Värmlands County Council (FoU) has contributed with funding for the ethical review.

**Ethical considerations:** The Regional Ethical Committee in Uppsala approved the study.

## 09.30 - 10.30 Session 2: Advances in schizophrenia research Chair: Davy Vancampfort, Belgium

### 23. WHAT ARE THE TOP 10 PHYSICAL ACTIVITY RESEARCH QUESTIONS IN SCHIZOPHRENIA?

Davy Vancampfort<sup>a,b</sup>, Simon Rosenbaum<sup>c</sup>, Michel Probst<sup>a</sup>, Joanne Connaughton<sup>d</sup>, Christy du Plessis<sup>e</sup>, Taisei Yamamoto<sup>f</sup> and Brendon Stubbs<sup>g,h</sup>

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**Background:** Research has only recently started to consider the applicability of physical activity (PA) for people with schizophrenia. Although there is increasing evidence for the benefits of physical

activity, this population remains generally physically inactive and sedentary.

**Purpose:** The aim of the current study is to highlight 10 pertinent physical activity research questions in people with schizophrenia.

**Methods:** The International Organization of Physical Therapy in Mental Health (IOPTMH) executed a consultation of its National Organizations (n = 13) to identify the most salient questions relevant to guide clinical practice on physical activity in people with schizophrenia.

**Results:** We identified the following 10 questions: (1) What are the benefits of physical activity for people with schizophrenia? (2) What are the mechanisms of the physical activity effects in people with schizophrenia? (3) What are the most prominent safety issues for physical activity prescription in people with schizophrenia? (4) What is the most optimal physical activity prescription for people with schizophrenia? (5) What are the key barriers for engaging people with schizophrenia in physical activity? (6) What are the most effective motivational interventions for physical activity adoption and maintenance in people with schizophrenia? (7) How do we translate physical activity research into clinical and community practice? (8) How can we ensure integration of physical therapists within the multidisciplinary mental health treatment team? (9) How can we prevent sedentary behavior in people with schizophrenia? (10) What is the most appropriate physical activity assessment method in clinical practice?

**Conclusions:** Addressing these questions is critical for developing evidence-based approaches for promoting and sustaining an active lifestyle in people with schizophrenia. Ultimately, achieving this will improve the quality of life of this population

**Implications:** Investigation of behavior change interventions for people with schizophrenia is critical while a low cost, easy to use, clinical, valid physical activity questionnaire is urgently needed.

**Funding acknowledgements:** Davy Vancampfort is funded by the Research Foundation - Flanders (FWO - Vlaanderen) and supported by Z.org UPC KU Leuven.

**Key words:** Schizophrenia. Physical exercise. Physical activity.

**Ethical considerations:** None to report.

## 24. "WHEN MIND CAN'T WALK ..... BUT THE LIMBS CAN" - PHYSIOTHERAPY AND PSYCHOGENIC GAIT AN MDT APPROACH

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**Background:** Psychogenic movement disorders (PMDs) are movement disorders that result from a psychological or psychiatric rather than neurological disturbance (Gupta & Lang, 2009). We often come across psychogenic gait patterns in mental health setting, however limited literature is available related to Physiotherapy in Psychogenic gait. The study aims to determine Specific strategic, goal - oriented treatment program to build on the current understanding and approach towards patient's with psychogenic gait disorder.

**Purpose:** Physiotherapy in Psychogenic gait - Input of pragmatic therapeutic approach through Physiotherapy intervention by motivation, education, intensive rehabilitative protocol focusing on optimising/maximising muscular strength, dynamic balance and gait to improve confidence and quality of life of the patients.

**Methods:** 41 years old Chinese male. Main Diagnosis: Schizophrenia, neck dystonia and Obsessive Compulsive Disorder (OCD) and psychosis with abnormal gait. Reason for Referral: Premorbid state - patient could walk with walking stick however after a fall at home he could not walk. After the incident, patient would crawl on the floor with "Fear of Falling". Patient was referred to physiotherapy for balance and gait assessment. Initial Assessment: no somatic is-

suess identified. Kyphotic posture with buckling of knees. Poor body awareness. Psychogenic dystonia and facial grimacing. Precarious gait with assistance of two persons not more than four to eight steps. Patient has the tendency to squat without any notice. No neurological deficit. MRI scan shows no abnormalities. MDT approach: cognitive Intervention. Psycho-education. Behavioural Intervention. Relaxation training. Desensitization training. Family support. Physiotherapist visited the patient daily for proprioceptive and gait re-education. Encouraged and educated the patient to walk in the parallel bar, forearm support walking frame and followed by walking frame. Electro Convulsion Therapy (ECT). Treatment Outcome: after 4 weeks intensive sessions Physio and Psycho education. Motivated to walk. Good body posture. 50-60% improved confidence level to walk with walking frame, still his knees will buckle at times. But he doesn't squat or sit on the floor. Exercises tolerance - Fair. Started ECT after 6 weeks. With physical rehabilitation patient was able to walk with the help of walking frame without any supervision or assistance. Patient was discharged with home exercise plan. Follow up with the Psychiatrist as an outpatient.

**Conclusions:** Psychogenic gait is a reversible condition with proper diagnosis, physical rehabilitation and MDT approach. This case study opens a window into further research.

**Implications:** Physiotherapy and psycho education should be included in the rehabilitation of Psychogenic gait.

**Key words:** Psychogenic gait. Physical rehabilitation. Multi-disciplinary team. Psycho-education. Electro convulsion therapy.

**Funding acknowledgements:** Nil.

**Ethical considerations:** Informed consent from the patient following the guidelines of the Institute of Mental Health, Singapore.

## 25. HEADACHES IN PEOPLE WITH SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER - AN UPDATE ON A CROSS-SECTIONAL OBSERVATIONAL COHORT STUDY

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**Background:** Headache is the most common pain reported by people with schizophrenia yet little research has been conducted into the characteristics and management of headaches in this population.

**Purpose:** Evidence supports the efficacy of physiotherapy treatment of cervicogenic headache (CGH) and tension type headache (TTH). Determining the prevalence, impact and current management of these types of headache was of particular interest.

**Methods:** A pilot study was undertaken to identify and refine an appropriate headache questionnaire and algorithm used for classification of headache into CGH, migraine (MH) or TTH against the International Classification of Headache Disorder criteria. Headaches not meeting these criteria were classified other headache (OH). Participants: 100 people with schizophrenia/schizoaffective disorder from one Australian mental health facility. Instrument: a validated questionnaire was used to collect data about headache prevalence, characteristics and management, clinical information and demographic data. Analysis: headaches were classified using the algorithm. Descriptive statistics were used to describe prevalence of headache, participant's demographic, general health and psychiatric clinical characteristics. A series of univariate logistic regressions were conducted to determine if any demographic and/or clinical characteristics impacted on the likelihood headache. A series of logistic regression analyses were undertaken to explore the likelihood of demographic and/or clinical characteristics impacting on specific headache types. Themes of management strategies for headache were identified and ranked in order of prevalence.

**Results:** 66% of participants were male, mean age of participants was 38.8 years, mean length of time since diagnosis was 14.6 years, all were taking antipsychotic medication and 66/100 people were taking some form of medication where headache was a common side effect. Twelve month prevalence of headache (57%) was higher than the general population (46%). Prevalence of CGH (5%) and MH (18%) were comparable to the general population while TTH had a much lower prevalence (16%). Prevalence of OH was 19%. There was no evidence of a relationship between mental health clinical characteristics and the presence of headache suggesting headache is independent of the mental health problem. Data suggest that a relationship between age and CGH (OR = 1.14, 95% CI [1.01-1.29]), medication use and MH (OR = 6.14, 95% CI [1.24-30.44]) and inpatient/outpatient status and TTH (OR = 0.28, 95% CI [0.08-0.95]) when considering only those people who suffer from headache. Physiotherapy was not included in the management of headache of any participant with CGH or TTH and no patient with MH was taking migraine specific medication.

**Conclusions:** It is recommended that better education be provided for both patients and mental health workers about headache and its management including the role of physiotherapy.

**Key words:** Headache. Pain. Schizophrenia. Schizo-affective Disorder.

**Funding acknowledgements:** This project was unfunded.

**Ethical considerations:** Ethical approval was granted from The University of Notre Dame Australia and Fremantle Hospital.

## 26. METABOLIC SYNDROME AND CARDIORESPIRATORY FITNESS IN PATIENTS WITH FIRST-EPIISODE SCHIZOPHRENIA

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**Background:** Patients with schizophrenia have a 15-20 years lower life-expectancy compared with the general population. This is primarily due to death from natural causes, in particular cardiovascular disease (CVD). Metabolic syndrome (MetS) increase the risk of CVD and is highly prevalent in patients with schizophrenia. However, the prevalence of MetS in patients with first-episode schizophrenia (FES) has been described in limited number of studies. MetS is attributable to several factors, including genetic factors, low physical activity, smoking, a high-calorie diet, and for patients with schizophrenia also exposure to adverse metabolic effect of antipsychotic medication. As studies on MetS in patients with FES lack concurrent examination of non-pharmacological risk factors little is still known about how physical inactivity, smoking and poor dietary habits contribute to MetS in these newly diagnosed patients.

**Purpose:** To investigate the prevalence and course of MetS in patients with FES compared with healthy controls; to examine predictors of MetS, hypothesizing that low physical activity is an independent risk factor for MetS in patients with FES.

**Methods:** a. Patients with FES (N = 101) recruited from the outpatient clinic for first-episode psychosis (OPUS) and healthy controls (N = 50). b. An observational, controlled, follow-up study. All participants were measured at baseline and the patients again after 1 year. Metabolic measures, including BMI, waist circumference, triglyceride, high-density lipo-protein, blood pressure and fasting-glucose, physical activity, cardiorespiratory fitness, smoking-, dietary and sleeping habits were obtained for all participants and data on psychopathology and psychopharmacological treatment for patients. c. The prevalence of MetS in each group was compared using the chi-squared test. Wilcoxon Signed Rank test was applied for paired comparisons of MetS at baseline and follow-up. Furthermore regression analyses were performed to examine factors correlated with MetS.

**Results:** Patients with FES had higher prevalence of MetS (10.0%) compared with healthy controls (2.0%), yet this was not statistically significant when adjusted for age. During 1 year of follow-up the prevalence of MetS increased significantly from 10% to 25%. Both use of antipsychotic medication and low physical activity was significantly correlated with MetS. However, in regression analyses low cardiorespiratory fitness was most consistently and significantly correlated with MetS.

**Conclusions:** MetS is highly prevalent in patients with FES, and increase significantly during 1 year of treatment. The study highlights that low cardiorespiratory fitness is a significant risk factor for MetS.

**Implications:** Promoting a healthier lifestyle should evidently be part of psychiatric treatment and rehabilitation.

**Key words:** Metabolic syndrome. First-episode schizophrenia. Cardiorespiratory fitness.

**Funding acknowledgements:** The Psychiatric Research Fund, Central Region Denmark, The Danish Physical Therapy Federation, and The Lundbeck Foundation.

**Ethical considerations:** The study was approved by the local ethical committee of Central Region Denmark.

## 27. DECREASED PAIN SENSITIVITY AMONG PEOPLE WITH SCHIZOPHRENIA: A META-ANALYSIS OF EXPERIMENTAL PAIN INDUCTION STUDIES

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**Background:** Patients with schizophrenia report reduced pain sensitivity in clinical studies, but experimental studies are required to establish pain sensitivity as a potential endophenotype.

**Purpose:** We conducted a systematic review of electronic databases from database inception until April 15, 2015, including experimental studies investigating pain among patients with schizophrenia spectrum disorder vs healthy controls.

**Methods:** A random-effect meta-analysis yielding Hedges'  $g \pm 95\%$  confidence intervals (CIs) as the effect size (ES) measure was conducted. Primary outcome was a pooled composite of pain threshold and pain tolerance; secondary outcomes included these parameters individually, plus sensory threshold, physiological pain response, and pain intensity or unpleasantness.

**Results:** Across 17 studies, patients with schizophrenia spectrum disorder (n = 387; age, 30.7  $\pm$  6.9 years; females, 31.9%; illness duration, 7.0  $\pm$  5.7 years) were compared with controls (n = 483; age, 29.5  $\pm$  7.4 years; females, 31.0%). Patients had elevated pain threshold/pain tolerance vs controls (ES = 0.583; 95% CI, 0.212-0.954; P = 0.002; studies = 15). Results were similar in antipsychotic-free individuals (ES = 0.599; 95% CI, 0.291-0.907; P < 0.0001; studies = 8), with trend-level significance in antipsychotic-treated individuals (ES = 0.566; 95% CI, -0.007 to 1.125; P = 0.047; studies = 9). Likewise, patients with schizophrenia had increased pain tolerance (ES = 0.566; 95% CI, 0.235-0.897; P = 0.0001; studies = 6), sensory threshold (ES = 1.16; 95% CI, 0.505-1.727; P < 0.0001; studies = 5), and pain threshold (ES = 0.696; 95% CI, 0.407-0.986; P < 0.001; studies = 9), as well as reduced physiological response to noxious stimuli (ES = 0.456; 95% CI, 0.131-0.783; P = 0.006) and pain intensity/unpleasantness ratings (ES = 0.547; 95% CI, 0.146-0.949; P = 0.008). Findings were similarly significant in antipsychotic-free patients with schizophrenia (analysable parameters = 4) and antipsychotic-treated individuals (analysable parameters = 2). Finally, greater psychiatric symptoms moderated increased pain threshold, and younger patient age moderated increased pain tolerance.

**Conclusions:** Decreased pain sensitivity seems to be an endophenotype of schizophrenia spectrum disorders. How this alteration links

to other dimensions of schizophrenia and physical comorbidity-related help-seeking behaviour/morbidity/mortality requires further study.

**Implications:** People with schizophrenia have a reduced sensitivity to 'feel pain'. Physiotherapists have a key role in identifying painful comorbidities in this group

**Key words:** Pain. Schizophrenia.

**Funding acknowledgements:** None.

**Ethical considerations:** N/A.

## 28. EXERCISE IMPROVES CARDIORESPIRATORY FITNESS IN PEOPLE WITH SCHIZOPHRENIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Davy Vancampfort<sup>a,b</sup>, Simon Rosenbaum<sup>c</sup>, Philip B. Ward<sup>c</sup> and Brendon Stubbs<sup>d,e</sup>

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**Background:** The cardiorespiratory fitness is significantly reduced in people with schizophrenia. Research in the general population has demonstrated that improvements in cardiorespiratory fitness following exercise are associated with a lower risk of mortality from cardiovascular disease independent of age, smoking and body composition.

**Purpose:** To determine if exercise can improve cardiorespiratory fitness in people with schizophrenia.

**Methods:** Major electronic databases were searched systematically until August 2015. A meta-analysis calculating Hedges' g statistic was undertaken.

**Results:** Engaging in exercise improves cardiorespiratory fitness in people with schizophrenia (g = 0.40, 95%CI = 0.16-0.64, p = 0.001, N = 7, n = 77). Data from four controlled studies demonstrated that exercise (n = 53) significantly improves cardiorespiratory fitness compared to control groups (n = 48) (g = 0.43, 95%CI = 0.05-0.82, p = 0.028).

**Conclusions:** Considering the current findings, the multidisciplinary treatment of schizophrenia should include a focus on improving "fitness" to reduce all-cause mortality, rather than focusing on "fatness" or weight reduction.

**Implications:** Cardiorespiratory fitness is relatively straight forward to measure in clinical practice and physiotherapists should consider monitoring this as a 'vital-sign', given its significant relationship with all-cause morbidity and mortality. In addition, achieving success in changes in cardiorespiratory fitness will provide valuable feedback to physiotherapists and patients, many of whom experience seemingly inevitable weight gain following treatment. Thus, we propose a shift to start to consider cardiorespiratory fitness in the health monitoring of people with schizophrenia.

**Key words:** Schizophrenia. Physical exercise. Physical activity. Physical fitness.

**Funding acknowledgements:** Davy Vancampfort is funded by the Research Foundation - Flanders (FWO - Vlaanderen) and supported by Z.org UPC KU Leuven.

**Ethical considerations:** None to report.

## 09.30 - 10.30 Session 3: Research progress in eating disorders and severe mental disorders Chair: Michel Probst, Belgium

### 29. RELATION BETWEEN ANOREXIA AND DIAPHRAGM MUSCLE. ADVANTAGES OF THE INSPIRATORY MUSCLE TREATMENT IN PATIENTS WITH ANOREXIA NERVOSA

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**Background:** Anorexia Nervosa (AN) causes a state of protein energy malnutrition in the body, which causes a decrease in muscle fibers of the diaphragm. This leads to a loss of inspiratory muscle strength and makes slower the rhythm of the metabolism, causing a decrease in O<sub>2</sub> in the brain. The muscle flattens and causes a feeling of fullness in the stomach and a feeling of breathlessness. It can also cause indigestion and difficulty to eat because of the inability to breathe properly. This malnutrition can be also caused by Chronic Obstructive Pulmonary Disease (COPD), which causes the same problems in the inspiratory muscle. Many COPD patients end up suffering anorexia. So there is a relationship between the diaphragm and anorexia. Whether AN causing malnutrition, and this can lead to breathing problems, or vice versa. If treating COPD patients inspiratory muscles work and it is very beneficial to them; why not use it in patients with AN?

**Purpose:** To demonstrate the importance of treating the diaphragm muscle and the rest of inspiratory muscles, for the restoration of normal metabolism, prevent respiratory diseases, decrease the feeling of fullness in the stomach and improve shortness of breath in patients with AN.

**Methods:** Add to the usual treatment of patients with AN respiratory exercises and hypopressive abdominal exercises to strengthen the diaphragm and inspiratory muscle to improve its function

**Results:** Patients with AN who have added to diaphragmatic treatment have shown an improvement in the sensation of fullness, no longer referred to have that pressure on the stomach, they have a better air exchange so they do not have that feeling of breathlessness. All of these improve the act of eating.

**Conclusions:** It is too early to establish a clear scientific evidence. Nowadays it is a hypothesis that is working very well and that is a type of therapy is not harmful to the patient. It would be ideal continue working with this hypothesis with a larger number of patients to quantify the benefits. The protocol would form two groups of patients with AN and one of them give treatment of the diaphragm, and value the differences with the control group ; which have not taken such treatment.

**Implications:** A decrease of sequels and medication, symptom improvement, infection prevention, improve the life quality of these patients.

**Key words:** Anorexia. Diaphragm. Breath.

**Ethical considerations:** This paper follows the Helsinki Declaration for Health Research and Ethics.

### 30. MASTERING-GROUP FOR OUTPATIENTS SUFFERING FROM ANOREXIA NERVOSA. AN INTERDISCIPLINARY GROUP- BASED TREATMENT WITH PHYSIOTHERAPEUTIC PSYCHO-EDUCATION AND AN INTRODUCTION TO B-BAT

Susanne Fabricius

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**Background:** In Denmark, national guidelines have been specified to achieve a higher quality of mental health services across the regions. The treatment of anorexia nervosa has been divided into three modules depending on the severity of the disease, namely the “main function treatment”, “regional function treatment” and “highly specialised function treatment”. Physiotherapy is not written directly into the modules. However at the Eating Disorders Centre (Cfs), Aarhus University Hospital, Risskov we have implemented physiotherapeutic treatment into all three modules. In the main function treatment we have developed an interdisciplinary group-based treatment for outpatients with anorexia nervosa called Mastering-group, in which physiotherapy is a natural part of the treatment.

**Purpose:** The national guidelines results in less time for each individual outpatient. The Mastering group is a concept in which patients, in a relatively short time and with relatively few resources, practise mastering both their eating and their bodily sensations and emotions more appropriately.

**Methods:** In The Mastering-groups, patients attend 45 min. of individual psychotherapy and a 2½ hour Mastering-group session every other week. The group session, with approximately 8-10 patients, includes i) physiotherapy comprising of psycho-education regarding the connection between body and mind, as well as an introduction to B-BAT; and ii) a mealtime with a nurse and a dietician, also including psycho-education. The patients are supposed to gain half a kilo of weight every week. The relatives also participate in the group every other session. The physiotherapeutic psycho-education address such issues as sleep, body disorders and body image, physical activity, forced exercise and health, the autonomic nervous system, anxiety disorders and osteoporosis.

**Results:** From January 2013 and until now, we have had two parallel mastering-groups throughout the year. Patients have an average of approximately half a year in the group. For most of the patients the mastering group seemed to be an adequate treatment. Some of the patients had to continue into a more intensified treatment as “regional function treatment” or “highly specialised function treatment”, where they among other things, also receive weekly physiotherapy. At the oral presentation the physiotherapeutic sides of the mastering group will be described in more detail with power points introducing some of the teaching material. The advantages and disadvantages of the concept will also be discussed.

**Conclusions:** In relation to physical therapy, the patients with anorexia nervosa and their relatives claim to achieve a greater understanding of the connection between body and mind, while at the same time experiencing that they are more able to exchange views about their bodily sensations and emotions. Physical therapy is a highly relevant part of a holistic multidisciplinary treatment approach for outpatients with anorexia nervosa.

**Key words:** Anorexia Nervosa. B-BAT. Psycho-education. Multidisciplinary treatment.

### 31. PHYSIOTHERAPY IN SPECIALISED NUTRITION SERVICE

Emilio Miñano

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**Background:** The Clinical Nutrition Service, specialised in Eating Behavior Disorder, of the Department of Internal Medicine, Hôpital Raymond Poincaré, Assistance Publique Hôpitaux de Paris, established in 1995, to treat patients with serious Eating Behavior Disorder with a body mass index under 12, in life threatening condition, and others patients with serious nutritional problems, like severe disabilities or chronic infections. This is the only one department in France that treats Eating Behavior Disorder from a somatic and psychiatric viewpoint.

**Purpose:** Mark the importance of multidisciplinary and transdisciplinary treatment for these patients according to the complexity of their pathology. Emphasize and describe the physiotherapist's role in the treatment and the team.

**Methods:** Description and analysis of the operation mode of the specialised nutrition department, the different treatment phases during hospitalization and the role of the physiotherapist in the team from a multidisciplinary and transdisciplinary perspective.

**Results:** Being the only eating disorder specialised department offering treatment for this type of patient from a somatic, nutritional, physical and psychiatric point of view and this, from the beginning of the patient's hospitalization. Around 200 patients hospitalised a year. 19 days average hospitalization.

**Conclusions:** Based on our experience and given the complexity of general patient behavior as well as the complexity of the treatment itself, we wish to emphasize the importance of a physiotherapist's role in the early stages of the patients' global and multidisciplinary treatment.

**Key words:** Eating Behavior Disorder. Nutritional recuperation. Functional recuperation.

### 32. THE IBEEP STUDY: INVESTIGATING THE BENEFITS OF EXERCISE IN EARLY PSYCHOSIS

Joseph Firth and Alison Yung

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**Background:** Physical exercise can reduce psychiatric symptoms and improve functioning in patients with long-term schizophrenia. However, this has not been examined in the early stages of psychosis, even though this is when patients may be most able to engage with exercise treatments. Furthermore, early psychosis may be an optimal timeframe for exercise to maximize psychosocial recovery and to attenuate the cardiometabolic dysfunction associated with antipsychotic treatment.

**Purpose:** To evaluate the feasibility of individualized exercise as an intervention for first-episode psychosis (FEP), and to examine associated changes in physical and mental health.

**Methods:** a. Participants: Thirty-one patients with FEP were recruited from Early Intervention services in Manchester (UK) between January-June 2014. Comparison data was obtained from seven patients who received treatment-as-usual (TAU) from the same services. b. Instruments: The 10-week intervention aimed to achieve -90 minutes of moderate-to-vigorous activity each week, using a combination of endurance and resistance exercises, tailored to individual preference. Exercise sessions were facilitated by research assistants, who accompanied participants to two 1-hour sessions per week. Psychiatric symptoms, neurocognitive functioning and physical health were assessed at baseline and follow-up. Additionally, semi-structured interviews were used to explore service users' qualitative experience of exercise. c. Analysis: Symptomatic outcomes following 10-weeks of exercise was compared to TAU using Welch's t-tests. Changes in neurocognitive functioning and physical health were analysed using within-participant t-tests for the intervention group. A thematic analysis was applied to qualitative data.

**Results:** Participants exceeded the exercise targets, achieving an average of 107 minutes of moderate-to-vigorous exercise per week for 10 weeks. Psychiatric assessments showed a 27% reduction in total symptoms after 10 weeks of exercise, significantly greater improvement than the treatment-as-usual group ( $p = 0.010$ ). The greatest improvements were observed for negative symptoms, which reduced by 33% ( $p = 0.013$ ). Pre-and post-intervention improvements were also observed for waist circumference (-2 cm), verbal memory and socio-occupational functioning.

In qualitative interviews, participants explained how physical exertion during exercise can direct attention away from symptoms, and thus improve mental health. Exercise was also experienced as a rewarding, sociable activity which increases energy and overcomes amotivation.

**Conclusions:** Individualized exercise interventions, which provide autonomy and social support, can enable young adults with first-episode psychosis to achieve sufficient amounts of weekly exercise. In turn, this may reduce symptoms, while also improving metabolic health, cognition and social functioning.

**Implications:** Implementing individualized exercise in FEP could improve clinical outcomes for this patient group. Community leisure services provide a feasible and accessible setting for such interventions.

**Key words:** Early intervention. Psychosis. Schizophrenia. Exercise. Cognition.

**Funding acknowledgements:** The study was funded by Greater Manchester West NHS Mental Health Foundation Trust.

**Ethical considerations:** Approved by the North West Research Ethics Committee (REC: 13/NW/0784).

### 33. WELLNESS FOR LIFE: AN INTERPROFESSIONAL INTERVENTION TO ADDRESS METABOLIC SYNDROME IN ADULTS WITH SERIOUS MENTAL ILLNESS

Ellen Zambo Anderson<sup>a</sup>, Kenneth J. Gill<sup>b</sup>, Michelle Zechner<sup>b</sup>, Margaret Swarbrick<sup>b</sup> and Ann Murphy<sup>b</sup>

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**Background:** Persons with severe mental illness (SMI) encounter difficulty receiving quality medical services. Contributing factors include poorly integrated medical and psychiatric services, ignorance of health disparities, psychiatric symptoms, and stigma. These barriers ultimately lead to shorter lifespans. SHRP developed an 8-week community-based program called Wellness for Life (WFL), promoting access to interventions for persons with SMI and metabolic syndrome. Faculty and students from psychiatric rehabilitation, physician assistant, dietetic internship, dental hygiene and physical therapy (PT) programs provided services. WFL included Peer Wellness Coaches, people with SMI educated to assist their peers in setting and pursuing goals (Swarbrick, et al., 2011).

**Purpose:** WFL provided health literacy skills through an interprofessional team with the primary goal of improving health and wellness of persons with SMI. Second, WFL increased awareness and skills of providers through collaborative teaching, inter-professional interventions, and physical activity.

**Methods:** Participants were recruited from partial hospitalization and supported housing programs. Inclusion criteria were: 1) an Axis I psychiatric disorder; 2) spoke and read English; 3a) 18-45 year olds with two metabolic risk factors or 3b) 45-60 years old with one risk factor. Risk factors included BMI > 25, impaired glucose tolerance, hypertension, HDL < 35, or triglyceride > 250, Type II diabetes, history of gestational diabetes, or family history of diabetes. Participants completed assessments at baseline, 8 weeks later, and 8 weeks post intervention: type II diabetes screening, lipid testing, SF-12 Survey, Motives for Physical Activities Measure-Revised, 30-second Sit to Stand, Half Sit-Up Test, Vertical Jump Test, 6 Minute Walk Test, One Leg Balance and Functional Reach Test. Blood pressure and heart rate were measured weekly. The intervention manual includes educational content, a motivational section, and physical activity. Education content was provided by each respective discipline. The motivational section included a group interven-

tion by Peer Wellness Coaches. The physical activity component was designed and facilitated by PT students supervised by a licensed PT.

**Results:** Numerous participants reported hypertension (40%), diabetes (21%), digestive disorders (19%), sleep disorders (13%) and smoking (33%). Screening revealed an additional three people with diabetes and two with hypertension. Significant reductions in blood pressure and waist circumference were observed. Additionally, significant improvements were noted in balance, functional strength and reported readiness for diet and exercise.

**Conclusions:** An interprofessional intervention for persons with SMI shows promise for addressing metabolic risk factors, cardiovascular disease, and for improved functional strength, mobility and physical activity.

**Implications:** Persons with SMI and MetS who should be supported and encouraged to engage in healthy eating, good dental health and physical activity by multiple providers.

**Key words:** Interprofessional. Psychiatric disorders. Physical activity.

**Funding acknowledgements:** Departmental funding.

**Ethical considerations:** Approved by Rutgers, Biomedical & Health Sciences Institutional Review Board (Pro2011000875).

### 34. DEVELOPING A PROFESSIONAL ROLE. PHYSIOTHERAPY STUDENTS' EXPERIENCES AS PHYSICAL ACTIVITY MENTORS FOR PATIENTS WITH SEVERE MENTAL DISORDERS

Elisabeth Møyner

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**Background:** Physical activity is an important part of the treatment for hospitalized patients with severe mental disorders, as schizophrenia and bipolar disorders. Inactivity, isolation and lack of initiative characterize this patient group. It is a challenge for the patients to continue physical activity after being discharged from the hospital. Bachelor students acted as a physical activity mentor for one of patient each. They met weekly, during a twelve week period. This was tried out as student practice.

**Purpose:** We wanted to know more about the student's experiences and learning outcome from being a physical activity mentor

**Methods:** Participants: 9 out of 10 physiotherapy students that had accomplished this student practise Instruments: Three group-interviews; one with 5 participants, and two with 2 participants. Analysis: Hermeneutic analysis; the material is sorted into categories of meaning units, subthemes and themes.

**Results:** The students evaluated this new kind of student practise as interesting and instructive. Prior to the practice itself, students were generally unsure how to behave in front of hallucinating or deluded patients, but they experienced harmless patients not so different from themselves. The students met their patients alone, doing different kind of sports or taking them walking. Some had exercises in the patient's home. The students got some challenges when the patients wanted them to be a friend more than a therapist. The patients were unstable in their mood, therefore communication and making motivational work was hard. The students learnt a lot of how to adjust their own behavior towards their patients. They were surprised to find that many of the patients were in so bad physical condition, and they learnt a lot of how to adjust the training. They also experienced that the psychiatric patients had problems of evaluating their own physical skills.

**Conclusions:** The physical activity mentor practice increased the students' interest toward physiotherapy and mental health. They acquired better communication skills and insights in how to relate to persons with severe mental disorders. They learnt more of how

to adjust individual training activity to patients that have no physical constraints, but still have special needs.

**Implications:** The physiotherapy student needs to learn more about how to adjust training activity and how to communicate and behave as a professional towards different kinds of patients.

**Key words:** Professional role. Relation. Motivation. Schizophrenia. Physical activity.

**Funding acknowledgements:** Unfunded.

**Ethical considerations:** Applied and approved by NSD (Norwegian society data service).

## 11.00-12.00 Session 4: Measuring effectiveness and clinimetrics Chair: Amanda Lundvik Gyllensten, Sweden

### 35. USE OF BAS MQ-E IN PATIENTS WITH PTSD

Lene Nyboe, Karen W. Nissen, Samuel Orlandersson,  
Lissie Thomsen Rikken and Lise Jensen

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**Background:** Patients with PTSD have several bodily complaints, including chronic pain, poor sleep and arousal, with increased muscular tension, impeded respiration and inability to relax. As a result patients often have very poor functioning of daily life and low level of physical activity. Physical therapy treatment of patients with PTSD often includes both somatic rehabilitation of specific injuries from torture, arousal-allaying treatment, and supervised physical activity. In DK the treatment modality of Basic Body Awareness is often applied. However, clinical practice lack consensus of how effects of physical therapy should be evaluated systematically. The Body Awareness Scale Movement Quality and Experience (BAS MQ-E) is a development of the Body Awareness Scale and is designed to evaluate changes in assess functional abilities and quality of movement. The BAS MQ-E has not previously been applied and validated in relation to patients with PTSD.

**Purpose:** In this study we want to examine the feasibility of BAS MQ-E in relation to patients with PTSD. Furthermore, we investigate if BAS MQ-E is useful in discriminating between healthy controls and patients with severe mental illness. Finally, we study the correlation of physical activity and BAS MQ-E.

**Methods:** We examine and compare Danish speaking refugees with PTSD (N = 20), Danish veterans (N = 20) and physical therapy students (N = 20) aged 30-40 years. All participants take part in a BAS MQ-E evaluation, comprising a movement test, a questionnaire and a qualitative interview regarding specific movements. In addition, the physical activity level, using the Physical Activity Scale (PAS) is assessed for all participants. Data on socio-demographic variables, as well as psychopathology and psychopharmacological treatment is also obtained.

**Results:** To this date, we have included 20 physical therapy students, 15 Danish veterans with PTSD, and 10 refugees. The preliminary results of the study will be presented.

**Conclusions:** From the preliminary results BAS MQ-E seems to be applicable and useful in evaluation of bodily complaints in patients with PTSD.

**Implications:** BAS MQ-E could be used in systematic evaluation of effects of physical therapy in relation to patients with PTSD.

**Key words:** PTSD. BAS MQ-E. Physical activity.

**Funding acknowledgements:** The study received funding from University College Nordjylland, Denmark.

**Ethical considerations:** The study was approved by the local ethical committee in Central Region Denmark.

### 36. CONSTRUCT VALIDITY OF THE PAIN ATTITUDES AND BELIEFS SCALE FOR PHYSIOTHERAPISTS (PABS-PT): RESULTS FROM EXPLORATORY FACTOR ANALYSIS

Emanuel Brunner<sup>a,c</sup>, André Meichtry<sup>b</sup>, Wim Dankaerts<sup>c</sup>  
and Michel Probst<sup>c</sup>

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**Background:** The Pain Attitudes and Beliefs Scale for Physiotherapists (PABS-PT) is a questionnaire frequently used for measuring healthcare providers treatment orientation in low back pain. Previous validation studies on the PABS-PT reported consistently that factor analysis yielded an interpretable 2-factor model, though there remain concerns about the construct validity of the measurement scale. Structure of the proposed 2-factor model varies across previous validation studies, and furthermore, previous factor analysis studies on the PABS-PT used critical methodological procedures for conducting factor analysis.

**Purpose:** To re-examine dimensionality of the German PABS-PT scale.

**Methods:** The 36-item pool from which the German version of the PABS-PT scale was previously validated was mailed to 1,066 physiotherapists and 111 physiotherapy students. Exploratory factor analysis (EFA) was implemented to examine dimensionality of the PABS-PT. Parallel analysis was used to determine the number of factor to include in the common factors model. Principal axis was applied for factor extraction.

**Results:** The overall response rate was 37% (438/1177), and 398 questionnaires were included for EFA. EFA yielded an 8-factor model. Structure of the factor model was not interpretable. The previously suggested 2-factor model was not identified in our data.

**Conclusions:** Construct validity of the German PABS-PT scale is insufficient. Our results disclose that the previously suggested 2-factor model cannot be replicated when parallel analysis and other objective methods are used to determine the number of factors to retain.

**Implications:** The PABS-PT should be revised before the questionnaire is further used.

**Key words:** Validation. Factor analysis. Low back pain. Physiotherapy. Attitudes.

**Funding acknowledgements:** This research received no specific grant from any funding agency.

**Ethical considerations:** The study received approval by the regional ethics committee.

### 37. BODILY FINDINGS IN DIFFERENT PATIENT GROUPS VERSUS IN HEALTHY PERSONS

Alice Kvåle

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**Background:** Use of systematic evaluation tools may help document where patients with musculoskeletal and/or psychiatric disorders have physical problems that can be addressed in therapy. The Global Physiotherapy Examination (GPE-52) is based on the construct from the Norwegian Psychomotor Physiotherapy Tradition

and has an assumption that the body may react to both physical and psychological strain over time, and thus the whole body should be examined.

**Purpose:** Examine different patient groups to document if and to what degree they differ from healthy persons.

**Methods:** GPE-52 consists of 52 standardized items within 5 domains: Posture, Respiration, Movement, Muscle and Skin, covering 13 sub-domains, each with 4 items. The items are scored according to a predefined standard (0), and the scale consists of 15-steps ranging from -2.3 to +2.3. Deviations from 0 indicate degree of aberration, either negative or positive, as findings for example can be too flexible or too constrained. Absolute scores can be added to a sumscore for each main domain or subscale. An examination takes about 30 minutes and sound psychometric properties have been documented. Altogether 158 persons, age 40.7 (SD 12.7), were examined with GPE-52: 34 healthy persons, 32 with localized musculoskeletal pain, 32 with widespread pain, 34 hospitalized with psychoses, and 26 patients sick listed due to workplace bullying. Independent t-tests were calculated for differences between the healthy versus the patient sample. One-way analysis of variance with Scheffé's post hoc test was used to analyze differences between the four patient groups.

**Results:** GPE-52 sumscore was significantly better ( $p < 0.001$ ) in the healthy persons compared to all four patient groups, healthy having a mean sum score of 31.1 (SD 5.7) versus 48.9 (SD 9.5) in the patient sample, patients with psychoses having the highest score and those with localized pain the lowest. In the main domains, healthy persons had significantly better scores in all domains compared to the four patient groups, except for Posture where those with musculoskeletal pain were quite similar. When comparing the four patient groups, those with psychoses had most aberrations within Posture and Respiration. All four patient groups had quite large aberrations within Movement. Within Muscle and Skin, those with widespread pain had significantly more aberrations compared to those with localized pain.

**Conclusions:** The GPE-52 showed that physical findings differed between the patient groups, patients with psychoses and widespread pain having most physical aberrations, those with localized pain least.

**Implications:** A systematic evaluation may help classifying patients into sub-groups, hopefully causing more targeted interventions and help document change over time.

**Key words:** Posture. Respiration. Movement. Palpation.

**Funding acknowledgements:** None.

**Ethical considerations:** The work has been approved by the Regional Ethical Research Committee in Western Norway (REK-Vest).

### 38. THE BRAIN MADE VISIBLE - HOW NEUROSCIENCE MIGHT ASSIST PHYSIOTHERAPY DEVELOP IN PSYCHIATRY AND MENTAL HEALTH

Mark Højbo

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**Background:** Neuroscience is developing rapidly in both numbers of areas being studied and methods being employed. In 2013 the US National Institute of Mental Health (NIMH) introduced the Research Domain Criteria (RDoC) project. RDoC reflects major systems of emotion, cognition, motivation, and social behavior in which functioning is impaired in different psychiatric conditions (Casey et al, 2013). Pharmacology, psychotherapy, even yoga and tai chi, are being studied with methods of neuroscience, but physiotherapy is absent. Thus, adapting and integrating a neuroscientific perspective and approach in future physiotherapy research and theory development is necessary.

**Purpose:** The major reason for developing a neuroscientific perspective in physiotherapy research is to evaluate the outcome of our

interventions as objectively as possible. Secondly 1) to underpin our theory and hypothesis building on a common basis, 2) to make our results better comparable with interventions of other professions, 3) to lay out standard evaluation programs enabling meta-analyses more readily, 4) to communicate our findings more easily and stronger by neuroimaging.

**Methods:** Heart rate variability (HRV) describes the capacity of the individual to adapt to challenges by engaging or disengaging specific brain areas and their connectivity to others by analysing the difference of the intervals in between heartbeats (Beauchaine and Thayer, 2015). A recent search in PubMed found 976 articles using HRV as tool of evaluating mental disorders. Mantovani and colleagues (2015) conducted a study using HRV evaluating the immediate effect of Basic Body Awareness Therapy (BBAT) on healthy young adults. We are currently evaluating the effect of BBAT on HRV in a group of patients with borderline personality syndrome.

**Results:** Morris and colleagues (2015) highlight the ways in which the field of psychophysiology already thinks along the lines of RDoC in terms of using biobehavioral constructs, looking for convergence among constructs using various methodologies, and utilizing dimensional measurements in studies. In this sense they find that RDoC is specifying a formal research platform that provides explicit encouragement and guidance for using such principles in understanding psychiatric phenomena.

**Conclusions:** HRV is an easy-to-use and fairly inexpensive method to measure psychophysiological effect, reflecting changes in brain activation. fMRI and DTI provides even stronger potential in imaging long term physiological and anatomical alterations as result of interventions and should be employed in our efforts to evaluate our interventions and communicate the effect.

**Implications:** Integrating neuroscience in our profession could imply refining of practice, enhancing of education, changing national, regional, and local policies and guidelines, strengthening our specialty for the benefit of our clients and patients.

**Key words:** Neuroscience. fMRI. DTI. HRV. RDoC.

**Funding acknowledgements:** This work was unfunded.

**Ethical considerations:** This presentation was not subjected to ethical considerations.

### 39. PATIENT SUBGROUP ACCORDING TO THE PAIN ACCEPTANCE AND A CLINICAL ALGORITHM TO PREDICT DIFFERENTIAL RESPONSE TO INTERPROFESSIONAL REHABILITATION

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A substantial literature indicates that pain acceptance is a useful behavioral process in chronic pain rehabilitation. Pain acceptance consists of willingness to experience pain and to engage in important activities even in the presence of pain and is often measured using the Chronic Pain Acceptance Questionnaire (CPAQ). The aims of these studies were: 1) to cluster patients according to their pain acceptance using Latent class analysis (LCA), 2) to develop clinical useful cluster-model based on the above statistical model, meaning

a clinically pragmatic algorithm to support the clinician (or researcher) to be able to assign the patients in their clusters without the need of perform a cluster analysis and 3) test if the clusters can identify and predict differential responses after different rehabilitation programs (based on Acceptance and commitment Therapy or on Behavioral Therapy). In total, 914 patients with chronic pain completed the CPAQ and a range of measures of psychological and physical function. The LCA demonstrated a 4-cluster model based on patterns of pain willingness and activity engagement was significantly associated with specific patterns of psychological and physical function, in line with theoretical predictions. These statistical developed clusters, were transformed in clinical useful clusters with sharp cut-offs that could in turn identify patients' need and their differential response to rehabilitation. Furthermore, patients with the lowest level of acceptance (in turn with the lowest quality of life, highest pain and lowest function) benefit more from ACT-based rehabilitation than from CBT. ACT better targeted and improved patients' physical function compared to CBT, which demonstrated to improve solely cognitive changes such as their fear of movement but failed to improve their physical function. These results provide further evidence of the relevance of chronic pain acceptance, and a more nuanced understanding of how the components of acceptance are related to function. Perspective: Pain acceptance is important in chronic pain. The findings of the present study, which included 914 individuals with chronic pain, provide support for 4 discrete groups of patients based on levels of acceptance. These groups appear statistically robust and differed in predictable ways across measures of functioning.

**Key words:** Chronic Pain Acceptance Questionnaire. Acceptance and commitment therapy. Pain rehabilitation. Latent class analysis. Cluster membership. Assessment.

**Funding acknowledgements:** The study was granted ethical clearance by the Regional Ethics Board in Gothenburg (approval number 815-12).

## 11.00 - 12.00 Session 5: Anxiety, depression and unexplained medical symptoms

Chair: Jonna Jensen, Denmark

### 40. A GENDER-SENSITIVE GROUP INTERVENTION MODEL FOR SWEDISH YOUNG WOMEN WITH STRESS-RELATED AND MENTAL HEALTH PROBLEMS

Maria Strömbäck<sup>a,b</sup>, Maria Wiklund<sup>c</sup>, Ellinor Salander Renberg<sup>b</sup> and Eva-Britt Malmgren-Olsson<sup>c</sup>

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**Background:** Gendered stress and mental health patterns are observed in numerous countries and indicate that young women report more problems than boys and young men. In Sweden, there are a considerable number of stress-related and psychosomatic problems among late adolescent young women, aged 16-24 years. Explanatory models with a focus on gender as a social construct and gender-sensitive interventions are needed in the area of youth mental health, as well as in physiotherapy settings.

**Purpose:** In this article we describe and evaluate a gender-sensitive, youth-friendly group intervention model designed for teenage girls and young women who experience stress-related or psychosomatic problems. In order to measure within-group changes, before

and after measurements were investigated for aspects of body perception, self-image, mental health, and somatic symptoms.

**Methods:** Fifty-four young women (16-25 years of age) participated in a gender-sensitive physiotherapy stress management course at a youth health center. The course combined short psycho-educative lectures and reflective discussions with basic body awareness therapy and progressive relaxation. Consistent with a participatory approach, we tailored the detailed content in congruence with participant experiences, thoughts, and needs. Inclusion criteria were self-defined stress-related problems and a wish to participate in the group intervention. Before and after measurements of aspects of body perception, self-image, and multiple somatic problems and mental health symptom areas were assessed with the Body Perception Questionnaire ad modum Schiöler (BPQ), social analysis of social behavior (SASB), and Adult Self-Report scale (ASR).

**Results:** Significant positive changes were found in aspects of body perception, self-image, and mental health and somatic symptoms. The changes were most significant in lower internalization of anxiety and depression symptoms. Symptoms such as headaches and sleeping problems decreased. Participants were more satisfied with their bodies and more able to listen to body signals. Among cognitive issues, significant change occurred in thought problems, but not attention problems.

**Conclusions:** The model can serve to capture the needs of young people from a contextualized and gendered viewpoint, and it encourages participants to seek support before developing long-term problems.

**Implications:** The intervention model needs future evaluation in controlled trials, but is promising and should be developed further in other physiotherapy settings and sub-groups of young people who suffer from mild to moderate stress and mental health problems.

**Key words:** Mental health. Stress management. Body awareness therapy. Psychosomatics. Physiotherapy.

**Funding acknowledgements:** The Västerbotten County Council (FOU) and Psychiatry, Umeå (ALF); the Swedish Research Institute (no. 521-2005-4848, and no. 344-2011-5478).

**Ethical considerations:** Approval was received from the Ethics Committee of the Medical Faculty of Umeå University (Reg nr 05-045 M).

### 41. TREATING GENERALISED ANXIETY DISORDER IN OLDER ADULTS USING COGNITIVE BEHAVIOUR THERAPY AUGMENTED WITH PHYSICAL EXERCISE - STUDY DESIGN AND EXERCISE PROTOCOL

Trygve Endal, Kristine Sirevåg, Silje Haukenes Stavestrand, Inger Hilde Nordhus, Ståle Pallesen, Henning Johansen, Stine Oksholm Lom and Anders Hovland

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**Background:** Generalised Anxiety Disorder (GAD) is a severe anxiety disorder that is frequent among older adults. GAD increases the risk of developing other mental and somatic disorders such as depression and coronary heart disease. It has been shown that older adults have reduced effect of the recommended treatment for anxiety; cognitive behaviour therapy (CBT). Physical exercise may enhance through its effect on cognition and increased levels of neurotrophins.

**Purpose:** An empirically validated physical exercise manual has been developed and will be used in a randomized controlled trial investigating the effect of physical exercise on the outcome of CBT in older adults with GAD. The CBT combined with physical exercise will be compared to CBT combined with supportive therapy.

**Methods:** A 2 × 2 mixed factorial design (Time × Group), with participants randomized to one of two treatment conditions; 1) CBT

combined with physical exercise or 2) CBT combined with supportive therapy. Physical exercise will be conducted three times a week, one supervised and two un-supervised sessions according to the exercise manual. a. Participants. 70 older adults aged 60-75 years with a primary diagnosis of GAD will be included. Participants will be recruited through primary health care services and the media. b. Instruments. Primary outcome measures are remission rates and reduction of GAD symptoms as assessed by the Penn State Worry Questionnaire and the Beck Anxiety Inventory. Secondary outcome measures include measures of depression, sleep impairment and quality of life. The Ekb-lom-Bak submaximal cycle ergometer test will be used for predicting VO<sub>2</sub>-max, and items from the Senior Fitness Test will be administered to measure submaximal physical strength and to determine physical fitness and provide manipulation check. c. Analysis: All analyses of treatment effects will be investigated with intention-to-treat data, using hierarchical linear (mixed) models. Effects of moderators and mediators on treatment outcome will be investigated with linear multiple regression models.

**Results:** Results will be presented when the study is completed.

**Conclusions:** Improved treatment efficacy of CBT for GAD is important for the older population that so far benefit less from CBT than younger patients.

**Implications:** Improved treatment efficacy of CBT for GAD in older adults will provide better and more effective treatment for a frequent and severe anxiety disorder in older adults.

**Key words:** Generalised anxiety disorder. Cognitive behaviour therapy. Older adults. Physical exercise. Physiotherapy.

**Funding acknowledgements:** The project is currently being funded by Solli District Psychiatric Centre, Bergen, Norway.

**Ethical considerations:** Application for clearance is under preparation and will be sent to the Regional Committee for Medical Research Ethics Norway.

#### 42. EFFECT OF GAIT TRAINING ON POST-STROKE DEPRESSION AND QUALITY OF LIFE: OVER-GROUND TRAINING VS. TREADMILL TRAINING

Mashaël Al-homayin and Matar Alzahrani

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**Background:** Stroke is a major health problem and the third leading cause of death. Post-stroke depression (PSD) has a significant impact on quality of life for both the patient and his/her family members. Studies showed that improvements in depressive symptoms are associated with a better functional recovery and quality of life. Physical exercise including gait training has been reported to be positively associated with a reduction in depressive symptoms among stroke survivors. To the best of the researcher's knowledge, there are some studies that have been conducted to investigate the effect of treadmill gait training on PSD, but not for the effect of over ground gait training. Therefore, it is crucial to investigate the relationship between over-ground training and depression and compare this with the effect of treadmill.

**Purpose:** The aim of the current study was to investigate whether there is a difference between the effect of treadmill training and over-ground training on depression and quality of life post-stroke. The other aim is to find out whether the improvement of depression is a result of improving walking performance or as a psychological effect of exercises.

**Methods:** All patients who were referred to physical therapy department at security forces hospital and Sultan bin Abdulaziz Humnatriy city from Dec 2014 - till present, were screened. The goal was to include 32 patients; however, Only 15 patients have met the criteria of this study so far. All participants were randomized into two groups: Treadmill or over-ground group. Participants were included if they were 35-75 years old, 6 months or more after their

first ever stroke, able to walk independently at their self-selected speed and have scored  $\geq 10$  on Beck Depression Inventory II. Both groups received gait training, either on treadmill or over-ground, for 20 minutes, 3 sessions/week for 4 weeks. Outcome measures: Arabic version of Beck Depression Inventory (BDI); Arabic version of the World Health Organization Quality Of Life- Brief; the 6 min walk test and the 10 m walk test.

**Results:** Preliminary findings reveal a significant difference between pre and post-training BDI scores for the treadmill group and over ground group ( $p = 0.0009$ ,  $p = 0.013$ ; respectively). In regards to the quality of life there were no significance differences between all domains in both groups except for physical health domain in treadmill group ( $p = 0.010$ ) and environmental domain in over ground group ( $p = 0.042$ ). Results also show there is a significance difference between pre and post walking speed and capacity for treadmill group ( $p = 0.047$ ,  $p = 0.041$ , respectively), but not for over ground group.

**Conclusions:** So far, both treadmill and over-ground gait training are effective in reducing PSD.

**Implications:** The preliminary finding suggests that either treadmill or over ground gait training can be used post stroke.

**Key words:** Stroke. Depression. Quality of life. Gait training.

**Funding acknowledgements:** University Of Dammam, and Security Forces Hospital.

**Ethical considerations:** The Ethical Committee of University of Dammam approves the study.

#### 43. MOVED BY MOVEMENT: STUDIES ON PHYSIOTHERAPY IN THE TREATMENT OF MAJOR DEPRESSION

Louise Danielsson

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**Background:** Major depression is a common and debilitating condition. There is a growing interest in movement-based treatment approaches, but the evidence is still inconsistent. A physiotherapeutic perspective is rarely addressed in previous studies.

**Purpose:** 1. To evaluate the effects of add-on physiotherapy in major depression. 2. To explore lived experiences of a physiotherapist-guided exercise intervention in persons with major depression.

**Methods:** 1. a) A three-armed, randomized controlled design was used. Sixty-two adults on antidepressant medication, who fulfilled the criteria for current major depression as determined by the Mini International Neuropsychiatric Interview were randomized into three groups: aerobic exercise twice weekly, BBAT twice weekly or a single consultation about physical activity. b) At ten weeks, primary outcome depression severity was evaluated by a blinded assessor using the Montgomery-Åsberg Rating Scale (MADRS). Secondary outcomes were global function, cardiovascular fitness, self-rated depression, anxiety and body awareness. c) Analysis of co-variance (ANCOVA) was used to test the hypothesis, followed by the Bonferroni test for pair-wise comparisons. 2a) Thirteen of the participants taking part in the above exercise intervention, were included. 2b) In-depth interviews were conducted, recorded digitally and transcribed verbatim. 2c) Qualitative content analysis guided the data analysis.

**Results:** 1. Significant improvements in MADRS score and cardiovascular fitness were observed in the exercise group. Per-protocol analysis confirmed the effects of exercise and also indicated that BBAT has an effect on self-rated depression. 2. Four categories emerged, reflecting the participants' experiences of the intervention: struggling toward a healthy self, challenging the resistance, feeling alive but not euphoric and needing someone to be there for you. Exercise, although it was hard work, enhanced their feel-

ing of being alive and capable of doing something good for themselves. This was a welcome contrast to the numbness and stagnation of depression. **Conclusions:** Exercise in a physiotherapeutic context improves mental and physical health in persons with major depression. More studies are needed to conclude the effects of BBAT. Guided exercise, with active and sensitive support from the physiotherapist, can spark the experience of aliveness and capability.

**Implications:** Physiotherapy has potential to take on a more prominent role in the primary care treatment of major depression. Physiotherapists need to be aware of the challenge to sensitively guide the patients, understanding their vulnerability and ambiguity.

**Key words:** Depression. Exercise. Basic Body Awareness Therapy. Randomized Controlled Trial. Qualitative Research.

**Funding acknowledgements:** The work was supported by the Gothenburg University Centre for Person-Centred Care (GPCC) and by Regional Funds of Västra Götalandsregionen, Sweden.

**Ethical considerations:** The ethical principles of the World Medical Association of Helsinki were followed. Approval was obtained by the local ethics review board.

#### 44. THE FIBROMYALGIA DIAGNOSIS IN THE CAREER AS A PATIENT - A METASYNTHESIS OF QUALITATIVE INTERVIEWS

Anne Marit Mengshoel, Birgitte Ahlsen, Susan Madden and Julius Sim

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**Background:** Diagnoses are applied to separate those being sick from those being healthy, and thereby sort out who needs therapy and support and who does not. Usually, a diagnosis is made up by pre-defined criteria referring to knowledge about pathology, treatment and prognosis. But diagnoses are also given when complaints cannot be explained by medical examinations. Nevertheless, a diagnosis is believed to provide explanations of what is wrong, what to do about it, and legitimize problems in the society. However, in medically unexplained illnesses a diagnosis may provide limited explanations about these issues. This may be the case for several musculoskeletal pain conditions, like fibromyalgia.

**Purpose:** A systematic literature study was performed to examine the experiences of patients about getting and living with the diagnosis of fibromyalgia.

**Methods:** A systematic literature search on Medline, PsychInfo, Cinahl, Embase, and Social Science Citations Index up till June 2014 was performed. After excluding duplicates, we ended up with 1292 titles and abstracts for review, and of those 104 papers were read in full-length. Nineteen papers included information about the patients' experiences about diagnosis. The papers were read several times to obtain an overview. Detailed information was extracted from the papers, and subjected to a thematic iterative analysis within and across papers.

**Results:** The included papers are published in the time-span 1995 up to 2013, and 318 persons (301 women and 17 men) were interviewed. The process of getting a diagnosis was usually time-consuming and winding as the informants were sent from one specialist to another, and they underwent several clinical examinations to eliminate several diseases. Getting the fibromyalgia diagnosis lead to an immediate relief, confirming they were not suffering from a fatal disease. But the solution was short-lived as the diagnosis did not include information about what was wrong, and how to deal with their suffering. Accordingly, it became difficult to explain their situation to others. In a wider time perspective, the patients experienced that health professionals and people in general did not necessarily think fibromyalgia was a le-

gitimate diagnosis, and the patients could question the validity and benefit of the diagnosis.

**Conclusions:** Both health professionals and lay people could question the reality of the patients' suffering during the time searching for and living with the diagnosis. Accordingly, the patients felt uncertain and that their credibility and identity were challenged.

**Implications:** Physiotherapists should recognize the uncertainty and together with the patients explore ways to make sense of their altered life situation.

**Key words:** Fibromyalgia. Unexplained medical diagnosis. Uncertainty. Meta-synthesis.

**Funding acknowledgements:** No extra funding.

**Ethical considerations:** All included papers were approved by ethical boards.

#### 45. MULTIDISCIPLINARY BODY-ORIENTED GROUP COURSE FOR PATIENTS WITH MUS

Annet de Jong

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**Background:** 30 to 50% of the consultations at the GP's end without any diagnosis. A reason for many following referrals to other medical specialists, without any effect. In 10-30% of the patients who develop MUS the complaints persist. Many MUS patients eagerly look for a solution for their non-existent organic disease. This causes high use of services, useless laboratory testing and consultation, and increased costs. Recently some multidisciplinary body-oriented group interventions have shown to have some effect.

**Purpose:** The time physical therapists spend with in their patients is often too short. Many interventions like cognitive behavioural therapy, pain education, relaxation techniques like mindfulness-based cognitive therapy appear to be effective but cannot be combined in a session of physiotherapist, specialized in psychosomatics (PSP). By combining these elements in a larger session, and also by gathering more patients with similar complaints the PSP has more time to practise the elements mentioned. Moreover, the advantage of the group can be utilized (cf. recognition of the complaints, possibility of interactive exercises, and sharing the personal benefits). The purpose was to provide MUS patients with tools to be able to deal better with their (fear for) complaints.

**Methods:** An innovative multidisciplinary body-oriented group course has been developed in order to face the mechanisms that induce the patterns of somatisation. As the target population has limited health literacy as well as lower socio-economic status (SES) a complementary, comprehensible handout has been developed with straightforward explanations and illustrations for homework help. We evaluated the programme by measuring the RAND 12, and scale for functional goals. (The analysis of these data will be given in a second presentation) Furthermore a short qualitative questionnaire is given.

**Results:** What has been the response to the programme method and theory when it has been used? Participants felt that their complaints have been taken seriously and they wrote they understood more of the initiation of their complaints; they also appreciated the opportunity of sharing and recognising the common experiences. (See the second presentation for the quantitative effects)

**Conclusions:** Most participants benefit from the programme. Probably in the future more severe types of MUS patients can be included. **Implications:** The multidisciplinary body-oriented group course for limited health literacy patients will be implemented in other lower SES populations elsewhere in The Netherlands.

**Key words:** MUS. Group therapy. Multidisciplinary. Body-oriented. Self-management.

**Funding acknowledgements:** Although there was no structural funding, some small (implicit) contribution has been given by a Dutch health insurance organisation, as part of a health care innovation support.

**Ethical considerations:** All participants accepted dispersion of the data. No approval of an ethical board was needed as there was no randomisation in the design.

## 11.00 - 12.00 Session 6:

### Physiotherapy in Mental Health (in Spanish)

Chair: Patricia Serranos de Andrés, Spain

#### 46. ASPECTS PSYCHOSOCIAL, OPERATION AND OCCUPATION IN THE DYAD CAREGIVER - A PERSON WITH PHYSICAL DISABILITY

Olga Lucia Montoya Hurtado<sup>a</sup>, Maria Emma Reyes<sup>b</sup>, Juanita Bejarano<sup>b</sup> and Maria del Carmen Botero<sup>c</sup>

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**Background:** Relations between psychological characteristics (social support, load the caregiver and resilience) and functioning of people with physical disabilities and their caregiver.

**Purpose:** Identify performance relationships and psychological variables in the dyad.

**Methods:** To identify and analyze relations between the operation and the characteristics psychological of the day were 6 instrument, 5 quantitative and a semi-structured interview taking into account: Variables evaluated above the (the) caregiver (a): socio-demographic, social support, resiliency, perception of load, occupational profile Variables evaluated in the person with physical disabilities: demographic, social support, resiliency, performance.

**Results:** The negative correlation of relationship with other people and communication-understanding, dimensions shows an inverse relationship with resilience, which may indicate that people with physical disabilities develop strategies of resilience when faced with the situation independently. The perception of performance is more deficient in amputees than in the other two groups. The perception of performance in specific domains could be activating coping as resilience strategies. Identify properly psychosocial aspects of people with physical disabilities can influence the development of resilience to favour not only the perception of performance but the level of independence

**Conclusions:** Incorporate the ICF in the investigation led to the need to take into account the context of the population, which necessitated another type of analysis from the emotional and how these factors influence the human body movement. Understanding of the human being is complex, not complicated; that is why it is necessary to establish interdisciplinary dialogues that complement or discuss analyses. Take into account the perception of the analysed population, requires analysis of different disciplines. It is important for physical therapists use qualitative analysis methods.

**Key words:** Resilience. International Classification of Functioning, Disability and Health.

**Ethical considerations:** Escuela Colombiana de Rehabilitación, CIREC, Arcángelos.

#### 47. PHYSICAL THERAPY IN DRUG-INDUCED PARKINSONISM: AN OVERVIEW OF MENTAL HEALTH NEEDS

Miriam Beltrán Checa, Jessica Borrull Guardado, M<sup>a</sup> Cruz Sebastiá Laguarda and Vanessa Sánchez Martínez

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**Background:** Being treated with some antipsychotics implies certain side effects such as dystonia, akathisia, tardive dyskinesia, tremor, stiffness and balance impairment, among others, for people with mental illnesses. These symptoms have a negative effect on the quality of life of those who experience them, on their motivation, their treatment adherence, their self-esteem and the stigma they suffer. Although there is scientific evidence supporting the efficiency of the pharmacological approach to these symptoms, the influence of non-pharmacological interventions (NPI) is unknown. Physical therapists take part in the management of the dysfunctions caused by neurological problems, such as Parkinson's disease, whose clinic is similar to drug-induced parkinsonism (DIP), although its origin is different. The importance of the figure of the physical therapist is incontrovertible in the interdisciplinary neurology team. Nevertheless, being the DIP a neurological consequence of the treatment, the physical therapist is not considered in the interdisciplinary team of Mental Health.

**Purpose:** To answer the following questions: What symptoms of the DIP can be addressed by the NPI? Which is the efficiency of the NPI in the management of the DIP? Which is the role of the physical therapist in the NPI of the parkinsonism?

**Methods:** A literature search was conducted in the following databases: Pubmed, Embase, Scopus, Science Direct, Cuiden Plus, Enfispo and Cochran Plus. Key words representing the principal symptoms of the PIF were used, combined using "AND" Boolean operator with "intervention\*" and with "parkinson\*", fitting them in each case to the characteristics of the base. Clinical tests published from 1995 up to the current importance in the languages Spanish, English, French, Portuguese and Italian were included.

**Results:** 56 original articles accessible from the University of Valencia Library were found. The documents were analysed and a table was created to show the most relevant aspects of each article (intervention, type of study, sample, purposes, results quality level and evidence level). In addition, a synthesis of the evidences found for each symptom was made.

**Conclusions:** According to the number of publications about NPI, those designed to treat balance problems, respiratory symptoms and tremor stand out. No documents were found about sialorrhea or dyskinesia. All the investigations considered in this study offer an approach to the treatment of the symptoms from Parkinson's Disease. The papers included offer different levels of evidence for the interventions they propose.

**Implications:** Some of the NPI require the participation of the physical therapists, so their inclusion in the mental health interdisciplinary team should be considered.

**Key words:** Physical therapy. Drug-induced parkinsonism. Mental Health. Non-pharmacological interventions. Intervention.

**Funding acknowledgements:** Unfunded.

**Ethical considerations:** Does not apply.

#### 48. BODY AWARENESS IS A MULTIDIMENSIONAL CONSTRUCT. WHAT RECENT STUDIES HAS REVEALED?

Janette Zamudio Canales and Ricardo Alberto Moreno

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**Background:** In recent years, a construct labeled "body awareness" has emerged as a subject of scientific research across a wide

range of health topics. Although a clear definition is rarely provided, body awareness involves an attentional focus on and awareness of internal body sensations. Currently the concept of interoceptive awareness has been accepted as a broader and deeper concept and has spread broadly in several scientific studies.

**Purpose:** For the purpose of this review, we are primarily concerned with those aspects of inner body awareness that, although interacting with thoughts and exteroceptive stimuli, are distinguishable from these and are potentially of key relevance for a deeper understanding of the interaction of mind and body.

**Methods:** A literature review of the last five years where 10 scientific papers reporting the concept of body awareness and interoceptive awareness and how they are applied were found took place.

**Results:** The results evidence that body awareness is the perception of bodily states, processes and actions that is presumed to originate from sensory proprioceptive and interoceptive afferents and that an individual has the capacity to be aware of body awareness is hypothesized as the product of an interactive and dynamic, emergent process that a) reflects complex afferent, efferent, forward and back-projecting neural activities, b) includes cognitive appraisal and unconscious gating, and c) is shaped by the person's attitudes, beliefs, experience and learning in a social and cultural context. In the same way, Interoceptive awareness has been shown to be critical for the sense of self and the creation of a subjective perspective from which the world is experienced. Furthermore, interoceptive awareness is critical for decision making and self-control of behavior in various situations with impact on health and disease.

**Conclusions:** The review was used to explore the current understanding of the construct and to demonstrate that "body awareness" is a multidimensional concept, what makes it more important both application and assessing. Future studies should be done to better understand the interoceptive awareness.

**Implications:** Provide deeper understanding of the construct and connect to therapeutic process in mind/body approach.

**Key words:** Body awareness. Interoceptive awareness. Interoception.

**Funding acknowledgements:** This review was unfunded.

#### 49. MEASURING PSYCHOMOTOR ASPECTS IN CHRONIC SCHIZOPHRENIA THROUGH THE ICF AND OTHERS INSTRUMENTS

Tamara Sofía Miranda-González and Katya Muñoz León

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**Background:** In schizophrenia, neuroanatomical alterations are mainly represented by brain mass and volume reduction, accompanied by dilated ventricles. This is associated to prefrontal, subcortical and temporal dysfunction and implies alteration of various neurotransmission systems, especially in dopaminergic pathways. It has been established that brain mass reduction corresponds mostly to a decrease of grey matter at the cortex. This effect is greater in the temporal lobe. Morphological alterations of the temporal lobe, specifically the hippocampal formation, amygdala and parahippocampal gyrus are characterized by important volume reductions. Scheibel et al., have shown structural disorders in the hippocampus and entorhinal cortex which affect dopaminergic pathways relating to the basal ganglia. These basis account for psychomotor alterations in schizophrenia. Also, through the body and mind integration current, Reich and others comment an intrauterine origin for movement alterations describing characteristic patterns associated with head and neck motor block, tonic-clonic seizures, and low muscle hypotonia. Rood relates them to sensory integration, identifying proprioceptive and vestibular disorders; it is described that the

origin of sensory integration affections are associated to problems in early development, referring to tonic muscle hypotonia, phasic patterns and the observed "S" posture (cervical kyphosis, lumbar hyperlordosis, retracted arms).

**Purpose:** This study seeks to characterize psychomotor alterations of people with schizophrenia from protected residences through ICF.

**Methods:** This is a descriptive cross exploratory study. Assessments are based on Groningen Social Disabilities Schedule (GSDS), daily activities evaluation (BELS), and the International Classification of Functioning Disability and Health (ICF). 27 males, 30 to 70 years old, clinically diagnosed with long term schizophrenia, all having resided over two years in protected homes of a community health support program. Selection of individuals was done by clinical record inspection. A qualitative approach was used. Data was obtained through three different assessment methods: patient behavioral observation, which was performed twice a day during 30 minutes for each individual; social role functionality evaluation; and personal interviews. The extension of deficiencies in corporal functions, activities, participation and environmental factors is valued with ICF's first qualifier on a modified assessment sheet based on ICF.4.

**Results:** Moderate to severe deficiencies in the following evaluated functions were detected: general and specific mental functions; neuromusculoskeletal and movement-related; general tasks and demands, mobility, communication, interpersonal interactions and relationships.

**Conclusions:** The results of this study show how schizophrenia impairs performance of mental functions, activity and participation; and the relation people with schizophrenia establish with the selected environmental factors. All these areas are relevant in abilities required for daily occupation.

**Implications:** It is important to note that rehabilitation practice oversees the considered psychomotor aspects which. Further investigation is required to provide improvement solutions for present rehabilitation practice orientations in public health policies.

**Key words:** Schizophrenia. Psychomotor. Motor skills. ICF.

**Funding acknowledgements:** This work was unfunded.

**Ethical considerations:** All individuals participated voluntarily under informed consent in this study.

#### 50. ADVANTAGES HIPOPRESSIVES ABDOMINAL EXERCISES IN PATIENTS WITH ANXIETY DISORDERS

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**Background:** Anxiety disorders are the most common psychological problems in the population and in the clinical context. These disorders often cause panic attacks, and among other symptoms is the feeling of wheezing or breathlessness, which causes a disruption in the body in the breath. A pattern of hyperventilation occurs during panic attacks in which the patient feels breathless. They usually have a higher costal breathing pattern, so that after several episodes the diaphragm is weakened. It is weakness in the diaphragm causes it to continue to promote superior costal breathing, avoiding to take a deep breath, so it shows the patient a feeling of suffocation. Producing a feedback, the has bigger is the feeling of suffocation more anxiety, more anxiety over choking sensation. There are many studies demonstrating the effectiveness of breathing exercises and Pilates in patients with anxiety disorders. However there are other exercises, as hipopressives how they can also help these patients. Hipopressives exercises help strengthen the diaphragm and be aware of the movement that has to do to get some air, providing good respiratory biomechanics. So we manage to avoid that feeling of shortness of breath, caused by the malfunction of the diaphragm. It is also good for the patient work in apnea, because it

makes you see that when you have that feeling of suffocation can be managed with a deep breath.

**Purpose:** Demonstrate the importance of treatment with hipopressive abdominal exercise in patients with anxiety disorders.

**Methods:** Add to the usual treatment of patients with anxiety disorders hipopressives abdominal exercises to strengthen the diaphragm, improve respiratory function and give the patient more control of your body and breath.

**Results:** Patients with anxiety who have added to hipopressives abdominal exercises treatment have shown an improvement in the feeling of breathlessness. They handle better the panics attacks, and correct the hyperventilation.

**Conclusions:** It is too early to establish a clear scientific evidence. Nowadays it is a hypothesis that is working very well and that is a type of therapy is not harmful to the patient. Something ideal would be continue working with this hypothesis with a bigger number of patients to quantify the benefits. The protocol would involve forming two groups of patients with Anxiety and one of them give treatment of hypopressive abdominal exercises, and value the differences with the control group ; which has not made him such treatment.

**Implications:** Decreased of spending on sequels and medication, symptom improvement, and improve the quality of life of these patients.

**Key words:** Anxiety. Diaphragm. Hypopressives.

**Ethical considerations:** This paper follows the Helsinki Declaration for Health Research and Ethics.

### 51. THE IMPACT OF A MINDFULNESS PROGRAMME ON THE PERCEIVED PSYCHOLOGICAL WELLBEING AND ON THE PERCEIVED SELF-EFFICACY IN COLLEGE STUDENTS

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**Background:** College students face significant academic stressors throughout their training. The inability to successfully cope with the enormous academic stress may lead to a cascade of negative consequences on health and the psychological wellbeing. Four decades of research with adult students, community and clinical populations have provided evidence that mindfulness meditation reduces negative mental health symptoms, including stress and anxiety, and enhances psychological wellbeing.

**Purpose:** The aim of this study was to test the impact of mindfulness practice on both the perceived level of psychological wellbeing and on the perceived level of self-efficacy in college students of physical therapy from the University of A Coruña.

**Methods:** 30 third-year students of physiotherapy participated in a 12-week mindfulness meditation programme. Measurement Tools: The Ryff (1989) Scale of Psychological Wellbeing and the General Self-Efficacy Scale (Baessler y Schwarcer, 1996) Spanish validated versions were applied. Design: Experimental in its nature, at random.

**Results:** Findings indicate that participation in the programme, compared with the control group (wait list), improved the perceived level of psychological wellbeing and the perceived level of self-efficacy. The Student's t test, showed differences in the average scores from pre to post-test for each of the dimensions of the psychological well-being, and the paired samples t-Test revealed significant statistical differences ( $p < 0.05$ ) on two of the evaluated dimensions: self-acceptance (sig: 0.001) and environment control (sig: 0.003) with an effect size of Cohen's d (0.85) and (0.37) re-

spectively. Also, the Student's t test, showed differences in the average scores from pre to post-test in the perceived level of self-efficacy, and the paired samples t-Test revealed significant statistical difference ( $p < 0.05$ ) in the perception of the level of self-efficacy (sig:0.00) with an effect size of Cohen's d (0.703).

**Conclusions:** The results suggest that mindfulness meditation can be effective in increasing the sense of psychological wellbeing and the perceived level of self-efficacy for physiotherapy college students. Further studies in different samples of college students are required to confirm these results.

**Implications:** Initially, the university population benefit from mindfulness meditation, but considering that they are health sciences students, it may be supposed that during their professional development patients will also benefit from this program, given the fact that among the effects of mindfulness are the improvement of the psychological wellbeing and self-efficacy. These qualities are related with lower levels of stress, which is valuable for health professionals.

**Key words:** Mindfulness. Wellbeing. Self-efficacy.

**Funding acknowledgements:** This work is not funded.

**Ethical considerations:** The authors considered ethical and legal principles regarding human research in the field of education. Participation was based on the formal informed consent.

## 13.00 - 13.50 Workshops

### 52. THE BRAATØY AND BÜLOW-HANSEN PHYSIOTHERAPY/ NORWEGIAN PSYCHOMOTOR PHYSIOTHERAPY

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**Background:** The development of the method started in the late 1940 in Oslo by the psychoanalyst Trygve Braatøy and the legendary physiotherapist Aadel Bülow-Hansen, via an interest group the method developed into an academic education. The Therapy is a 2 years part time postgraduate education in physiotherapy at two Universities and one University College in Norway. Since 1956 I have participated in developing the method and the education. Respiration is the guideline for this kind of physiotherapy.

**Purpose:** My aim is to introduce the method for international colleges and teach how one can use movements to stimulate both the middle, the upper and the lower diaphragms.

**Methods:** The theory is introduced on power point slides and I will show the practical work. The whole group can participate afterwards, and eventually try in small groups. The tools are specific movements that release the respiration and muscular tension. To get a balanced body proprioception is stimulated.

**Results:** In the pre-academic form 3years program have for instance been at the Karolinska institutionen in Stockholm, Sweden and The University psychiatric hospital in Aalborg, Denmark. For the time being there is an education in Finland led by Associate professor Kirsten Ekerholt and Assistant professor Elisabeth Møyner from the University college in Oslo. There is research performed both on the method and the body examinations based on the method.

**Conclusions:** Indication for the Braatoy and Bülow-Hansen method are chronic pain, long-lasting musculoskeletal disorders and psychosomatic disorders. The method is excellent in changing body and mind.

**Implications:** a) This individual therapy depends on a good therapeutic relationship and empathy. b) Introductory courses arranged in the home country. c) English education in Norway in the future.

**Funding acknowledgements:** Center for Senior Competence at the Oslo and Akershus University College.

**Ethical considerations:** Does not concern.

### 53. TAI CHI FOR ARTHRITIS (TCA)

Kent Skoglund<sup>a,b</sup> and Amanda Lundvik Gyllensten<sup>a</sup>

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**Purpose:** In physiotherapy and in healthcare there is today an increasing need to find methods that emphasize awareness of the whole and awareness of balance and movements. Many persons suffer from problems with muscular tension and pain, mood disorders like depression or anxiety and/or problems with balance both in the body and/or social situations. There is strong evidence of the effects of Tai Chi in multiple areas, like fear of falling, balance difficulties, fear of movement and everyday physical activity, kinesiophobia, mood disorders and stress-related problems. Tai Chi for Arthritis (TCA) is a short form focusing on pain, stiffness and depression. There are several scientific articles in international journals some written by Physiotherapist revealing TCA to be effective in promoting balance, pain relief and improved functioning. There are also some thesis in Physiotherapy using TCA as an intervention.

**Methods:** The aims and methods of this workshop is to move and practice Tai Chi for Arthritis (TCA), together with some preparatory warm up exercises. The participants are the ones that enrol in this workshop and also wants to discuss what makes TCA one of the methods in Physiotherapist practice.

**Results:** TCA is nowadays gaining more and more popularity as a method promoting health and harmony. It is done slowly and with full concentration and therefore it is safe. Your body balance is improved and also your strength, flexibility and mood. This is very important especially when you are getting older in order to prevent falling, depression or other age-related illnesses. There are many professionals that use Tai chi as an intervention for different patient groups. Physiotherapists here have company with Medical Doctors and Nurses. As professionals Physiotherapists have a profound knowledge about body function and movements that makes us especially suited to promote methods like TCA.

**Key words:** Tai chi for arthritis. Evidence. Health. Body/mind function. Physiotherapy practice.

**Funding acknowledgements:** No funding.

### 54. BODY-ORIENTED GROUP INTERVENTIONS FOR PEOPLE WITH BIPOLAR DISORDERS

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**Background:** Bipolar disorder (BD) is a mental disorder that causes unusual shifts in mood, energy, activity levels, and the ability to carry out day-to-day tasks. An increased vulnerability to stress and “early warning symptoms” are typical for BD. The most commonly identified early signs for manic episodes are feeling energetic, being more talkative and feeling emotionally high; the most commonly endorsed signs for depression are low energy, low motivation, feeling tired and listless. Furthermore alterations of awareness can lead to concentration deficits or eating/drinking disorders. In particular during a manic or depressive phase body awareness and consequently physical activity is affected. Beside medication, tools need to be provided so that patients with BD become aware at an early stage of the warning symptoms. These tools should help them to react adequately and to avoid relapse. At the Medical University

of Graz (MUG) a program with body-oriented group interventions has been developed. The cornerstones of this group intervention are: Body perception and awareness exercises; Activation of the physiological processes by physical activity; Body-relaxation and stress-management exercises.

**Purpose:** The objective of this workshop is to propose this new body oriented approach for persons with BD. The content of the workshop consist of a theoretical introduction, a practical part with some aspects of the program (“The energy barometer”, “Contact with the ground - as an external support”, “The skeleton - as internal support”, “The skin - as barrier”, “Centring and balance”, etc.) and a discussion part. In this discussion part specific attention will be given to the (positive) experience of patients with BD in regard of body awareness and coping strategies for stress-management.

**Conclusions and implications:** From our point of view this intervention is relevant for the relapse prevention and therapy of patients with BD, but can be extended to other psychiatric disorders or to persons with a high stress vulnerability.

**Key words:** Bipolar disorders. Body awareness. Physical exercises. Stress-coping strategies.

**Funding acknowledgements:** No funding.

**Ethical considerations:** was given by the ethics committee at the MUG (26-276ex) for the “Bip-Body-Study” with body-oriented group interventions.

## 14.00 - 14.50 Workshops

### 55. BODY EXPERIENCE AND EXCESSIVE EXERCISE IN EATING DISORDERS, THE CORNERSTONES FOR A PHYSIOTHERAPEUTIC APPROACH

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Physiotherapy is often overlooked as an adjunctive treatment for patients with eating disorders. However, the integration of physiotherapy is based on the physiotherapists’ experience in both the body and the body in movement, two important issues integral to eating disorder pathology. From our clinical experience, physiotherapeutic techniques represent a potent clinical addition to available treatments of eating disorders. Patients with eating disorders have an intense fear of gaining weight and present a negative body experience and a disturbed body perception (weight, circumference and form). Excessive exercise, drive for activity or hyperactivity are considered to be a secondary symptom in the diagnostic of patients with eating disorders and are characterized by a voluntary increase of physical activity, a compulsive urge to move and by the dissociation of fatigue. These characteristics are the two cornerstones for physiotherapy in children, adolescents and adults with eating disorders problem in an in- or outpatient treatment. More concrete, the objectives for physiotherapy are (1) rebuilding of a realistic self-concept, (2) curbing hyperactivity and (3) developing social skills. There are several ways to accomplish the above-mentioned objectives in physiotherapy. Physiotherapists have a wide array of skills which can be applied successfully in treatment of AN. Different therapeutic interventions aimed at improving the body experience in patients with eating disorders can be used: postural training, relaxation training, mindfulness, tai chi and yoga, breathing exercises, physical activities, sensory awareness and self- perception (mirror exercises and body awareness). The goal of this workshop is to present

practical guidelines for physiotherapeutic management in eating disorder, recommendations based upon more than 35 years of clinical experience. At the end the question “Do patients with eating disorders benefit from physiotherapy?” will be elaborated. The goals of the workshop. 1. To propose and to experience “adapted physiotherapeutic exercises” based on our clinical experience. 2. To analyse the research data in regard of body experience and excessive exercise. 3. To discuss the pros and the cons, the therapeutic and practical implications. Handouts in Spanish language will be available.

**Key words:** Eating disorders. Body experience. Excessive exercise. Physiotherapy. Psychomotor therapy.

**Funding acknowledgements:** No funding.

## 56. WITHIN EVERY PROBLEM LIES AN OPPORTUNITY. A CREATIVE METHOD FOR PROBLEM SOLVING USING METAPHOR CARDS

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**Background:** The inspiration for this method came from Albert Einstein’s observation that problems can not be solved with the same way of thinking as they arose. Using image metaphors and useful beliefs in a goal-directed collaborative and systematic approach makes it possible to discover new and unexpected perspectives and solutions by focusing on particular problem areas. The original metaphor cards were created in 2010 by Pille Murrik and Pille Kriisa, and since then two major universities in Estonia (University of Tartu; Tallinn University) have used this method in their Induction Year Program and Mentor Program.

**Purpose:** To share a creative problem-solving method that can be used in various ways, with the workshop focus on helping the person accomplish better self-awareness and knowledge of one’s existing resources. The previous experience shows the use of metaphor cards to be an effective method to establish contact with reserved and shy people, giving them a safe framework to share their thoughts, help foster collaboration within a group, etc. Together with the participants we ask ourselves two questions: Could this method be used as an everyday practice and which features are necessary for better implementation in physiotherapy?

**Methods:** The workshop will be conducted using active learning principles, an introduction to the method, PowerPoint presentation, metaphor cards and example cases. Participants get to practice the method using their own examples and existing experience, as well as create their own exercises using the metaphor cards.

**Results:** Participants will get a practical insight into this creative problem-solving method. The card game can be fun and refreshing. In addition to a specific problem-solving model we introduce other ways to use the cards. Being a creative method, participants can use metaphor cards as wildly as they can imagine (f.e using the cards with a patient in therapy can enhance the therapeutic relationship).

**Conclusions:** This method has been used mainly in education (but also in coaching, counselling, etc.) and it has been embraced in seminars and the daily work of teachers. Using metaphor cards for descriptive tasks, one’s brain is stimulated to develop new connections. Therefore, in addition to better problem-solving skills, regular practice might have the benefit of boosting creativity in general. Although the method itself needs to be scientifically explored to maximize its potential benefits, a lot of research into its core subjects like lateral thinking and solution-focused brief therapy already exists.

**Implications:** Through our positive feedback and previous experience in other fields, we believe this method could be an useful tool for physiotherapists (and for others, who work with people).

**Key words:** Problem-solving model. Lateral thinking.

**Funding acknowledgements:** No funding.

**Ethical considerations:** General regulations for ethical considerations are followed.

## 57. MASSAGE IS THE MESSAGE: MASSAGE AS AN INTERVENTION IN THE TREATMENT OF PSYCHOSOMATIC DISORDERS

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Massage is an effective method in the treatment of psychic illness. Massage is also one of the sources of our profession. As long as we know, massage is a way to heal and reassure people who are suffering. The patients who came to me were suffering with somatoform symptoms. They were willing to open themselves with body and mind to find healing. To me the question arises: What is the suffering body telling me? To find an answer I developed a method called psychosomatic analysis. The purpose for developing this method is to come to a deeper understanding of the suffering in the body and the mind. This process has to take place in the inter subjective relation between patient and therapist. This will open a possibility to learn a new way in treatment of psychosomatic diseases. In the workshop I will present this method, the background and some cases from my practice. Followed by discussion. I have been developing and studying this method for more than 30 years now. About 2,000 people came to me during these years. A therapeutic process has the duration of 6 months and patients are coming once a week. Using deep tissue massage, it is possible to make a connection with the emotions of the patient, which are unknown in the mind, but expresses themselves in the body as pain. Taking this connection makes it possible to read the mind in the body. The encounter between the hand of the therapist and the body of the patient opens a space of consciousness where clarity arises. Mind and body integrate more and the patient feels more complete. A nonverbal communication is noticeable, which is inter subjective, the therapist uses her/his body as an instrument, using professional intuition to deconstruct the blockade in the body. To use this professional intuition, asks for a different curriculum. Therefore the implications must be found in education. To train and learn psychosomatic physiotherapy, and the psychosomatic method, students have to be aware of their role in the process. The most important key words are: Massage, psychosomatic analysis and education. I want in this conference to address the importance of the oldest healing method known to human of touching a human being who is suffering, with kindness and affection.

## 15.30 - 16.20 Workshops

### 58. BASIC BODY AWARENESS (BBAT) - A HOLISTIC APPROACH ON HUMAN MOVEMENTS USED IN PHYSIOTHERAPY AND MENTAL HEALTH CARE

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**Purpose:** In all physiotherapeutic fields and in mental health care there is a need for patients to get in touch with themselves through increased awareness of their bodies. The aim of this workshop is to

experience yourself through the holistic method Basic Body Awareness Therapy (BBAT).

**Methods:** BBAT consists of simple movements from daily life. These movements are done lying, sitting, standing, walking and also movements done together with and in relation to a partner. Breathing and use of the voice are integrated in the exercises. Awareness of yourself is very fundamental. Man is looked upon as a whole consisting of physical, physiological, psycho-social-relational and existential aspects. It is considered important to be in touch with all of these aspects of yourself to be able to grow as a whole person. To better understand yourself and to reflect on yourself and your behaviour bodily and mentally is important. When you are concentrated and aware of yourself doing these exercises you get involved in the movements through experiencing different aspects such as balance, flow, rhythm, intention as well as emotional aspects. For the physiotherapist it is important to be in touch with himself as well as the patient in order to be able to stimulate personal growth both bodily and mentally. In this workshop we will try to find some of these movement qualities doing BBAT exercises and there will also be time to put questions and to share experiences with each other's. Relevance: BBAT started in psychiatric physiotherapy more than 30 years ago. Due to its growing popularity it is today used within all physiotherapeutic fields. It is a health-and resource oriented rehabilitation program/methodology working with body/mind unity. BBAT is used individually as well as in group therapy. The method has been thoroughly evaluated in several scientific studies and has been found to be effective in treating patients with different kinds of problems such as depression, anxiety, personality disorders and muscle-skeletal pain.

**Key words:** Basic Body Awareness Therapy. Movement quality. Body/mind unity.

**Funding acknowledgements:** Unfunded.

## 59. EXPERIENCING BASIC BODY AWARENESS THERAPY (BBAT) IN SPANISH LANGUAGE

Patricia Serranos de Andrés<sup>a</sup> and Maite Cenoz Huarte<sup>b</sup>

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**Background:** BBAT is a person centered physiotherapeutic modality, evidence and experience based. It is based on movements from daily life, the use of voice and massage. Our aim is to make participants experience BBAT in Spanish. The workshop will be conducted by a BBAT teacher candidate and a BBAT therapist, both with years of clinical experience in BBAT and Spanish native speakers.

**Purpose:** The purpose of this workshop is to invite Spanish speaking people from the conference to be involved in a BBAT session, encouraging them to participate actively in the workshops and not only in the conferences. Possibly an important amount of people can see the language (English) as an obstacle to be in touch or get familiar with some therapies; this workshop could be an opportunity to unify, promote and help spread out of BBAT and Physiotherapy and Mental Health from the lived experience of participants.

**Methods:** Material: chairs, mats and comfortable space. Method: It will be developed through: Short oral theory of the movements. Practical guidance of some BBAT movements. Time for shearing the experiences of movements within the group. Linking the experiences that emerge from the sharing time with some of the core elements in BBAT.

**Results:** For physiotherapists in mental health, it is important to be aware of the importance of their own movement quality and to be familiar with BBAT. The important point of this workshop is that participants will achieve a practical experience of their self awareness and at the same time they will be invited to reflect on the

experience and share with others at the end of the session. They will experience the group therapy as well and become more aware of their own movement quality in a very comfortable language.

**Conclusions:** This Workshop in Spanish can be the opportunity to make an excellent network, to unify mental health interested Spanish speaking physiotherapists and to provide them with a unique experience of movement quality. At the same time this workshop will help them reflect and improve their self awareness. As the language is sometimes a challenge, there won't be any hamper to the spread out of the information and sharing the experience.

**Implications:** Being unified is important to have strength as a group and this workshop will provide the opportunity of experiencing BBAT in Spanish and create a Spanish speaking group that could be the reference for future work or projects in other Spanish speaking countries and not only in Spain.

**Key words:** BBAT. Spanish. Unity. Experience.

**Funding acknowledgements:** It hasn't been funded.

**Ethical considerations:** All ethical aspects were considered.

## 60. PRACTICAL SAMPLES OF TREATMENT IN LUMBAR PAIN

Esther Eiras and Claus Knapp-Boetticher

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**Background:** Presentation of technical details on exercises included in "Escuela de columna" (column training) exposed at the "oral presentation" by Dr Claus Knapp-Boetticher and physiotherapist Mrs Esther Eiras.

**Purpose:** Show the exercises that resulted useful during years of development, and selection of the most efficient, and their practical utility and application. The use and technical details of many of the most important exercises are exposed and their practical application explained in detail.

**Methods:** The exercises will be shown: 1. By untrained volunteers. 2. By trained physiotherapists. Tech requirements: Amplified wireless hands free microphone. Camera and big screen for detailed live screening. Two or three sturdy tables. Each participant one chair. There's no special requirement for the floor.

**Results:** As we don't do our exercises lying on the floor, elder patients can do them, even over 90 years. Our experience is very positive with these patients. With Escuela de columna we don't cure! We put the patient in condition to cure themselves. And the results are excellent!

**Conclusions:** The use of no machines and not exercising on the floor, allows us to present enough samples to transmit a clear idea of the efficiency of the method, and the basics to understand it!

**Implications:** The method needs precise control and shall be applied always by a physiotherapist. It's an excellent method to avoid surgical interventions in most cases of "back pain" (without specification)! The "Back-school" indicates that the patient can learn to realize and execute the method by himself. Our results demonstrate this fact.

**Key words:** Back-Pain. Lumbar-Pain. Back-School-Dr. Knapp, Escuela de columna Dr. Knapp

**Funding acknowledgements:** All paid by Dr Knapp during the more than 20 years of investigation.

**Ethical considerations:** Escuela de Columna uses only normal exercises, but applied in a specific way.

## 16.30 - 17.20 Workshops

### 61. FALLS PREVENTION FOR OLDER ADULTS IN MENTAL HEALTH INPATIENT ENVIRONMENT USING THE MEDIUM OF DANCE

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**Background:** A Fall is the most costly incident for health services and may shorten peoples life span. In inpatient areas MH units in the UK we recognise that we can affect the likelihood of harm from falls by specific directed exercise and by general physical activity. The challenge is to find a medium which is accessible to both groups of patients, those with either organic or functional MH diagnoses.

**Purpose:** WE aimed to find if dance could be used and which type of dance would be best suited to this environment. The workshop aim would be to share our experience of dance based activity for falls harm prevention.

**Methods:** Within the work shop we will share the types of dance tried this may include Tea dance, Line dancing, Circle dance and rock and roll.

**Implications:** Benefits can be achieved despite cognitive deficit or some physical disability

**Key words:** Dance. Fall. Balance. Music.

### 62. PROMOTING MOVEMENT QUALITY AND SELF-EFFICACY IN PATIENTS SUFFERING FROM HIP OSTEOARTHRITIS - A PILOT STUDY ON GROUP PHYSIOTHERAPY

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**Background:** Hip Osteoarthritis (OA) is characterized by dysfunctional movement habits, pain and reduced self-efficacy. There is evidence that exercise and patient education can be effective and possible postpone the need for hip replacement. A pilot study, including a combined program of patient education (PE) and Basic Body Awareness Therapy (BBAT) for patients suffering from hip OA was conducted. BBAT offers a Movement Awareness Learning Program focusing on more functional, healthy movement quality and self-efficacy.

**Purpose:** As BBAT has not been studied for patients with hip OA, the purpose of the present study was to examine the outcome of the Movement Awareness Learning Program, how physical, mental and relational movement components could influence movement habits, pain, mental health and self-efficacy.

**Methods:** The pilot included patients with hip OA, two women and three men, 52-78 years, recruited from the waiting list at a University Hospital for hip replacement. BBAT was offered once a week, 90 min, during a period of 3-4 months. Each movement session consisted of lying, sitting, standing, walking and relational movements. Time to share and reflect on movement experiences were offered. According to the research protocol, data were collected through the log of the physiotherapist's observation of movement quality and the patients' descriptions of movement experiences. Data analysis was based on research method by Giorgi and Malterud. In the workshop, a short version of the Movement Awareness Learning Program will be presented, consisting of three parts: 1) Theory 2) A Movement Awareness Training Program 3) Reflections with the audience.

**Results:** The data from the physiotherapist's observation revealed that the patients' movement quality, gained new movement patterns, becoming more functional and healthy, less energy consuming and compensatory. All patients reported that they become more aware of healthy movement co-ordinations, and that they learned strategies to practice at home and to cope with daily life challenges. Further, they reported that the program led to more contact with physical, mental and relational aspects of the self. Some reported experiences of having more comfortable sleep and being more at ease.

**Conclusions:** This pilot showed that practicing BBAT movements in a group therapeutic setting, improved movement quality, functional movement habits and self-efficacy in patients suffering from hip OA. However, a larger study is needed to gain more robust data.

**Implications:** The workshop will suggest ideas for how to promote self-efficacy in patients with hip OA, implementing BBAT in group physiotherapy within mental health.

**Key words:** Hip osteoarthritis. Movement quality. Movement awareness learning. Basic Body Awareness Therapy.

**Ethical considerations:** The Norwegian Regional committee of Ethics approved the study.

### 63. BASIC BODY AWARENESS THERAPY AND ACUTE AND CHRONIC LOW BACK PAIN IN CLINICAL PRACTICE

Kirsti Niskala

*BBAT Teacher, BBAT Therapist, Occupational Physiotherapist, NLP Trainer, Tmi Kirsti Niskala, Espoo, Finland.*

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**Background:** I have been working as an occupational physiotherapist for decades. I meet every day patients with low-back-pain. They may have acute pain or chronic low-back-pain. This year I have a patient with very grave problems with back operated two times. He was on long sick leave. Little by little he learned to listen to his body and to use BBAT movements without pain in lying and standing positions. Now he is part time worker. The more I have been working with BBAT, the more I have found how useful it is. BBAT movements are easy practice but it takes lifetime to learn them, because there is a lot to learn. Embodied and mindful presence, awareness and movement quality are keys in this therapeutic approach.

**Purpose:** The major reason for developing the Workshop is to give experience how physiotherapist can guide a person with low-back-pain to help oneself with BBAT movements. The learning objectives are how to proceed with BBAT movements, how to guide person to listen oneself and to learn to move without pain and how to prevent low-back-pain.

**Methods:** In the workshop we experience how to do BBAT movements with low back pain. We practice BBAT movements without pain in lying, sitting and standing positions. BBAT was developed by Jacques Dropsy and brought into physiotherapy by Gertrud Roxendal. IATBBAT is now taking care of the movement quality of BBAT.

**Results:** At daily work I meet only 3 to 5 times persons with low back pain. So it is very important to involve a person to take care of himself immediately from the beginning of treatment. Within BBAT movements there are easy movements to integrate them to person's daily life and to get out from the pain circle to work more economically. The workshop participants will achieve understanding how to use BBAT movements with patient with low back pain. They will have also an own experience during and after the BBAT movements.

**Conclusions:** Every physiotherapist should know more about BBAT and how to listen and teach the patient to listen him/herself and courage the patient to discover his/her own ability and recourses. BBAT represents a health oriented and person-centered approach and offers treatment program.

**Implications:** When people become to know themselves better and they find that the pain is a teacher, they will use fewer painkillers, they will be less on sick leaves and they will take care of themselves. They will understand movement as medicine. BBAT is for

individual and group physiotherapy. BBAT offers clinical competence to physiotherapists for facing multidimensional needs in the health care system in society.

**Key words:** BBAT. Movement quality. Low back pain.

**Funding acknowledgements:** Unfunded.

## Friday 11<sup>th</sup> of March, 2016

### 08.00 - 09.20 Morning Round Table 4: The Norwegian Psychomotor Physiotherapy

**Chair:** Gro Marit Helleso, Norway

#### 64. NORWEGIAN PSYCHOMOTOR PHYSIOTHERAPY (NPMP). A GLIMPSE INTO PRACTICE AND UNDERSTANDING

Alette Ottesen, Ingeborg Hanssen, Berit Ianssen, Ingar Kvebæk, Eli Rongved and Gudrun Øvreberg

*Physiotherapist and Specialists in NPMP, Norway.*

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This DVD presents excerpts from a five-hour Norwegian film: Gudrun Øvreberg - A Life In Movement - Documenting Psychomotor Physiotherapy Practice (Ottesen et al. 2010), aiming to give the viewer a brief glimpse into Norwegian Psychomotor Physiotherapy practice (NPMP). We wish to show our colleagues abroad this specific Norwegian approach in the field of physiotherapy through a series of scenes from Gudrun Øvreberg's clinical practice and teaching. We hope that the film will contribute to an understanding of practice and understanding, even if the excerpts are taken out of their original context. The sessions presented are demonstrations, not authentic therapist-patient situations. This DVD must be regarded, not as in-depth material, but merely supplementary to the theory NPMP is based on. Hopefully it will arouse the viewer's interest in NPMP as an approach and an understanding of the interaction between the body in detail and the human being as a whole. Contents: Clinic with Inger, Patient with breathing problems, anxiety and restlessness, On the pelvic floor and incontinence, On swallowing, On supporting buttocks, not backs, On good spinal mobility, On stretching the knee. Production of the original film was supported by The Norwegian Fund for Post-Graduate Training in Physiotherapy. The project group published *Movements of Life* in 2012. This book is about Norwegian psychomotor physiotherapy (NPMP), imparting with insight case stories from the authors' clinical practice. Norwegian psychomotor physiotherapy is a university based, well-founded and documented postgraduate physiotherapy education in Norway. All professionals working in the field of physical therapy in mental health share the responsibility of international networking and exchanging knowledge and understanding.

#### 65. THE IMPORTANCE OF DETECTING BODILY MESSAGES IN THE PROCESS OF EMPOWERMENT. PROFESSIONAL EXPERT KNOWLEDGE IN NORWEGIAN PSYCHOMOTOR PHYSIOTHERAPY

Kirsten Ekerholt and Astrid Bergland

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**Background:** This study is part of the project: Quality of life; Pain, coping, physical, psychological and social functioning for people

treated with Norwegian Psychomotor Physiotherapy. Purpose: We wanted to elucidate the therapists' views on the following question: We often read: "One should listen to the body". Could there be too much "listening to the body"?

**Methods:** A: Participants: 12 Norwegian physiotherapists, all specialists in NPMP. B: Instruments: Qualitative interviews. C: Analysis: Inductive content analysis. The inductive approach enabled us to identify the following key categories.

**Results:** The body as an ambiguous source of information. The process of exploring traumatic experiences. Transformation of bodily information provides an increased sense of coping.

**Conclusions:** The physiotherapists have experienced the importance of increasing the patients' sensibility to, awareness of and tolerance for bodily sensations. During therapy, the patients became more familiar with and able to interpret their own bodily reactions without being frightened and scared. This process enabled the patients to recognize the connection between present bodily sensations and previous lived experiences, thus enhancing the patients' feelings of coping and empowerment.

**Implications:** Physiotherapists' knowledge of the autonomic reactions, human emotions and cognition should be extensive, encouraging the therapists to recognize the patients' resources during therapy. The physiotherapists should be competent in adjusting the treatment individually to the patients.

**Key words:** Norwegian Psychomotor Physiotherapy. Individual therapy. Bodily reactions.

**Funding acknowledgements:** Oslo and Akershus University College of Applied Sciences supported this study.

**Ethical considerations:** Regional Ethic Committee approved the study. All therapists have signed an informed consent document. No patients are mentioned in the study.

#### 66. (IN)VISIBLE AND (IN)COMPREHENSIVE - DEPENDING ON THE EYE OF THE BEHOLDER

Alette Ottesen and Anne Marit Mengshoel

*Clinical Work-Specialist Norwegian Psychomotor Physiotherapy in Primary Health Care, University of Oslo, Norway.*

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**Background:** Many patients undergoing physiotherapy have been experiencing pain for a long time and have gone through several medical examinations without finding anything wrong. Without any biological changes in the body itself, the symptoms become invisible and uncomprehensive within a biomedical framework. Through studying a case in the field of Norwegian psychomotor physiotherapy, we will illustrate that these invisible and incomprehensive symptoms may be visible and make sense for the physiotherapist and the patient. This study highlights exploring the body as both object and a subject.

**Purpose:** We want to exemplify how physiotherapists' examination of the external body understood in the context of the patient's experiences may increase the understanding and coping of long lasting musculoskeletal pain. What one chooses to observe will be a determining factor in what will be visible and comprehensive versus invisible and incomprehensive. Can physiotherapy provide increased understanding of patients' ailments where medical technology falls short?

**Methods:** This study is a qualitative exploration of a patient with long lasting pelvic girdle pain undergoing Norwegian psychomotor physiotherapy. The analysis is based on data collected from the hospital's medical records, the physiotherapist's record and a text written by the patient herself after the examinations and treatment were concluded. Altogether, this constitutes data for analysis and reflection in the light of biomedical and physiotherapy-perspectives. The analysis is built around the concepts visible/invisible, comprehensive/incomprehensive and external/internal.

**Results:** Hypermobil joints, increased tension in the entire left side compared to the right side, m. psoas major “cramped” on one side and restricted breathing were clear and visible findings in the examination of the external body. Considering the patient’s life, it became understandable that her body had tensed up. The physiotherapist’s examination led the patient to understand that her long lasting pain was connected to muscular conditions, emotions and life.

**Conclusions:** The lack of explanations from a biomedical perspective places the patients in a helpless state with few possibilities to move forward on their own. Physiotherapy can provide an alternative way of understanding where medical technology falls short. The lived body, including both biology and human experiences, is little explored in physiotherapy research. Such an understanding challenges the prevailing training discourse that seems to have gained a foothold in physiotherapy.

**Implications:** Observing the body externally and understand findings and muscular tensions in context with the patient’s life and history represent an alternative way to understand long lasting pain which should be reflected in physiotherapy research. The importance of practical skills also need to be emphasized in health education and medical practice.

**Key words:** Long lasting pain. Norwegian psychomotor physiotherapy. The lived body.

**Funding acknowledgements:** FYSIOPRIM, University of Oslo, Norway.

**Ethical considerations:** The patient has given written informed consent to this study and she has been made anonymous.

#### 67. HOW TO USE THE FUNDAMENTALS OF NORWEGIAN PSYCHOMOTORICAL PHYSIOTHERAPY IN PATIENTS WITH SERIOUS MENTAL ILLNESS IN A PSYCHIATRIC WARD - OUR EXPERIENCES

Ellen Raugstad and Kristine Myksvoll

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**Background:** Norwegian psychomotorical physiotherapist usually Works in private institutes. There are few psychiatric hospitals that prioritize our profession. After many years of experience working in a psychiatric hospital with patients with serious mental illness, we see the needs for a physical intervention, focusing on body awareness and how the mental illness effects the body. We want to present how we, as psychomotorical physiotherapist, are working in a psychiatric hospital with three closed wards. We want to focus on how we use the fundamentals of Norwegian psychomotorical physiotherapy (NPMF) on patients With serious mental illness, such as schizophrenia or other psychotic disorders, and often substance abuse additionally.

**Purpose:** To make the importance of a physical approach in the treatment of patients with serious mental illness visible, and also to accentuate our profession in mental health care.

**Methods:** We want to present our experiences from a body awareness group and individual treatments-techniques and exercises.

**Results:** The findings are often reduction of negative and positive symptoms, reduction of anxiety, increased body awareness and self-esteem, sense of empowerment and discovery of their physical resources.

**Conclusions:** We wish that the listeners may get some new ideas and thoughts in how to intervene with these patients, and that they get courage and spirit to fight for the psychomotorical physiotherapists position in psychiatric wards

**Implications:** The physical aspect in mental Health care are more than physical activity. Body and mind are mutually affecting each other and can not be treated separately. More Scientific data are needed because Our findings are mostly based on experience. We want to conduct a questionnaire for Our patients where they describe what the psychomotorical treatment have given them.

**Key words:** Norwegian psychomotorical physiotherapy. Mental healthcare. Body awareness.

**Funding acknowledgements:** Norsk Fysioterapiforbund (NFF) 9. Ethical considerations: Our employer approve our presentation at your conference. To conduct our study we need to apply for the National Ethical Committee (R.E.K).

#### 68. “THE LANGUAGE OF SKILLED HANDS IS FIRM AND STRONG” - A FILM WITH PROFESSOR IN SOCIAL PSYCHIATRY TOM ANDERSEN

Berit Ianssen, Ingeborg Hanssen, Ingar Kvebæk, Alette Ottesen, Eli Rongved and Gudrun Øvreberg

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Tom Andersen An Interview A Conversation A Lecture. Spanish version: Una Entrevista Una Conversación Una Conferencia. The people behind this film with Tom Andersen are Psychomotor Physiotherapists. He was deeply influenced by the founder of Norwegian Psychomotor Physiotherapy (NPMP)- Aadel Bülow-Hansen - in his worldwide work with family therapy. He was impressed by the way Bülow-Hansen used her eyes and hands, how she constantly monitored the patient’s expression - to know whether, when, where and how she could proceed with the treatment. He introduced this to his own dialogue-based practice by also focusing on expression in a wider sense than the verbal, letting himself be guided by other senses than merely his hearing. The group behind this film spent many years with Tom Andersen. Through conversations and company, he gave us an opportunity to continuously reflect upon our own practice as physiotherapists. In our field, the body and movements form the starting point, and we use our hands when exercising our profession. At the same time, conversations are an important and natural part of every consultation. The body is understood in a context of lived life, and existential issues are often touched upon as a natural consequence of this. The significant hand that examines, works, listens and waits - does not have a verbal language - a language of words. But the language of skilled hands is still firm and strong. In the film, Tom compares hands with words - words as practical, meaningful expressions, rather than words as something abstract and intellectual. Thus the language of hands may be compared to the verbal language. The dialogue becomes an interconnected whole of all bodily movement. This makes it possible to work in a way that feels natural, both when exploring the stretch in the knee and talking about what comes up; individually complete in themselves, yet connected. In a cultural context where words and academic language take the front seat, Tom helped us maintain a grip on the non-verbal side of our everyday practice. Through it, he gave us the courage to continue to develop the artisan aspect of our profession.

#### 08.00 - 09.20 Morning Round Table 5: Advances in chronic pain Chair: Graciela Rovner, Sweden

#### 69. COPING IN ADOLESCENT SIBLINGS TO CHILDREN WITH CEREBRAL PALSY AND PAIN - CAN THE PHYSIOTHERAPIST AFFECT SIBLINGS’ FUTURE HEALTH?

Petra Vikman Lostelius<sup>a,b</sup>, Lena Ståhle-Öberg<sup>a,c</sup> and Annacristine Fjellman-Wiklund<sup>a</sup>

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**Background:** Pain is common in children with Cerebral Palsy (CP). According to parents, siblings are affected both positively and negatively, when a child in the family suffers from CP and pain. A better understanding from a family perspective is important, to help families cope with the pain.

**Purpose:** To illuminate, from the siblings’ and parents’ perspectives, the experience of being a sibling in a family that includes a child with CP and pain.

**Methods:** A qualitative approach with thematic interviews was used. A purposive sample was chosen according to gender and age. Interviews with seven siblings and ten parents were conducted in four counties in northern Sweden. The siblings were between 15-20 years of age. Mothers, fathers and siblings were from different families, but all had a child with CP and pain. The Grounded Theory method of constant comparison was used to analyze the interviews.

**Results:** The analysis resulted in the core category “Togetherness and pain” and six categories, connecting the family affiliation and how the pain affected the siblings to children with CP. Siblings were perceptive and often negatively affected of pain in the child with CP. Siblings worried for the child with CP on a daily basis and had both adaptive and dysfunctional strategies to cope. They were often unwilling to put additional stress on the family. Siblings wanted better support from the development center during stressful periods. Parents’ interviews supported and shed extra light on the siblings’ narratives. Parents were concerned about the siblings but also saw extraordinary emotional development in them.

**Conclusions:** Adolescent siblings were perceptive and often negatively affected of pain in the child with CP. Although with mixed feelings, siblings worried for the child with CP on a daily basis. The use of dysfunctional coping strategies, such as unwillingness to put additional stress on the family, risk their health as adults.

**Implications:** Physiotherapists need to examine distress in families, and offer education about pain and stress reduction. This may prevent illness and promote physical and mental health in siblings to children with CP and pain.

**Key words:** Pain. Stress reduction. Qualitative research. Siblings.

**Funding acknowledgements:** The Jerring foundation, the Mayflower charity foundation for children, the Norrbacka-Eugenia foundation.

**Ethical considerations:** The research project was approved by the Ethics Committee, Faculty of Medicine, Umeå University, Sweden, Dnr 06-049M, 11-431-32M.

## 70. THE PATIENT AS TEXT; NARRATIVES AND INTERPRETATION IN PHYSIOTHERAPY PRACTICE

Birgitte Ahlsen

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**Background:** There is a claim that physiotherapy should be evidence based. However, even evidence based practice requires the use of judgement in the clinical encounter with the individual patient. Moreover, physiotherapy may be seen as an interpretative practice, one that requires narrative skills in order to integrate the patient’s illness story with physical findings, own clinical experiences and scientific knowledge into a meaningful Whole. Previous studies on clinical reasoning in physiotherapy commonly refer to a complex process. However, no studies to date have shown how various components interact in the physiotherapist’s interpretation of a specific clinical problem.

**Purpose:** Using chronic muscle pain as a case, the purpose of this paper is to shed new light on the interpretative practice in physiotherapy. How are different sources of information and knowledge

integrated in the physiotherapist’s narrative about a specific clinical problem?

**Methods:** a. The participants consist of ten Norwegian physiotherapists, in their fifties, 6 women and 4 men, all of which are experts in either psychomotor physiotherapy or manual therapy. The patients consist of 6 women and 4 men, with the average age of 55. b. The material is produced through observations of the first encounter between patient and physiotherapist and qualitative interviews with both of them right after the encounter. The encounters were videotaped and interviews were tape recorded. c. The material is analyzed using a narrative approach.

**Results:** The findings show that the physiotherapists usually produce and receive a lot of information - some of which are outside the physiotherapist’s scope of actions, such as conflicts at work and troubles in private affairs. The physiotherapists’ narratives show how they interpret information in the light of the patient’s story - could this be an injury or emotional distress? Sometimes the physiotherapists question the patient’s motives for seeking treatment. In the physiotherapists’ narrative there are evaluations, judgements and recommendations such as “not to worry”. However, the basis for judgements is often not visible in the narrative. Nevertheless - the choice of actions are always exercises of some kind. Choice of action also involves ethical considerations on what is the right thing to do in this specific case.

**Conclusions:** The problems of the patients seeking physiotherapy are often complex. However, the physiotherapist’s tools of actions may be limited.

**Implications:** It is important that physiotherapists acknowledge the interpretive work involved in clinical decision making in order to make explicit what often are implicit in practice.

**Key words:** Physiotherapy practice. Interpretation. Narrative. Chronic muscle pain.

**Funding acknowledgements:** The study is funded by The Norwegian Fund for Post-Graduate Training in Physiotherapy.

**Ethical considerations:** The study was approved by the Norwegian Social Science Data Services (NSD)/38954.

## 71. SEXUAL FUNCTION AND URINARY INCONTINENCE IN WOMEN WITH FIBROMYALGIA

Carla Oda, Elizabeth Alves Gonçalves Ferreira and Hellen Cristina Souza de Carvalho Fusco

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**Background:** Fibromyalgia is defined by the American College of Rheumatology as an unknown etiology syndrome characterized by chronic, diffuse pain of musculoskeletal origin, non-autoimmune, claimed for more than three months, with pain on palpation in at least 11 of 18 tender points. These patients also experience fatigue, sleep disorders, depression, and urinary disorders. These symptoms can lead to difficulty in the sexual act. Physical therapy has been engaged in treatments that addresses all aspects of fibromyalgia, but there are few studies on the evaluation of pelvic floor and urinary continence and sexuality in women with fibromyalgia.

**Purpose:** To evaluate the strength of the pelvic floor, urinary continence and sexual function in women with fibromyalgia.

**Methods:** A total of 11 sexually active women, aged between 25 and 55 years and with medical diagnosis of fibromyalgia. The study was conducted at the Department of Physical Therapy and at the Hospital das Clínicas of the School of Medicine - University of São Paulo. The patients signed the Informed Consent. Exclusion criteria: women with sexually transmitted diseases and HIV positive, neurological diseases or sequelae, pregnant women, those who are on medications that have the side effect the loss or urinary retention. In one single interview the evaluation of the pelvic floor was performed according to the modified Oxford Scale and applying two questionnaires; one

for the collection of personal data and information related to urinary continence and sexuality and also the questionnaire of Sexual Quotient - Female Version (QSF) to assess sexual performance.

**Results:** It was observed that 70% of the evaluated patients had urinary loss complaints composed of 40% who had incontinence efforts and 30% with mixed incontinence. 60% of women also had dyspareunia complaints. According to the QSF, 40% of women scored "good to excellent" in sexual performance, 10% "fair to good", 20% as "unfavorable to regular", 20% "bad to unfavorable" and 10% "null to bad". The average strength of the pelvic floor was 3. One woman was excluded because of medication use.

**Conclusions:** Preliminary data suggests that the incidence of urinary incontinence and dyspareunia in fibromyalgic women is significantly higher than in female non-fibromyalgic population, according to incidence data described by literature. Sexual performance showed great variability, but most reported "excellent" and "regular" scores. Implications: Sexuality and urinary continence are important to the quality of life and self-esteem. A physical therapy approach that includes these aspects will be more aligned with promoting physical and mental health of women with fibromyalgia.

**Key words:** Fibromyalgia. Urinary incontinence. Physical therapy. Chronic pain. Sexuality.

**Funding acknowledgements:** This study received funds from CAPES (Coordination for the Improvement of Higher Education Personnel - Government Research Agency) with scholarship to the first author.

**Ethical considerations:** This research was approved by the Ethics Committee for Analysis of Research Projects (40789914.1.0000.0065).

## 72. PERSISTENT PAIN IN OLDER ADULTS: INNOVATIVE EDUCATION MATERIALS

Denis Martin

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**Background:** Self-management is a vital aspect of management of persistent pain. Older adults form a very high proportion of those living with persistent pain; and the disabling effects of persistent pain can be more marked in older people compared to middle-aged and younger adults. However, self-management for older people with pain is relatively under-researched. This was the rationale behind a major project to explore pain and its management for older people. The project - engaging with older people and their carers to develop interventions for the self-management of chronic pain (EOPIC) - was a collaboration between the University of Dundee, Northumbria University, the University of Greenwich, the University of Aberdeen, and Teesside University. A key finding from the project was the need for information and advice about self-management of direct relevance for older people.

**Purpose:** The purpose of work was to develop and evaluate products to help improve the knowledge and understanding of persistent pain, with a particular focus on older people.

**Methods:** The materials were developed and evaluated using design workshops, interviews, focus groups and surveys with different stakeholder groups. These included older people with pain and their carers; and health professionals and students. Some of the work was carried out as part of the EOPIC project and outwith that in parallel studies.

**Results:** The products developed included print materials and digital products - a directory of resources; a poster and leaflet explaining self-management; a comic book explaining persistent pain; internet applications using metaphors to explain pain, communicate experiences and provide feedback on self-management; and an online learning resource for health professionals and students providing insight into the day to day life of an older person with persistent pain. From evaluations, responses of note include benefits of people understanding that they are not alone in their experience; confidence in communication; understanding of the psychosocial aspects of persistent pain.

**Conclusions:** Innovate ways of providing information and advice about persistent pain are valuable and well-received.

**Implications:** The materials provide opportunities to improve knowledge and understanding of persistent pain, and provide examples of the types of products that can be developed from research and working with stakeholders.

**Key words:** Pain management. Patient education.

**Funding acknowledgements:** The work was funded through different projects. Engaging with older people and their carers to develop interventions for the self-management of chronic pain (EOPIC) - was funded by a £1.2m grant from the Joint UK Research Councils' Lifelong Health and Wellbeing initiative. Other projects were funded by the Higher Education Academy, Arthritis Research UK, and Teesside University.

**Ethical considerations:** All activities were carried out with ethical approval from NHS Research Ethics Committees and/or Teesside University.

## 08.00 - 09.20 Morning Round Table 6: Psychosocial factors in physiotherapy Chair: Norma Elisa Gálvez Olvera, Mexico

### 73. THE INFLUENCE OF A PHYSICAL ACTIVITY PROGRAM ON MENTAL HEALTH IN THE ELDERLY POPULATION IN PORTUGAL

Luísa Pedro<sup>a</sup>, José Pais-Ribeiro<sup>b</sup> and João Páscoa Pinheiro<sup>c</sup>

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**Background:** Regular exercise and physical activity are important for physical and mental health in the elderly. Being physically active is very important to independence, self-determination and quality of life of the elderly. It is of great importance to develop programs to increase physical activity in elderly, has an impact and compliance in your daily life.

**Purpose:** In this study we will see the effect of an intervention program to promote physical activity, based on self-regulation in the mental health (Positive affect and emotional ties) of elderly.

**Methods:** This is a prospective study. The study includes 17 people, aged between 66 and 83 years old, 75% female, 65% married, were all retired and all had functional independence. The data collection was performed on seniors universities. We use the Inventory of Mental Health it includes 38 items which are grouped into five dimensions, three negative and two positive. These in turn can be grouped in two dimensions, one positive and one negative. In our study we used the constituted positive dimension (positive affect and emotional ties). The program consists of an intervention to promote physical activity in a group of eight people, in once a week sessions of 90 minutes. The program was held for seven weeks. In each session were performed a set exercises for a specific thematic related with functional limitations in daily live, then counseling for the facilitation of movement. The application of the program followed the self regulation model (Maes & Karol, 2005). This model includes three procedural phases: the first phase, the individuals identify and define personal goals they wish to achieve; the second phase they implement strategies to achieve pre-set goals; the third phase they assess if they reach the intended objectives, as well as maintenance.

**Results:** Research show statistically significant differences for two dimensions of mental health (positive affect and emotional Ties), between the beginning and the end of the program. We use non parametric test, related- samples Wilcoxon signed ranks test.

**Conclusions:** There are statistically significant differences between the two moments of assessment, suggesting that physical intervention programs for promotion of physical activity can play an important role for the mental health of elderly population.

**Implications:** The development of programs to improve the physical activity in the elderly, are an important mechanism for promoting your mental health.

**Key words:** Physical activity. Mental health. Elderly.

**Funding acknowledgements:** The work was not funded.

**Ethical considerations:** This work follows the guidelines of the declaration of Helsinki.

#### 74. PHYSICAL ACTIVITY CONTINUUM: FROM RECREATION TO ADDICTION?

Anna Szczegielniak and Karol Pałka

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It's not easy to distinguish between healthy and unhealthy level of physical activity since both may share the same attributes. In recent years media willing promote healthy lifestyle that includes a wide range of exercises as a preventive tool against various civilization diseases. At the same time, unrealistic body image present in mass media seems to negatively affect particularly adolescent and young people. Widely spread consequences such as low self-esteem, negative self-image or impaired contacts with peers are only few to mention. Unbalanced diet and excessive exercise, accompanied by uncontrolled use of pharmacological agents, are understood by many as the only way to achieve a desired body shape. There are no doubts about positive effects of sport on variety of health indicators, however it's been stated that a physical activity continuum may develop from a recreational exercise, through at-risk exercise and problematic exercise, eventually leading to exercise addiction. Various studies show that exercise abuse may have an obsessive-compulsive quality and biological findings associate it with endorphins and cannabinoids, explaining at the same time possibility of addiction development based on occurrence of the euphoric feelings. From the psychological point of view it's also connected with stress relieving and rewarding factors. The aim of the study was to answer whether it's possible to examine social context of exercise addiction and assess risk of its occurrence among young athletes, focusing on possible differences between sexes. Study group consisted of young athletes (aged 16-30 years old) who voluntary agreed on taking part in the research. The research was planned for 3 months (January-March 2015). In order to do this authors prepared original questionnaire that was disseminated among participants together with Exercise Addiction Inventory (EAI). It was distributed both in paper version and on-line. IP control has been introduced for the virtual participants. Special emphasis was placed on previous medical records, other addictions and possible negative consequences of the behavior. Preliminary study, conducted between May and October 2014 among regular visitors of fitness clubs (168 responses; 58% women, 42% men; an average age was  $23 \pm 7.8$ ; average length of training is  $180 \text{ min} \pm 45$  per day), showed that even though men were supposed to change their lifestyle more to meet terms of being fit and healthy, women showed higher risk of development addiction. The study was designed to answer whether among young athletes trends may be similar.

**Key words:** Excessive exercise. EAI. Behavioral addiction. Healthy lifestyle.

### 09.30 - 10.20 Workshops

#### 75. PROMOTING MENTAL HEALTH PHYSIOTHERAPY BY INTEGRATING INTERACTION, EMOTIONS AND BODY AWARENESS

Amanda Lundvik Gyllensten and Gunvor Gard

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**Background:** The workshop takes its starting point in previous research on expert Physiotherapist experiences of interaction, emotional awareness and body awareness. Interaction skills have been shown to be important for optimal physiotherapy treatment results. Practical professional skills, patient experience, the ability to establish contact and confidence with the patient and "to use the patient resources" was found to be important for a positive treatment outcome. Acknowledging patients emotions have been shown to be important. To identify emotions in the patients and help patients to express their emotions was also important. Emotions were seen as a basis for interaction in patient treatment situation. Physiotherapists have to identify also the body language in treatment situations and promote increased emotional awareness in patients for positive treatment effects. The meaning of body awareness according to professionals and patients have been studied and analyzed using grounded theory. A theoretical understanding and a core category of body awareness emerged: the embodied identity. The core category was related to two subcategories: living in the body and living in relation to others and in society. The subcategory "living in the body" was conceived as becoming more aware of one's body and to experience oneself from within in order to recognize one's needs and emotions. A key point was that bodily experiences always exist in the present moment. The experience of the physical body, the balance, and stability were basic experiences that were connected to the conception of well-being and control. To understand one's emotions and needs through the awareness of the body was the base for self-confidence, trust in one-self, and the ability to take care of oneself and one's needs physically and mentally. The subcategory "living in relation to others and in society" was an important aspect in the interaction with others and for societal participation.

**Purpose:** The workshop focuses the integration of interaction, emotional awareness and body awareness and how to apply this knowledge clinically.

**Methods:** The workshop will start with a short presentation of previous research and then a participatory action model for developing the theme through the participant's experiences and reflections.

**Results:** The workshop aim to deepen and integrate the lived bodily interaction using body and emotional awareness in mental health physiotherapy practice.

**Conclusions and implications:** Deepened integration of the lived body into physiotherapy practice is focused.

**Key words:** Embodiment. Body awareness. Emotions. Lived body.

**Funding acknowledgements:** Department of Health Sciences, Lund University, Sweden.

**Ethical considerations:** Permission for previous research has been granted by the Ethics Committee at Lund University, Sweden.

#### 76. ACTIVEPHYSIO™: ACCEPTANCE AND COMMITMENT THERAPY FOR THE PHYSIOTHERAPIST WORKING WITH PATIENTS WITH CHRONIC PAIN

Graciela Rovner

*Senior Pain Specialist PhD in Rehabilitation Medicine, PT Senior Pain Specialist. MSc in Physiotherapy, in Psychology and in Clinical*

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Have you been wondering how to adapt behavioral principles from Acceptance & Commitment Therapy (ACT) in your practice as a physiotherapist? Or are you curious about ACT? This unique workshop introduces you to the basics of ACT and ACTivePhysio™, the model adapted for physiotherapists working in chronic pain. One of the main strengths of ACTivePhysio™ is the focus in function rather than on symptom. These are two different working ‘paradigms.’ When symptoms are not controllable, we need a new strategy to increase function and vitality; a first line intervention when coming to chronic conditions. ACTivePhysio™ helps the patients to keep motivated and increase physical capacity even in presence of pain. It will be easier for them to focus on what is important in their life instead for struggling year after year to control their pain. With enhanced acceptance, Acceptance enhances openness and flexibility to be able to handle their situation and will be engaged in the therapy. Patients with long-lasting pain conditions will be able to regain a meaningful and vital life despite their pain. In this short workshop you will learn about the mechanism of action of acceptance and how to work with it. You will practice some exercise included in ACTivePhysio™. This experiential learning will offer you insights, strategies, and pragmatic clinical tools. Three main therapeutic processes taught will be: the capacity to be present and aware, the ability to focus on what is important and the power to be committed to it with the required openness and stamina to accept the pain or discomfort that this may bring along. This workshop is open to professionals working with people with chronic mental and/or physical conditions in the area of rehabilitation. Examples and questions presented will be relevant for the implementation of ACT in the field of physiotherapy. Theory will be kept to a minimum in this workshop. In order to get the most of this workshop, we strongly recommend you to listen to Dr. Rovner presentation “Patient subgroup according to the Pain Acceptance and a clinical algorithm to predict differential response to interprofessional rehabilitation” on Thursday the 10th at 11.40 (please double check the program).

## 11.00 Plenary session

### Chair: Dr. Joseph Firth, United Kingdom

#### 77. THE ROAD LESS TRAVELLED - FROM BRAIN SCIENCE TO EXERCISE AS MEDICINE IN MENTAL HEALTH

Philip B. Ward

*School of Psychiatry, University of New South Wales, Sydney. Schizophrenia Research Unit, South Western Sydney Local Health District, Liverpool Hospital, Liverpool NSW. Ingham Institute for Applied Medical Research, Liverpool NSW, Australia. E-mail: p.ward@unsw.edu.au*

The last fifty years has seen growing recognition that many psychiatric conditions arise from biological abnormalities in brain structure and function. More recently, we have started to see a similar pattern of greater appreciation of the impact of poor physical health in people living with mental illness. Arising from multiple factors, the increased rates of cardiovascular and metabolic disease in people with mental illness result in a substantial reduction in life expectancy, such that people with psychotic disorders currently have a life expectancy similar to that seen in the general population in the early part of the twentieth century. To address this major health inequality, mental health services must adapt to ensure that physical health issues in people with mental are giving the same attention as psychiatric symptoms. The systemic changes

that have been made towards achieving this goal in a mental health service based in Sydney will be described. This major shift in focus began with recognition of the problem by front-line clinicians, followed by demonstration projects that established the feasibility and acceptability of lifestyle interventions to prevent weight gain in young people commencing treatment with antipsychotic medications. This positive approach is now being rolled out for people with established illness, accompanied by innovative programs to deliver culture change among mental health staff.

**Key words:** Lifestyle interventions. Neuroscience. Health service redesign. Holistic care.

**Funding acknowledgements:** Mental Health and Drug & Alcohol Office, Ministry of Health, NSW.

**Ethical considerations:** N/A.

#### 78. POST TRAUMATIC STRESS DISORDER: THE INCREASING NEED FOR PHYSICAL THERAPY

Simon Rosenbaum

*Department of Exercise Physiology, School of Medical Sciences, University of New South Wales, Australia. E-mail: s.rosenbaum@unsw.edu.au*

Posttraumatic stress disorder (PTSD) occurs following exposure to potentially traumatic experiences such as those regularly encountered by emergency service workers (police, ambulance and firemen/women) and servicemen/women. PTSD is associated with high rates of somatic comorbidities including metabolic syndrome contributing to an excess mortality rate due to preventable cardiovascular diseases. Interventions targeting physical activity have repeatedly been shown to be efficacious in the augmentative treatment of a range of mental disorders including major depressive disorder, anxiety disorders and schizophrenia while simultaneously improving physical health profiles, yet relatively few studies have investigated the specific impact on PTSD. This talk aims to provide an overview of the available literature regarding physical activity and PTSD with specific reference to the first published clinical trial of exercise for severe PTSD, conducted in Sydney, Australia. Results from a recent meta-analysis of four unique RCTs (n = 200) will also be discussed as well as implications for clinical practice and future research. Based on the available evidence, there is reason to be optimistic regarding the role of physical activity interventions delivered by physical therapists and exercise physiologists as a feasible and scalable component of treatment for PTSD.

**Key words:** Posttraumatic stress. PTSD. Exercise. Metabolic syndrome.

**Funding acknowledgements:** Simon Rosenbaum is funded by a Society for Mental Health Research (SMHR) Early Career Fellowship.

**Ethical considerations:** N/A.

#### 79. ADOPTING AND MAINTAINING PHYSICAL ACTIVITY BEHAVIOURS IN PEOPLE WITH SEVERE MENTAL ILLNESS: THE IMPORTANCE OF AUTONOMOUS MOTIVATION

Davy Vancampfort<sup>a,b</sup>, Brendon Stubbs<sup>c,d</sup>, Simon Rosenbaum<sup>e</sup>, Philip B. Ward<sup>e</sup> and Michel Probst<sup>a,b</sup>

<sup>a</sup>Z.org UPC KU Leuven, Kortenberg, Belgium. <sup>b</sup>University of Leuven, Department of Rehabilitation Sciences, Leuven, Belgium. <sup>c</sup>Physiotherapy Department, South London and Maudsley NHS Foundation Trust, Denmark Hill, London, United Kingdom.

<sup>d</sup>Health Service and Population Research Department, Institute of Psychiatry, King's College London, London, United Kingdom.

<sup>e</sup>University of New South Wales, Sydney, Australia.

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**Background:** Physiotherapy can improve the health of people with serious mental illness (SMI) but many are inactive. Adopting theo-

retically-based evidence considering the motivational processes linked to the adoption and maintenance of an active lifestyle can assist physiotherapists in facilitating lifestyle changes in people with SMI.

**Purpose:** Within the Self-Determination Theory (SDT) and the Trans-Theoretical Model (TTM) (stages of change) frameworks, we investigated differences in motives for physical activity between different diagnostic SMI groups.

**Methods:** All participants with SMI from 15 different centers completed the Behavioral Regulation in Exercise Questionnaire 2 (BREQ-2), the International Physical Activity Questionnaire (IPAQ) and the Patient-centered Assessment and Counseling for Exercise (PACE) questionnaire.

**Results:** Overall 294 persons with SMI (190-) ( $43.6 \pm 13.6$  years) agreed to participate. People with affective disorders had higher levels of introjected regulations than people with schizophrenia. No significant differences were found for other motivational regulations. Moreover, no significant differences were found according to gender, setting and educational level. Multivariate analyses showed significantly higher levels of amotivation and external regulations and lower levels of identified and intrinsic regulations in the earlier stages of change. Strongest correlations with the IPAQ were found for motivational regulations towards walking.

**Conclusions:** Our results suggest that in all people with SMI the level of identified and intrinsic motivation may play an important role in the adoption and maintenance of health promoting behaviours.

**Implications:** The study provides a platform for future research to investigate the relationships between autonomy support, motivational regulations and physical and mental health variables within physiotherapy interventions for this population.

**Key words:** Schizophrenia. Exercise. Motivation.

**Funding acknowledgements:** Davy Vancampfort is funded by the Research Foundation - Flanders (FWO - Vlaanderen) and supported by Z.org UPC KU Leuven.

**Ethical considerations:** The study procedure was approved by 15 included local ethical committees and all participants provided written informed consent.

## 12.00 - 13.00 Closing ceremony Chair: Daniel Catalan, Spain

### 80. MENTAL HEALTH REFORM AND WORKFORCE CHALLENGES IN EUROPE: A WHO PERSPECTIVE

Matt Muijen

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Over the last decade, awareness of the need for mental health reform has grown, stimulated by the attention given by intergovernmental agencies such as The WHO, EU, OECD and World Bank. Many countries have developed strategies in response to a growing awareness of the burden posed by mental health problems, the suffering of people suffering from mental health problems and the poor availability and quality of services. Implementation of strategies has been uneven so far. Some countries now have a spectrum of well integrated community based services, but many still rely on mental hospitals. Partly this can be explained by low investment and system challenges, but also by an inefficient use of available resources including the workforce. This raises challenges about roles and responsibilities, integration, training and education. The migration of the mental health workforce also means that standards and a common understanding of concepts need to be internationally understood and adopted. The WHO European Mental Health

Action Plan recognizes these challenges, but progress can only be made if consensus is built between professional associations and other stakeholders. In most countries these do not sufficiently include physiotherapists, even though their involvement may add great value. They offer a contribution to the treatment of mental health problems in their own right, and also provide a bridge to other chronic diseases and disabilities, which are overrepresented among people with mental health problems.

### 81. PHYSIOTHERAPY IN MENTAL HEALTH: CHALLENGES TO THE FUTURE

Michel Probst

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For the last 12 years, a lot of efforts have been made to put “physiotherapy in mental health” on the map of physiotherapy worldwide. The visibility of “physiotherapy in mental health” has increased. Specific approaches from different countries get an international audience. “Bringing physiotherapy in mental health in the picture worldwide” and “fostering the co-operation between physical therapists practicing in mental health throughout the world”. Are two main IOPTMH objectives and they are in permanent progress. It is easy to develop an organization, but in our continuously changing world it is getting more difficult to deal with new challenges of society. Despite the very positive evolution of physiotherapy in mental health, physiotherapists in mental health need to find answers to all upcoming questions and solutions. The aim of this presentation is to reflect deeply on four topics: 1. In mental health care, boundaries between specialities become more and more blurred. Intensive specialization is questioned. Inter- and transdisciplinarity are hot topics. Some colleagues even find subgroups in physiotherapy a contradiction. 2. Cooperation and connections with other speciality within and outside physiotherapy seem necessary to develop the field, to avoid isolation and to build a quality framework. 3. Multi-morbidity and chronicity of illness are a growing concern in our society and a challenge facing patients and health professionals including physiotherapy and health systems’ sustainability. 4. The call to set up a consensus statement and to create with open mind clinical standards and guidelines for physiotherapy in mental health based on scientific and or clinical practice becomes louder.

## Posters

### 82. PREVALENCE AND PREDICTORS OF TREATMENT DROPOUT FROM PHYSICAL ACTIVITY INTERVENTIONS IN SCHIZOPHRENIA: META-ANALYSIS

Davy Vancampfort<sup>a,b</sup>, Simon Rosenbaum<sup>c</sup>, Felipe B. Schuch<sup>d,e</sup>, Philip B. Ward<sup>c</sup>, Michel Probst<sup>a</sup> and Brendon Stubbs<sup>f,g</sup>

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**Background:** Physical activity interventions have been shown to improve the health of people with schizophrenia, yet treatment dropout poses an important challenge in this population and rates vary substantially across studies.

**Purpose:** We conducted a meta-analysis to investigate the prevalence and predictors of treatment dropout in physical activity interventions in people with schizophrenia.

**Methods:** We systematically searched major electronic databases from inception till 08/2015. Randomized control trials of physical activity interventions in people with schizophrenia reporting dropout rates were included. Two independent authors conducted searches and extracted data. Random effects meta-analysis and meta-regression analyses were conducted.

**Results:** In 19 studies, 594 patients with schizophrenia assigned to exercise interventions were investigated (age = 37.2 years, 67.5% male (range = 37.5-100%). Trim and fill adjusted treatment dropout rate was 26.7% (95%CI = 19.7-35.0%), which is more than double than in non-active control interventions (odds ratio = 2.15; 95%CI = 1.29-3.58,  $P = 0.003$ ). In the multivariate regression, qualification of the professional delivering the intervention ( $\beta = -1.06$ ; 95%CI = -1.77 to -0.35,  $P = 0.003$ ) moderated treatment dropout rates whilst continuous supervision of physical activity approached statistical significance ( $P = 0.05$ ).

**Conclusions:** The current systematic review and meta-analysis demonstrated that in particular intervention factors (provision of supervision and delivery by qualified professionals) predicted the drop out of people with schizophrenia in physical activity intervention trials.

**Implications:** Qualified professionals (e.g. physical therapists/exercise physiologists) should prescribe supervised physical activity for people with schizophrenia, to enhance adherence, improve psychiatric symptoms and reduce the onset and burden of cardiovascular disease.

**Key words:** Schizophrenia. Physical exercise. Health service.

**Funding acknowledgements:** Davy Vancampfort is funded by the Research Foundation - Flanders (FWO - Vlaanderen) and supported by Z.org UPC KU Leuven.

**Ethical considerations:** None to report.

### 83. BODY AWARENESS IN NORWEGIAN PSYCHOMOTOR PHYSIOTHERAPY - BODILY EXPERIENCES, MEANING AND COPING

Jane Gabrielsen

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**Background:** Norwegian Psychomotor Physiotherapy is one of the main clinical physiotherapeutic approaches in Norway aimed at muscle-skeletal disorders and complex, unspecified disorders. The approach was developed mainly through practical and clinical experiences, and scientific research on the field has been lacking. One of the main elements of the approach is body awareness - both as a tool and a result of the treatment. My purpose of the study was to more thoroughly investigate the concept of body awareness in Psychomotor Physiotherapy, to contribute to the systematic and scientific understanding of the approach. This is meant to support and challenge the prevailing theoretical and clinical base of the tradition.

**Purpose:** The aim of the study was to explore how body awareness was experienced by patients in Psychomotor Physiotherapy, if the awareness changed during the treatment, and what effects these changes might have.

**Methods:** This is a qualitative study. Research data was drawn from in-depth interviews of three patients that were referred to psychomotor physiotherapy treatment for muscle-skeletal disorders. The research data was analyzed using Systematic Text Condensation.

**Results:** The analysis resulted in three categories with complementary subthemes: 1. Experiences of own body. Subthemes: New and

clearer body experiences, Total experiences - more than body experiences, and Giving the body attention. 2. Creating meaning. Subthemes: Understanding pain in new meaning context and Understanding oneself through reflections on body expressions. 3. Coping and responsibility. Subthemes: Coping with own complaints and Insight - responsibility and challenges.

**Conclusions:** This study shows how body awareness might change during treatment, and that these changes might contribute to better understanding and coping with own disorders.

**Implications:** Increase of body awareness could be an essential part and goal of treatment of muscle-skeletal disorders.

**Key words:** Psychomotor Physiotherapy. Body awareness. Muscle-skeletal disorders.

**Funding acknowledgements:** Fondet (NFF) and Zonta Egersund.

**Ethical considerations:** Norwegian Social Science Data Services (NSD) has approved the study. The study was conducted at the University of Tromsø, Norway, in the Master program in Health Science. Field of study: Psychiatric and psychosomatic physiotherapy.

### 84. SOMATIC AND PSYCHOSOCIAL APPROACH TO PHYSIOTHERAPY OF PSYCHIATRIC PATIENTS IN CHRONIC PAIN

Axelle Mokry and H el ene Hyde

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**Background:** It has been established that chronic pain is often associated with psychiatric disorders such as depression, anxiety or addictive disorders. 50% of depressive patients complain of pain. The combination of mental disorders and chronic pain has a deleterious effect and may lead to functional limitations and incapacitations, increasing the risk of social breakdown. The psychosocial skills, by developing an adaptive and positive behaviour, aim to minimize risk factors and maximize protective ones. In 2003, the study "Adherence to long-term therapies" led by the World Health Organization (WHO) recommended the combination of psychotherapy, medication and physical care to improve patient adherence to their treatment. In 2012, the WHO Mental Health Program recommended the integration of psychosocial interventions in the treatment strategy of adult with mental health disorder in order to enhance independent living, social skills and treatment adherence.

**Purpose:** Our approach to physiotherapy in psychiatric focuses on improving the patient's skills so that they become autonomous in the management of chronic pain and involved in their discharge plan. Our strategy to improve functional skills incorporates work on psychosocial skills. Objectives are to help increase the acceptance of physiotherapeutic care during hospitalization and follow-up.

**Methods:** Our approach is based on best practices, standard references and WHO recommendations. Our aim is to prevent physical and psychological regression by acting on physical deconditioning, fear of movement, and psychosocial abilities. This allows us to develop an adaptive behaviour to chronic pains. We work with the patient on the design, implementation and evaluation of therapeutic objectives, and include educational work sessions on psychosocial skills (cognitive, personal and inter-personal). We develop notions of knowledge, know-how and knowledge-being linked to the patient's pain.

**Results:** Patients recover psychosocial skills. We observe a decrease in somatic pain affecting mental disorders, physical reconditioning, and an increase in self-mobilization capacity.

**Conclusions:** Through our somatic treatments, physiotherapist's role is complex and requires an extended professional support for physical and mental pains, and of course multidisciplinary collaboration. In the future, the use of standardized scales for chronic pain (Dallas Pain Questionnaire), kinesiophobia (Tampa Scale) and psychosocial skills (Empowerment Scale, Community Adaptative Planning Assessment...) will allow the collection of statistical data.

**Implications:** Because of their prevalence and societal burden, chronic pains associated with psychiatric disorders are a major public health issue. The physiotherapists' initial training must integrate such areas of expertise to effectively meet the demand of care and help better integrate the profession in national and international health systems.

**Key words:** Chronic pain. Psychosocial skills. Psychosocial abilities. Psychiatry.

**Funding acknowledgements:** Geneva University Hospitals, Switzerland.

## 85. METABOLIC SYNDROME AND AEROB FITNESS IN FIRST-TIME HOSPITALIZED PATIENTS WITH DEPRESSION

Lene Nyboe

*Research Unit, Department of Affective Disorders, Aarhus University Hospital, Denmark. E-mail: lene.nyboe@ps.rm.dk*

**Background:** Patients with depression have an increased risk of premature death and CVD is a common cause. The metabolic syndrome (MetS) is helpful in screening and monitoring the risk of CVD and therefore highly relevant in patients with depression. Both adverse metabolic effects of psychopharmacological treatment and unhealthy life style, e.g. low physical activity, are possible risk factors of MetS.

**Purpose:** To examine the prevalence and progression of MetS in first-time hospitalized patients with depression at baseline and during one year of follow-up in comparison with healthy controls. Furthermore, to explore the putative risk factors of MetS.

**Methods:** The prevalence of MetS and its individual components was evaluated in first-time hospitalized patients with depression (N = 52) and healthy controls (N = 50) (18-45 years). Physical activity, aerobic fitness, sleeping disturbances, smoking and dietary habits, and psychopharmacological treatment were recorded at baseline for all participants and after one year for the patients.

**Results:** Patients had significantly higher waist circumference and lower HDL compared to healthy controls ( $p < 0.05$ ). Patients had higher prevalence of MetS, but this was not significant when adjusted for age. Patients had significant increase in waist circumference and triglycerides and a non-significant increase in the prevalence of MetS. Antipsychotic medication (OR 10.5, 95% CI 1.18- 94.14) and low aerobic fitness (OR 0.79, 95% CI 0.68- 0.93) were significantly correlated with MetS ( $p < 0.05$ ).

**Conclusions:** Metabolic abnormalities are highly prevalent in younger, severely depressed patients and increase significantly during one year of follow-up. Low aerobic fitness and use of atypical antipsychotics are strongly correlated with MetS.

**Implications:** Promoting a healthier lifestyle should evidently be part of psychiatric treatment and rehabilitation.

**Key words:** Metabolic syndrome. Depression. Aerobic fitness.

**Funding acknowledgements:** The Psychiatric Research Fund, Central Region Denmark, The Danish Physical Therapy Federation, and The Lundbeck Foundation.

**Ethical considerations:** The study was approved by the local ethical committee of Central Region Denmark.

## 86. URODYNAMIC EFFECT OF PERCUTANEOUS POSTERIOR TIBIAL NERVE STIMULATION FOR URINARY INCONTINENCE IN PARAPARETIC PATIENTS

Waleed Mansour, Yasser Seada and Mohamad Tawfik

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**Background:** Currently, there is a considerable lack of studies on treatment of urine incontinence in cases of Paraparetic patients. Individuals with spinal cord injury (SCI) and associated bladder

problems need a urinary catheter to manage bladder problems. Someone who has a spastic bladder may use a single-use, intermittent catheter or indwelling catheter. Males may choose to use an external condom catheter instead. Those with a flaccid bladder typically self-cath with intermittent catheters. Complications of bladder problems resulting from SCI include urinary tract infections, sepsis, kidney or bladder stones.

**Purpose:** The purpose of this study is to evaluate the effectiveness of Percutaneous Posterior Tibial Nerve Stimulation (PPTNS) in treatment of Urinary Incontinence in Paraparetic Patients. Dorsal level from T7 to T12.

**Methods:** Thirty traumatic Paraparetic patients of both sexes were selected for this study. Their age ranged from 25-40 years, with a mean value of 35.2 ( $\pm 1.1$ ) years, their weight ranged from 60 to 88 kg, with a mean value of 75.4 ( $\pm 1.4$ ) kg. Patients were randomly divided into two equal groups, G1 is a control group was treated by physical therapy program for bladder training (strengthening exercises for abdominal and pelvic floor muscles, tapping, percussion pressure, scratching and brief icing on lower abdomen) and placebo PPTNS, GII is an experimental group was treated by the same physical therapy program in addition to PPTNS. All subjects received the treatment program for 40 minutes, three days per week day after day for 12 weeks. All patients were assessed by Modified Ashworth Scale for muscle tone grade 3, biofeedback for pelvic floor muscle, Electromyography for detrusor and pelvic floor muscles, urine testing and bladder residual volume measured by cystometry and muscle power of pelvic floor muscle by tensiometer, testing in all patients were done before initiating conservative treatment and after the end of treatment program. Electrical stimulation was applied to posterior tibial nerve stimulation using a surface self-adhesive electrode on the ankle skin behind the internal malleolus with square wave form with duration of 200  $\mu$ s and a frequency of 20 Hz for 30 minutes.

**Results:** Results showed that, there was a statistically significant improvement in GII than G1, regarding all variables ( $P < 0.001$ ).

**Conclusions:** PPTNS is an effective method in treating urinary incontinence in Paraparetic patients and consider as a treatment modality filling the gap between conservative and surgical therapies in patients with certain types of urinary incontinence.

**Implications:** Percutaneous Posterior Tibial Nerve Stimulation should be included in treatment of Urinary Incontinence in Paraparetic patients.

**Key words:** Percutaneous Posterior Tibial Nerve Stimulation. Cystometry. Urinary incontinence. Tensiometer and paraparesis.

**Funding acknowledgements:** Physical Therapy Department for Neurology and Neurosurgery, Faculty of Physical Therapy, Cairo University.

**Ethical considerations:** Faculty of Physical Therapy, Cairo University.

## 87. THE INFLUENCE OF PSYCHIATRIC PHYSIOTHERAPY ON PATIENTS' AROUSAL LEVEL AND NUMBERS OF BELT RESTRAINTS IN EMERGENCY- AND INTENSIVE- PSYCHIATRIC CARE

Benjamin Rosenberg Edelman, Maja Nørgaard Bonneup, Christina Løvenborg Gjettermann and Nina Olsen

*Psychiatric Centre Copenhagen, Denmark. E-mail: benjamin.rosenberg.edelman@regionh.dk*

**Background:** This Pilot was established because of a new blueprint from Region Hovedstadens Psykiatri (RHP) which main purpose was to reduce the use of belt restraints. One of the main efforts in RHP's program was to establish the possibility of modified physical activity both during day and evening in intensive psychiatric care units. It is well known from clinical practice that modified physical activity and body awareness therapy can have a calming effect on psychiatric patients. This is why RHP started this pilot with an increased possibility of psychiatric physiotherapy.

**Purpose:** The main purpose of the intervention was to reduce the use of belt restraint. The focus was on physical activity and body awareness therapy. The hypothesis was that the increased effort would have an effect on the patients' common physical and mental conditions and also have an influence to equilibrate the arousal level. Thus reduces the use of belt restraint.

**Methods:** The pilot was performed at Psychiatric Centre Copenhagen (PCC). The intervention took place during the day at two psychiatric emergency care units and two psychiatric intensive care units. All patients' from the four units was offered to participate. 279 patients participated. The groups consisted of 5 physical activity- and 4 body awareness groups. Participation was voluntary and a Visual Analogue Scale (VAS)-score was used measuring the bodily unrest of the patients before and after the group session. The number of belt restraints on all the units was measured before and after the trial period.

**Results:** A bodily difference was in general read from the VAS measurements. The measurements from the body awareness sessions showed the highest decrease in bodily unrest. Furthermore the numbers of belt restraints during the Pilot dropped from 119 to 56.

**Conclusions:** There seems to be a calming tendency amongst the patients participating in the body awareness groups. In the same period there was a decrease in the numbers of belt restraints, supporting the hypothesis that psychiatric physiotherapy may have influence on such a decrease.

**Implications:** To implement this intervention in psychiatric emergency and intensive units, there is a need for an extensive cross profession effort.

**Key words:** Psychiatric physiotherapy. Body Awareness. Bodily unrest. Belt restraints.

**Funding acknowledgements:** The intervention was funded by the Danish government by Satspuljemidler.

**Ethical considerations:** The participants were informed about the content in the treatment. They could withdraw at any time without any consequences.

## 88. COMPARISON OF CLINICAL VIGNETTES AND STANDARDIZED PATIENTS AS MEASURES OF PHYSIOTHERAPISTS' ACTIVITY AND WORK RECOMMENDATIONS IN PATIENTS WITH BACK PAIN

Emanuel Brunner<sup>a,b</sup>, Michel Probst<sup>b</sup>, André Meichtry<sup>c</sup> and Wim Dankaerts<sup>b</sup>

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**Background:** Accurate measures of physiotherapists' clinical behaviour are important for testing physiotherapists' clinical skills, guideline adherence and exploring patient-therapist interaction. Large efforts have been expended for measuring physiotherapists' therapeutic recommendations in treatment of patients with non-specific back pain. Most of previous studies used clinical vignettes for measuring physiotherapists' clinical behaviour. But validity of this self-reported measure remains unclear. Standardized performances of simulated patients (standardized patients) are considered as the gold standard method for measuring therapist-patient interaction. But unannounced visits of standardized patients have never been used in physiotherapy practice.

**Purpose:** To validate clinical vignettes as a measure of physiotherapists' activity and work recommendations given to patients with non-specific low back pain.

**Methods:** Physiotherapists (N = 59) who consented to see unannounced standardized patients in their clinical practice filled out clinical vignettes to initially measure their self-reported activity

and work recommendations. Clinical vignettes are written case scenarios presenting fictitious patients, and respondents are then asked to report what their behaviour would be. Subsequently, actors performing as standardized patients (N = 23) visited physiotherapists in their clinical practice and rated the advice given by the physiotherapist regarding activity and work. Physiotherapists were blinded towards the standardized patients. To test whether standardized patients were detected, physiotherapists reported if they suspected that they had treated an actor. Weighted kappa coefficients were calculated for estimating the agreement between clinical vignettes and standardized patient scales.

**Results:** The 23 standardized patients visited 22 different physiotherapists. Physiotherapists detected 12 out of 23 unannounced standardized patients (detection rate: 52%). The estimated agreement between the two measures was poor, for both activity and work recommendations (weighted kappa coefficients: 0.29 resp. -0.21).

**Conclusions:** The poor concordance between clinical vignettes and standardized patients indicates the potentially limited validity of clinical vignettes as a measure of health providers' activity and work recommendations. Using standardized patients in physiotherapy practice is highly challenging. The main concern is related to the blinding of physiotherapists.

**Implications:** Direct measurements of physiotherapists' clinical behaviour should be used for future research on therapists-patient interaction and clinical practice.

**Key words:** Clinical practice. Low back pain. Clinical vignettes. Standardized patients. Validity. Clinical practice.

**Funding acknowledgements:** This research received no specific grant from any funding agency.

**Ethical considerations:** The study received approval by the regional ethics committee.

## 89. BASIC COURSES IN NORWEGIAN PSYCHOMOTOR PHYSIOTHERAPY BODY EXAMINATION

Kirsten Ekerholt<sup>a</sup> and Elisabeth Møyner<sup>b</sup>

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**Background:** Norwegian psychomotor physiotherapy (NPMP) was developed in Norway in the period 1947-1953, mainly in order to increase the patients' access to emotions during psychoanalytic therapy. Today, NPMP therapists understand the body as an integrated biopsychosocial phenomenon where lived experiences are deeply embodied. Bodily and emotional reactions are fundamental in the examination and treatment, exploring possible connections between bodily functions and the patient's life experiences and current situation. In the autumn 2016, course I and II in the basic body examination in NPMP, "The Resource Oriented Body Examination" (ROBE), will be arranged in Oslo, Norway. The teaching language will be English.

**Purpose:** To give physiotherapists outside Scandinavia the opportunity to learn one of the body examinations in NPMP. The courses will provide a useful tool in clinical reasoning and decision making, thus increasing the physiotherapists' skills to give individually adjusted treatments. The body examination ROBE, has proved to be useful both in primary and in specialized health care.

**Methods:** Course I: The Resource Oriented Body Examination (ROBE). Content: To make registrations and assessments of the patient's respiration, posture, movements, muscles and autonomic function and reactions. The patient's general body awareness and self-image will be noticed. The findings are assessed according to the ICF framework, thus being an important element in the clinical

reasoning and decision making for the direction of the therapeutic approaches. Course II: Different therapeutic approaches related to the evaluation of the findings in ROBE. Content: The course will deepen the clinical reasoning and reflections upon how physiotherapy can be adjusted accordingly to the individual patient's needs. Admission requirement: Bachelor degree in physiotherapy. Applicants who aim for course II will need access to clinical practice in between the two courses.

| Course               | Subject                                       | Duration           | ECTS                             |
|----------------------|---|--------------------|----------------------------------|
| I: Week 35           | ROBE  | 4 days             |                                  |
| II: Week 43          | Therapeutic approaches, individually adjusted | 3 days             |                                  |
| Final written report | Case study                                    | Approx. 2000 words | 5 ECTS (not yet finally decided) |

## 90. FASCIATHERAPY AND THE PERCEPTUAL PHYSICAL AND MENTAL HEALTH OF ELITE ATHLETES

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**Background:** The performance of a top athlete is not only dependent on his potential or talent, his passionate commitment during training sessions or his ability to handle stress during matches, but also on his ability to recover after a training session or a match. A lack of recovery has an impact on the functioning of the athlete at all levels (physical, physiological, psychological and social). Literature tells us very little about how the athlete experiences his own recovery. In this study, recovery is described based on 17 indicators that are representative of the perceptual physical health and perceptual mental health. In particular, these concepts do not refer to the idea or image the athlete has of his physical and mental health, but to their bodily experience. Fasciatherapy, Danis Bois Method, a specialization of physiotherapy, is a manual approach that focusses on the structural segmentation of the fascia, it addresses the elasticity of the tissue and muscle tone. Also the "pulsology touch", vascular resistance is regulated through a specific technique.

**Purpose:** This study attempts to answer the question "How and in what way does fasciatherapy participate in the physical, mental and somato-psychic recovery of high-level athletes?"

**Methods:** 10 top athletes 'in optima forma' - in full preparation for the Olympics or after selection for the national team - participated in this study. A semi-structured interview and Likert scales were used to assess their experience of physical and mental health, before and after 4 fasciatherapy sessions. This research uses a mixed methodology. The first one is qualitative. It develops an analysis inspired by phenomenology on a case by case basis and a transverse hermeneutic interpretation. The second one is quantitative and uses a questionnaire based on Likert scales.

**Results:** Results demonstrate a significant effect of fasciatherapy on physical aspects such as acute and chronic pain, physical tension, muscle stiffness. In addition, results show that fasciatherapy also has an effect on psychological aspects such as inner state, emotion, energy level and mental tension. Qualitative analysis offers an in depth comprehension of the athletes subjective experience and an insight into the processes during the treatment.

**Conclusions:** Fasciatherapy has a significant effect on both perceived physical and mental health and consequently on the recovery of top athletes. Also the use of a more qualitative approach to investigate the subjective experience of top athletes show promis-

ing results and give additional information during the recovering phase and treatment.

**Implications:** The high correlation between the indicators of physical and mental health illustrates that 'physiotherapy in the field of mental health' does not just belong in the domain of psychiatry or in a sedentary setting, but also has its place in every physiotherapist's treatment room.

## 91. ATTITUDES TOWARDS PSYCHIATRY OF PHYSIOTHERAPY STUDENTS FROM GERMAN-SPEAKING COUNTRIES: AN INTERNATIONAL COMPARISON

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**Background:** The field of psychiatry remains unpopular for physiotherapy students and physiotherapists working in clinical practice. However with the increasing number of mental health and psychiatric comorbidities among patients seen in physiotherapy departments, the future urge to recruit more physiotherapists with an interest for psychiatry becomes apparent. Previous studies showed that intensive educational courses shift physiotherapy students' attitudes towards psychiatry to more positivity. To date, attitudes towards psychiatry of German-speaking physiotherapy students rest indefinite. The Attitudes Towards Psychiatry questionnaire (ATP-30) is a valid measurement tool, which has previously been used in several countries. Hence a German version of this specific questionnaire seemed required.

**Purpose:** The primary aim was to translate the ATP-30 into German and further to validate the translated version. The secondary aim was to compare the German ATP-30 score of first year undergraduate physiotherapy students between different universities in Switzerland, Germany and Austria.

**Methods:** This cross-sectional survey study included first year undergraduate (Bachelor of Science, BSc) students in physiotherapy (N = 300) of three different universities from Switzerland, Germany and Austria. Data collection was planned in December 2015. The German ATP-30 version was generated by use of a cross-cultural adaption process, including a forward-backward translation procedure. Reliability of the German ATP-30 was determined by testing internal consistency (Cronbach's alpha) and item-total correlation. Comparison between ATP-30 scores of students from different countries was explored by calculating student's t-test.

**Results:** Results are expected for January 2016.

**Conclusions:** Conclusions are expected for January 2016.

**Implications:** Findings may disclose differences between countries. A 3-years follow-up measurement is planned prior to graduation of the physiotherapy students. Data will be used to test associations between ATP-30 scores, education in mental health and psychiatry, and exposure to psychiatry during internships.

**Key words:** Attitudes towards psychiatry. Physiotherapy. Students. Survey study.

**Funding acknowledgements:** None.

**Ethical considerations:** None.

## 92. DEVELOPMENT OF PHYSIOTHERAPY IN MENTAL HEALTH IN ESTONIA WITH THE SUPPORT OF NIBK AND EDUCATION PROGRAM BBAM

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**Background:** Physiotherapy education system in Estonia is rather young (from 1990) and its usage in the field of Mental Health so far

had not been developed. There is no dedicated subgroup for Physiotherapy in Mental Health and there are no experienced lecturers in that field. Within the last 5 years with the support of Basic Body Awareness Methodology (BBAM) education and Norwegian Institute of BBAT (NIBK) this situation is starting to change.

**Purpose:** To describe how Physiotherapy in Mental Health has been developed in Estonia within the past 5 years with the support of NIBK and BBAM education.

**Methods:** Hermeneutic phenomenology was used for data collection and analysis.

**Results:** During the past 5 years, 4 Estonian physiotherapist have gotten their postgraduate education in the international study program BBAM, from Bergen University College, Norway. This group of specialised physiotherapists have offered their services in private and public health care in Estonia. Within our population of 1.3 million citizens and 5 psychiatric hospitals, 2 major hospitals have opened new full time workstations to offer more comprehensive treatment for their clients. In 2015 these specialised physiotherapists created official literature group of Physiotherapy in Mental Health under Estonian Physiotherapy Union. Estonian education system has shown great interest in their work. For the past 2 years the presenting author has been invited by Tartu Medical College to teach a subject "Physiotherapy in Mental Health" in their Physiotherapy Bachelor Program. One was also invited by NIBK to join The International Association of Teachers in BBAT (IATBBAT) as a teacher candidate. This opportunity supported the processes in Estonia by making it possible to start developing an education system in Basic Body Awareness Therapy (BBAT). It gives the future possibility to educate specialists in Estonia with the mentoring and support from NIBK. Estonian Physiotherapy Union showed their support by dedicating their fifth annual conference to the topic "Psychology in Physiotherapy". They invited the presenting author to give a keynote presentation about BBAT.

**Conclusions:** Within the past 5 years a lot has changed in the field of Physiotherapy in Mental Health in Estonia. From having no specialised therapists we have grown to provide service in two major psychiatric hospitals in Estonia. Our higher education system today is open for collaboration and development in the future. Though we are still short of specialists, but with the support on BBAM education and NIBK we can meet these needs.

**Implications:** Through this example of Estonia we want to highlight the importance of international education system and encourage other countries to develop this field.

**Key words:** BBAT. Physiotherapy in mental health. Physiotherapy education.

**Funding acknowledgements:** No funding.

**Ethical considerations:** General regulation for ethical consideration is followed.

### 93. THE EFFECTS OF MOVEMENT THERAPY ON A PATIENT WITH ANXIETY/FEAR OF FALLING. THREE-YEAR FOLLOW-UP CASE STUDY

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**Background:** Wernicke Korsakoff Syndrome is a life-threatening neuropsychiatric disorder resulting from vitamin B1 (thiamine) deficiency. This syndrome can develop as a result of insufficient food intake e.g. prisoners that suffer the consequences of hunger strikes. Physiotherapy with Body Awareness Therapy may help.

**Purpose:** This case study illustrates how Basic Body Awareness Therapy (BBAT) can help a patient suffering symptoms of central vestibular disease. Relevance: To study if BBAT can be a useful therapeutic intervention for this kind of problem. Case description: A 32-year-old

woman with clinical features of Wernicke-Korsakoff syndrome, the consequences of a 115-day-mass scale hunger strike seven years ago, became my patient. Her goal was to walk alone without cane and, if possible, to walk more confident and relaxed in crowded areas and be able to participate more in social activities. In the beginning of treatment she had a cerebellar syndrome (nystagmus, vestibular ataxia) with the sequel of Wernicke's Encephalopathy, and severe symptoms of anxiety and panic, -low mood due to fear of falling. She lost her balance and tended to fall often. She complained of dizziness/vertigo (brought on by postural change and walking), inability to stabilize gaze during head movements and feelings of being off balance. She was unable to walk without cane.

**Methods:** The physiotherapy program: The patient was treated with BBAT in a program lasting 3 years. The first year the patient attended therapy session 60 minutes/once a week. She was taught to focus her eyes on a target when walking or sitting/standing. After one year she performed the exercises at home with monthly update. Assessments: Some of the exercises: Turning around the action line, sit-stand up and- walking were video recorded continuously during three years.

**Results:** The patient improved in balance and gaze stability and significantly decreased her falls after 3 years. She developed a good self-awareness in doing and assessing her movements, a more relaxed look, and a pleasant smile on her face. The patient became more grounded with a better posture. She could walk without a cane. At the end of treatment she was able to ascend and descend stairs without a cane. She became more self-confident and can now read a book without line skips and studies journalism at university.

**Conclusions:** This case study revealed that Basic Body Awareness Therapy worked for balance retraining reduced falls and fear of falling and/-anxiety in a patient that suffered from a central vestibular disease. Further research is needed to investigate the effectiveness of this treatment for other patients with cerebellar dysfunction.

**Key words:** Wernicke Korsakoff syndrome. Vestibular rehabilitation. BBAT.

**Funding acknowledgements:** I would like to thank the patient and staff at Rehabilitation Center/Foundation for Society and Legal Studies (TOHAV).

### 94. ARE PAIN THRESHOLDS RELATED TO CATASTROPHIZING, ILLNESS PERCEPTION, ANXIETY OR FEAR IN PATIENTS WITH FIBROMYALGIA? A SYSTEMATIC REVIEW

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**Background:** Besides suffering from pain patients with fibromyalgia (FM) often show higher catastrophism, more negative illness perceptions, increased anxiety and fear. Could there be a relationship between pain thresholds, catastrophizing, illness perceptions, anxiety and fear in people diagnosed with fibromyalgia compared a healthy people?

**Purpose:** This article provides a systematic review of published studies investigating the relation between pain thresholds and levels of catastrophizing, illness perception, anxiety and fear in patients with fibromyalgia compared to healthy people.

**Methods:** We conducted a systematic review of the literature with a search in PubMed, PsycINFO, and EMBASE. Patients had to be adults and diagnosed with fibromyalgia according to the American College of Rheumatology criteria and healthy controls. The studies were included if a pain threshold measurement was performed and one of more of the following outcome measures; catastrophizing, illness perception, anxiety and fear using standardized and valid measures. The pain measurement had to be expressed in quantitative terms. For the quality assessment of studies we used the Newcastle-Ottawa scale (NOS).

**Results:** Seventeen full-text articles were included, all were case-control studies. Methodological quality varied from moderate to good. Various pain thresholds were used; cold pain thresholds, heat pain thresholds and pressure pain thresholds. Eleven articles reported significantly lower pain threshold scores in the FM group. Ten out of eleven articles reported significantly higher anxiety in patients with fibromyalgia compared to healthy control. Six articles reported significantly higher catastrophizing in patients with fibromyalgia, no articles were found regarding illness perception and fear. Our study indicates that there is a relationship between lower pain thresholds, anxiety and catastrophizing.

**Conclusions:** The majority of literature provides evidence for lower pain thresholds in relation to a higher degree of anxiety and catastrophizing in patients with FM.

**Implications:** Targeting anxiety and catastrophizing could be an important aspect of your treatment.

**Key words:** Fibromyalgia. Catastrophizing. Anxiety. QST. Review.

**Funding acknowledgements:** Our work was unfunded.

**Ethical considerations:** Does not apply.

## 95. BASIC BODY AWARENESS THERAPY IN PATIENTS SUFFERING FROM FIBROMYALGIA

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**Background:** Fibromyalgia nowadays is recognized as the most common cause of widespread chronic muscle pain being frequently diagnosed in the last decade. This disorder has been described by widespread pain, no restorative sleep, fatigue, cognitive dysfunction, and other somatic symptoms such as depression, anxiety and reduction in quality of life. In the field of physiotherapy, body awareness interventions in general, as well as more specific interventions, such as Basic Body Awareness Therapy, demonstrated good outcome in treatment for fibromyalgia. Purpose: To evaluate change in movement quality and pain levels in a group of patients suffering from fibromyalgia after using Basic Body Awareness Therapy.

**Methods:** 10 females with fibromyalgia were included in the study. They were treated twice a week during 5 weeks. The participants were selected from a data base of fibromyalgia patients in a Primary Care Health Center. We used Body Awareness Rating Scale (BARS), Visual Analogue Scale (VAS) and an open interview interpreted with Giorgi's Analysis to assess treatment outcome.

**Results:** The average of participants were 53,5 years old. Range of the BARS before treatment were 2 - 3,3 and after treatment were 4,5 - 5,3. The average of VAS-scale for pain before and after the treatment was respectively 84% and 63%. The level of pain improved with 21%. The qualitative results showed improvements across four main categories; physical capacity, body awareness patterns, relationship to self and relationship with the group. In order to physical capacity, the patients referred the movement freer and wide in the path and the form coping the daily task in less time and with more resistance and concentration. The body awareness patterns has changed; BBAT helps patients to be aware of their whole body especially legs which improved the stability and balance. The experiences of group (i.e. the interactions, the confidence, the al-

truism and the group cohesion) were the most important improving factor which leads to a high motivation to continue with the group session. At last a new relationship to self was created; BBAT treatment improves the self-awareness.

**Conclusions:** The results of BBAT seem to have a positive effect on pain and on the level of movement quality. The group approach influences the therapeutic process. Further research should be required.

**Implications:** From this work it seems that BBAT groups can be a recommended therapy for fibromyalgia and should be included as a usual treatment inside of public health centers.

**Key words:** Basic Body Awareness Therapy. Fibromyalgia. Movement Quality. Physiotherapy.

**Ethical considerations:** This project is a sample of further trial that has been approved by Ethical Research Committee of Bellvitge Hospital from Barcelona.

## 96. BASIC BODY AWARENESS THERAPY (BBAT) AS A DAILY TREATMENT METHOD USED AT THE PSYCHIATRIC UNIT IN THE FAROE ISLANDS

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**Background:** The Psychiatric Unit at the National Hospital of the Faroe Islands covers all treatments for in- and outpatients with psychiatric diagnoses. On a yearly basis there are around 1000 adults and adolescences that require assistance from the multidisciplinary psychiatric healthcare team. The team counts about 200 staff members, including two physiotherapists. In total there are about 70 physiotherapists in the primary and secondary health care system in the Faroe Islands. The physiotherapist at the Psychiatric Unit are BBAT specialists graduated from the Basic Body Awareness Methodology (BBAM) education in Bergen. In 2014 they started as teacher candidates in BBAT, connected to BBAM education at Bergen University College, with prof. Liv H. Skjærven as BBAT teacher and tutor. BBAT was introduced at the Psychiatric Unit in 2009. Since then it has developed and is today, well integrated into the psychiatric physiotherapy, both as individual and group treatment. As the only Psychiatric Unit in the country, treatment of all diagnosis is requested. The most frequent diagnosis are depression, anxiety, bipolar, eating disorder, personality disorder and schizophrenia.

**Purpose:** The objective is to describe the process of implementing BBAT, as a physiotherapy treatment method at the Psychiatric Unit and mental health area in a small remote society.

**Relevance:** Use of BBAT as evidence based method, to ensure the quality within physiotherapy treatment in a multidisciplinary psychiatric healthcare team. Implementation: BBAT movement as individual and group treatment. Lectures for relatives, patients, colleagues, other professionals, students and the interest organizations using BBAT and Movement Quality Model approach. A structured teaching plan in BBAT theory and practice for physiotherapy students in clinical practice lasting (10 weeks). A structured plan in BBAT movements for physiotherapist colleagues lasting (6 weeks). BBAT introduction course for physiotherapist with prof. Liv Helvik Skjærven lasting (12 hours). Future plan/vision. We will: continue the implementation of BBAT in the primary and secondary healthcare system; continue the implementation of BBAT through introduction courses for physiotherapists; ensure that the standard is maintained with respect to treatment quality, through continuous tests, such as Body Awareness Rating Scale (BARS), Body Awareness Scale-Interview (BAS-I) and Motivational Analysis (MA).

**Key words:** Basic Body Awareness Therapy. Implementation. Movement Quality Model. Isolated society.

**Funding acknowledgements:** Landssjúkrahúsið-National Hospital of the Faroe Islands, Psychiatric unit, Medical unit and the Physiotherapy department. The Faroese Research Council supported the BBAT introduction course.

**Ethical considerations:** Considering the size of our country, thorough information of the importance of confidentiality is vital in group treatments.

## 97. PHYSIOTHERAPY FOR HIGH SCHOOL ADOLESCENTS TO COPE WITH STRESS

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**Background:** In primary health care in Norway a team that often includes a physiotherapist is responsible for providing health services to school pupils and students. Motor problems, physical inactivity and obesity, the major health challenges for youngsters in the western world for decades, represent the main focus of the physiotherapist working in such a team. However, a 2013 study on 110,000 Norwegian youngsters showed that stress-related ailments and minor mental disorders are increasing and present a major health challenge for today's youth. Stress manifests itself in the body among other things as muscle pain, headache, dizziness, anxiety and sleep problems. This challenges physiotherapists to develop preventive physiotherapy in school in order to better meet adolescents' needs.

**Purpose:** The purpose of the study was to develop physiotherapy practice to prevent stress-related ailments and minor mental disorders in high school students.

**Methods:** About sixteen high school students who had participated in a body awareness group over one semester led by a physiotherapist, were asked to attend an interview. Seven of these joined a single interview lasting for 45 minutes. Topics discussed during the interview were informants' experience of stress and stress management, their experience with participation in the body awareness group and ideas for how to work with the issue of stress in school. The material was transcribed and analyzed and presented in a report.

**Results:** The study confirms previous surveys that describe stress as a major health challenge for today's youth. Informants related stress to high performance demands, lack of control and the requirement to always be available. Youngsters associate bodily ailments to stress and want to learn how the body responds to stress and how they can use the body as a resource in coping with stress. The informants found participation in the body awareness group helpful and learned among other things physical methods to reduce muscle tension and improve sleep. The students recommend cooperation between students, teachers and health care professionals to develop a learning program with body awareness groups, project work and lectures for coping with stress.

**Conclusions:** The physiotherapist in school can through a bodily perspective help students to understand the body's expressions and see them in a context. Various educational methods included bodily approaches can be used to increase young people's knowledge of the body as an important signal carrier and to help them find ways of coping with stress.

**Implications:** A program for coping with stress through a bodily perspective should be developed and implemented in high school.

**Key words:** Adolescent. Stress. Physiotherapy. High school.

**Funding acknowledgements:** FYSIOPRIM, University of Oslo, Norway.

**Ethical considerations:** Norwegian Social Science Data Services (NSD) approved the study.

## 98. BASIC BODY AWARENESS THERAPY WITH A GROUP OF WOMEN SUFFERING FROM BREAST AND GYNECOLOGICAL CANCER

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**Background:** Breast cancer is the most common cancer type amongst women, with 1.67 million of new cases diagnosed in 2012.

**Purpose:** The goal of this project was to study the response to BBAT in a group of women suffering breast and gynecological cancer and their sequels. Movement quality and the perceived self-efficacy were explored. The focus was on how the participants experienced and responded to this therapy.

**Methods:** Qualitative and quantitative methods were used to analyse the results of the Body Awareness Rating Scale (BARS) and the General Perceived Self-Efficacy Scale (GPSES) questionnaires of each participant, before and after the treatment process. Participants were seven women with ages between 40 and 63 years, who were going through or had been gone through a breast or gynecological cancer process. Twelve sessions of Basic Body Awareness Group Therapy (BBAGT) were implemented.

**Results:** Based on the descriptions of BARS questionnaire of the participants, a clear difference was detected between the words used in the first and last BARS. In the first BARS words tended to be short and based on pleasurable or uncomfortable sensations or experiences. In the last BARS the vocabulary was richer, showing reflections on the experiences. These observations were organized in three categories: sensations, awareness and metaphors. Relating to the scores of the BARS a general increase in all participants was observed, so each participant's movement quality improved. The results of the scale show a functional movement quality and a moderate movement harmony. The average in the movement quality before the process was a weak or lack of movement quality. And finally, relating the GPSES questionnaire an increase of the total scores was observed, except for one participant, who's result was lower.

**Conclusions:** Some participants evaluated the experience as highly positive and rewarding. This kind of work is very suitable and convenient for the person in this condition. Further research is needed to confirm and generalize the results.

**Implications:** BBAT should be incorporated into the Spanish Public Health Care System, in the mental health services and in traditional physiotherapy boards.

**Key words:** Basic Body Awareness Group Therapy (BBAGT). Breast and gynecological cancer. Body Awareness Scale (BARS). General Perceived Self-Efficacy Scale (GPSES). Movement Quality.

**Funding acknowledgements:** None.

**Ethical considerations:** Ethic considerations were taken in account.

## 99. YOGA AS A WAY TO PROMOTE PHYSICAL AND MENTAL HEALTH IN PHYSICAL THERAPY

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**Background:** Nowadays many of our patients come to an evaluation complaining of pain, fatigue, anxiety, discouragement, stress symptoms. All of this symptoms are linked and we need some minutes throughout the day to perceive our body and what we need. Health evolves more than absence of diseases, it evolves a feeling of well being. Yoga may give us a way to achieve this goal.

**Purpose:** This study aims to show that Yoga may be useful in promoting Physical and Mental Health through asanas, pranayamas and meditation.

**Methods:** 12 subjects that wants to participate in YOGA weakly classes from September 2014-December 2014. There were no criteria for inclusion or exclusion. We have a total of 12 classes, once a

week/one hour each class. Measures: the participants should describe how they felt before and how they felt after each class, giving a score from 0 to 10 according to their symptoms.

**Results:** They all felt better, more relaxed and the pain decreased in all cases. The results show that it was a very positive experience for all members and they experienced different body movements

**Conclusions:** This study provided evidence on the use of Yoga as a way to help in promoting physical and mental health.

**Implications:** Yoga practice may help to manage pain and stress.

**Key words:** Yoga. Physical. Mental health.

**Ethical considerations:** All patients gave their personal signed confirmation for this experience; all ethical considerations were considered.

## 100. MASTER PROGRAMME PHYSIOTHERAPY IN MENTAL HEALTH UNIVERSITY OF APPLIED SCIENCES THE NETHERLANDS

Rutger IJntema, Dammis Vroegindewij and Roland van Peppen

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Since 2006 the Utrecht university of applied sciences offers a master physical therapy in mental health. This 3 year Master of Science programme is a 90 EC programme with the character of a clinical master. Access to this master programme is possible after 4 years bachelor physical therapy education (240 EC). This master examination programme consist 8 days internship, a master thesis and a master proof. The diploma gives access to the Dutch quality register for physical therapist in mental health. Most health insurance companies pay a higher tariff for this specialism. This competency based programme is demand driven. Collaboration between the university and physical therapy in mental health institutions is considered important. The master programme is ranked number 1 Master Physical Therapy in The Netherlands (Master guide 2015). Official language: Dutch. Education days: 20 Fridays a year. Maximum of 30 students per year enrol. 1 Tutor per 15 students.

## 101. THE PATIENTS' EXPERIENCES OF BASIC BODY AWARENESS GROUP THERAPY

Ana Cascante

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**Background:** There is a need of change; as a physiotherapist I search to maintain an restore movement and functional ability. Basic Body Awareness Therapy (BBAT) is a validated and reliable therapy that explores the quality of movement and search to increase it. For a treatment to take place, as a physiotherapist, I have to understand and improve communication skills between my patients and me.

**Purpose:** I explore how this can be done and which are the therapeutic factors and the communication factors that are important to take into consideration and that affects the outcome of the treatment.

**Methods:** This is a study made with a Basic Body Awareness Therapy group. My group is an open group started in December 2014. A total of 13 persons have participated in the group. Most of the participants has long-lasting pain disorders. The methodological approach is qualitative. The aim of the study was to understand better the phenomenon of movement. I conducted one focus group interview with four participants.

**Results:** From the analysis of the interview, I recognize 5 themes in the focus group interview: movement experiences in BBAT, use of sounds and silence, usefulness of BBAT in daily life, clinical talk, exploring movements at home.

**Conclusions:** The group showed an improvement and understanding of movement quality and functionality. For the outcome of the treatment, it is necessary to be a movement experienced physiotherapist, take care of the therapeutical factors and to master the communication skills.

**Implications:** This is a small study to understand communication in Basic Body Awareness. More research is needed to generalize results. Future research could be interesting for the long term usefulness and effect of Basic Body Awareness Therapy.

**Key words:** Basic Body Awareness. Movement. Therapeutical factors. Communication. Wellbeing.

## 102. RESULTS OF A MULTIDISCIPLINARY BODY-ORIENTED GROUP COURSE FOR PATIENTS WITH MUS

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**Background:** 30 to 50% of the consultations at the GP's end without any diagnosis. A reason for many following referrals to other medical specialists, without any effect. In 10-30% of the patients who develop MUS the complaints persist. Many MUS patients eagerly look for a solution for their non-existent organic disease. This causes high use of services, useless laboratory testing and consultation, and increased costs. Recently some multidisciplinary body-oriented group interventions have shown to have some effect.

**Purpose:** The time physical therapists spend with in their patients is often too short. Many interventions like cognitive behavioural therapy, pain education, relaxation techniques like mindfulness-based cognitive therapy appear to be effective but cannot be combined in a session of physiotherapist, specialized in psychosomatics (PSP). By combining these elements in a larger session, and also by gathering more patients with similar complaints the PSP has more time to practise the elements mentioned. Moreover, the advantage of the group can be utilized (cf. recognition of the complaints, possibility of interactive exercises, and sharing the personal benefits). The purpose was to evaluate the described programme.

**Methods:** Quantitative analysis of the data by paired T-tests (to compare pre- and post measurements) and Spearman's rho test to relate variables to the differences measured. Possible regression analysis.

**Results:** Still to be investigated.

**Conclusions:** Still unclear.

**Implications:** Dependent on the results measured the multidisciplinary body-oriented group course for limited health literacy patients will be implemented in other lower SES populations elsewhere in The Netherlands.

**Key words:** MUS. Group therapy. Multidisciplinary. Body-oriented. Effect.

**Funding acknowledgements:** no structural funding facilities.

**Ethical considerations:** All participants accepted dispersion of the data. No approval of an ethical board was needed as there was no randomisation in the design.

## 103. EVIDENCE ABOUT THE MOST FREQUENT PHYSIOTHERAPY TREATMENTS IN MENTAL HEALTH CONDITIONS

Lidia Carballo-Costa and Andrea Ferro-Garrido

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**Background:** Compared with the situation in countries of Northern Europe, physiotherapy in mental health is not an extended specialty in Spain, in spite of the efforts to spread it among physiother-

apists and patients. However, the interest in it is increasing year after year. This interest motivates the present work, which tries to answer the question about what the evidence about the efficacy of various treatments in mental health conditions is.

**Purpose:** This study aims at identifying the evidence about what the role of physiotherapy treatment in following mental health conditions is: dementia, schizophrenia, major depression, eating disorders and bipolar disorder.

**Methods:** A bibliographic review was carried out in Pubmed, Scopus, PEDro and Web of Science databases, including papers published between 2005 and 2015 (May). Languages included were Spanish, English and Portuguese. The topic of papers must be physiotherapy as a treatment of the mental health conditions.

**Results:** After the application of inclusion and exclusion criteria, 27 papers were obtained: 4 about Basic Body Awareness therapy, 4 about muscle strengthening, 8 about aerobic exercise, 4 about yoga, 1 about progressive muscle relaxation, 2 about acupuncture and 4 systematic reviews that studies different interventions as treatment in mental health conditions.

**Conclusions:** There is moderate evidence in the role of physiotherapy in the treatment of mental health conditions: Dementia: Evidence about treatment with aerobic exercise is found. Schizophrenia: There is moderate evidence about the efficacy of physiotherapy treatments studied in this review. Major depression: Evidence about treatment with aerobic exercise, muscle strengthening and Basic Body Awareness therapy is found. Eating disorders: Basic Body Awareness therapy has moderate evidence. Yoga and acupuncture has evidence too, but less. Bipolar disorder: There is less evidence about physiotherapy treatment in this condition. Physiotherapy treatments have positive effects on different aspects of mental health conditions: improvement of physiopathology, improvement of the symptoms of the somatization process and other symptoms that appear in these disorders, like anxiety, stress and quality of life decrease. This study concludes that aerobic exercise and Basic Body Awareness therapy are the treatments with stronger evidence.

**Implications:** More research is required in order to state stronger evidence regarding the use of physiotherapy interventions as treatment of mental health conditions.

**Key words:** Physiotherapy. Schizophrenia. Dementia. Major depression. Eating disorders. Bipolar disorder.

**Funding acknowledgements:** This study did not receive any funds.

**Ethical considerations:** They are not relevant in this study.

#### 104. SUICIDAL THOUGHTS, BEHAVIOURS AND DEATHS AMONG PEOPLE WITH PAINFUL COMORBIDITIES: A META ANALYSIS AND IMPLICATIONS FOR PRACTICE

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**Background:** The relationship between pain and suicidal behaviours such as suicidal thoughts, intentions and attempts is unclear. If pain is associated with suicidal behaviour, physiotherapists might have an integral role in addressing this.

**Purpose:** Conduct a systematic review and meta-analysis of the literature investigating suicidal behaviour among people with painful comorbidities.

**Methods:** Major electronic databases were searched and data meta-analysed utilizing a random effects model.

**Results:** Almost one quarter of people with painful comorbidities had lifetime suicidal ideation (22.9%, 95% CI 6.88-54.4) whilst the prevalence of current suicidal ideation was 13.5% (95% CI 9.25-19.4). Almost one in ten people with pain had made lifetime suicidal plans (8.5%, 95% CI 0.8-50.7) whilst only 2.0% (95% CI 0.5-8.0)

currently expressed suicidal plans. The trim and fill analysis demonstrated that people with painful comorbidities were over 3 times more likely to have current suicidal plans (Odds ratio, (OR) 3.57 (95% CI 2.04-6.26). Of interest, 16.3% (95% CI 10.2-25.0) of people with pain had made lifetime suicide attempts. The prevalence of deaths from suicide across all pain severity and moderate and worse pain severity were low (approximately 2%), whilst the prevalence appears higher at 8% in those with the most severe pain.

**Conclusions:** People experiencing painful comorbidities are at increased risk of lifetime and current suicidal behaviours.

**Implications:** Pain is a risk factor for suicide. Physiotherapists might have a key role in identifying and managing pain among people. It remains to be seen whether bespoke physiotherapy interventions targeting pain can reduce suicidal behaviours.

**Key words:** Suicide. Pain.

**Funding acknowledgements:** None.

**Ethical considerations:** None.

#### 105. THE BODILY, NONVERBAL INTERACTION I MENTALIZATION-BASED TREATMENT FOR PATIENTS WITH BORDERLINE PERSONALITY DISORDER

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**Background:** In Sweden, there is an ongoing work, to implement evidence based treatments for patients with the diagnosis, Borderline personality disorder (BPD), in psychiatric care. One of the recommended treatments is Mentalization-based treatment (MBT). In MBT one works to create a secure attachment experience through the therapeutic relationship and to stabilize and develop the mentalizing ability through interventions with an affect focus, where one tries to regulate the affect level in the interaction. The mentalizing ability develops in our early attachment relationships, from the beginning in a nonverbal, bodily interaction. In MBT, interventions on this bodily, affective level are not integrated in the method.

**Purpose:** The aim of this study was to describe and analyse the bodily, nonverbal interaction in relation to nonverbal affect attunement, and the verbal dialogue in MBT for patients with BPD.

**Methods:** A qualitative method, part process analysis, elaborated for video recorded material was used. It emphasizes the interaction between the patient and the therapist and analyzes the communication on both verbal and nonverbal level. The data were five video recorded individual sessions in MBT, with five women, 18-25 years, with BPS, and their therapists.

**Results:** Four categories, identified in the analysis were: 1) Affect attunement, where the therapist was matching the patient, in nonverbal expression. 2) Misattunement that supports the process, where the response from the therapist was lower in affect intensity or showed another affect. 3) Misattunement that doesn't support the process that had a similar pattern as the second category, but the relational interaction became another. 4) No affect attunement, where the therapist didn't give any affective response.

**Conclusions:** The bodily, nonverbal interaction that was analyzed through nonverbal affect attunement is central for what kind of relational interaction is being created in the therapeutic relationship, more or less advantageous for the process. To make conscious the nonverbal affect attunement and integrate physiotherapeutic, body oriented interventions in MBT could be helpful in relation to better regulate affects and then to develop and stabilize the mentalizing ability.

**Implications:** The bodily, nonverbal interaction in MBT has a great clinical applicability and could be integrated in the method through body oriented interventions. In Sweden there are strengthened requirements on evidence based treatments. Physiotherapeutic treatments in psychiatric care, for patients with BPD, as Body awareness therapy and body oriented psychotherapy are treatments that need

further research, to integrate theoretical with concepts as nonverbal affect attunement, attachment and metallization, to meet these requirements.

**Key words:** Mentalization-based treatment. Borderline personality disorder. Nonverbal affect attunement. Qualitative analysis.

**Funding acknowledgements:** The study was unfunded.

**Ethical considerations:** The study was approved by the Regional Ethic review Board in Gothenburg (Dnr: 439-14).

### 106. THERAPEUTIC NORDIC WALKING AS AN INTERVENTION FOR COPING WITH PSYCHOSOMATIC DISORDERS?

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**Background:** Patients with psychosomatic disorders experience withdrawal from work or social life, they try to cope this by doctor-hopping. All this always results in high costs for themselves and the community. It is important to develop low-cost interventions, which can be implemented in everyday life. Effects of exercise therapy in patients with psychosomatic disorders are modest. Nordic walking (NW) possibly will be an appropriate additional treatment modality.

**Purpose:** The purpose of this study was to investigate the effects on coping ability of a therapeutic NW programme (experimental group), compared to usual care (control group) in highly disabled patients with diverse psychosomatic disorders in a hospital setting.

**Methods:** Patients with diverse psychosomatic disorders, maximum age 65, participated in this randomised controlled trial with follow up. The rehabilitation programme lasted least three weeks. Primary outcomes were self-efficacy, readiness to health behaviour change and self-reported functional disability, measured at entry, at discharge and at 11 weeks follow-up. Assessments were Pain Self-Efficacy Questionnaire, three Items about walking, Performance Assessment Capacity Testing and the Freiburg Questionnaire - Stages of Chronic Pain Management. Secondary outcome was willingness-to-pay. Statistical analysis was executed by nonparametric analyses for ordinal items and t-test, cohens d for other scales.

**Results:** Most common diagnoses were chronic pain, depression and anxiety-disorders. Both groups changed their self-efficacy during hospital stay (about 0.4 points on a 6 point Likert-scale,  $p = 0.013$ ), but did not differ from each other ( $p = 0.273$ ). People participated in mean at 7 therapeutic Nordic walking sessions. Self-reports about walking outside or performance of elected activities did not differ between groups or time points. Physical capacity showed no significant between-group-effect.

**Conclusions:** The therapeutic NW programme with an average of seven training sessions for patients with psychosomatic disorders was not more effective in improving coping ability than usual care. Future research should focus on n-of-one trials investigating more sophisticated "How to involve people with psychosomatic diseases better". 6. Implication: Since experience and expectancy of both patient and health care provider with this treatment modality play an important role in the process of treatment NW might be a low budget approach for some patients.

**Key words:** Pole walking. Coping. Psychosomatic.

**Funding acknowledgements:** This study was supported by Johanna Dörmüller Foundation, Bern, Switzerland. The funder was not involved in the preparation of the study protocol, management of the trial, analysis of the data, or preparation of the manuscript.

**Ethical considerations:** The Local Research Ethics Committee in Bern gave ethics approval on the 2009-02-26 (ref: 224/08).

### 107. FALLS PREVENTION AWARENESS TRAINING - A JOINT WORKING APPROACH

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**Background:** Annually, falls leave 1.2 million people in Accident and Emergency. This places huge financial pressures on our Health and Social Care systems. Falls are not an inevitable part of ageing and Specialist Physiotherapy provides solution focused intervention.

**Purpose:** To highlight the components of our Falls Prevention Awareness Training delivered and facilitated by the Physiotherapy Department at Royal Cornhill Hospital, Aberdeen.

**Methods:** Nursing staff and students working in Old Age Psychiatry (wards and Day Hospitals) attended Falls Prevention Training. The 2-3 hour sessions consisted of education, group work and experiential components.

**Results:** Via Participant Questionnaires. Positive and valuable feedback. Falls Prevention Training is now Mandatory on E-KSK-The Knowledge and skills Framework.

**Conclusions:** There is greater understanding and awareness of the components of Falls Prevention and the importance of Joint working. The training is valued and highlights the need for ongoing provision. Highlights the need for to provide more Physiotherapy Resource.

**Key words:** Falls Prevention. Awareness. Training. Joint working and responsibility.

**Funding acknowledgements:** This project is unfunded.

### 108. AN EXPERIENCED BASED STUDY FOR UNDERSTANDING OF MOVEMENT AWARENESS

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**Background:** World Confederation for Physical Therapy declares, "Functional movement is central to what it means to be healthy". Functional movement can be realized by promoting movement quality. Therefore, promoting movement quality is main role of physiotherapy. Movement awareness is an important component in order to promote movement quality. Recently, much attention has been paid to movement awareness, but it has not reached deep understanding in physiotherapy.

**Purpose:** The purpose of this study was to understand movement awareness that the components of movement quality.

**Methods:** An experience based study was used in this research to understanding the movement awareness. We searched the meaning of the results of physical assessment that showed significant changes after Basic Body Awareness Therapy (BBAT) in our previous research. We also explored to understanding the movement awareness by blending our clinical experiences with related literature.

**Results:** Four clinical physiotherapists discussed the movement characteristics in patients with psychiatric disorders. We found the movement characteristics in their everyday life were explained by mechanically, dysfunctions, stiff, and high in tension in our clinical experiences. We also found balance in a standing position (motor control), and 10-meter image-walking test (movement prediction) showed significant change after BBAT in our previous research.

**Conclusions:** Our previous research showed that balance and image walking tests are reflected outcome of BBAT. These results indicated that motor control and movement prediction were important factors for movement awareness, because movement awareness can be defined as an awareness of self-movement through external environment and internal condition. Understanding of movement awareness has anticipated common ground for physiotherapy in mental health as well. These results would lead us to understanding of movement awareness.

**Implications:** The present study shows the benefits of understanding for movement awareness in the mental health field, which should be a key of promoting movement quality.

**Key words:** Movement awareness. Movement quality. Functional movement.

**Funding acknowledgements:** Nothing

**Ethical considerations:** This research was approved by the Ethics Committee in Kobe Gakuin University, Kobe, Japan.

### 109. EFFECTIVENESS OF MULTISENSORY STIMULATION (SNOEZELLEN) IN PATIENTS WITH ALZHEIMER'S DISEASE. A SYSTEMATIC REVIEW

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**Background:** Alzheimer's disease (AD) is one of the most serious degenerative diseases in senior people. As the dementia progresses, patients gradually lose independence, increasing the burden in caregivers and family members. Moreover, the institutionalization of the patients becomes necessary in order for physical, psychological and social care to be provided. Despite this, there may be a lack of necessary sensory stimulation, increasing feelings of unhappiness, depression and agitation in patients with AD. The deprivation of sensory stimulation and the ineffectiveness of pharmacological treatments in the control of behavioral and psychological symptoms have led to the development of non-pharmacological treatments, which help to improve the well-being and quality of life of people with dementia. This way, the multisensory stimulation therapy confers patients the necessary stimulation to promote positive behavior, reducing maladaptive behaviors and encouraging interaction and communication.

**Purpose:** To carry out a systematic review to determine the clinical effectiveness of multisensory stimulation (MS) as a therapeutic intervention in elderly with Alzheimer's disease. In addition, to identify the methodological quality of scientific publications on the subject of the last 15 years.

**Methods:** Studies published from January 2000 to January 2015; randomized controlled trials or not and non-controlled clinical trials; pretest and posttest data should be provided with at least one relevant variable; n -5 subjects in each group at the end of the study; subjects with AD at any stage; sample age > 60 years old who were treated with MS therapy alone or this therapy combined with another. Exclusion criteria were articles with any other type of cognitive impairment, case studies or a single case study, and studies related to caregivers. To assess the methodological quality of the studies included in this review, the PEDro scale was used.

**Results:** Through electronic and manual search we identified 153 articles and we selected 14, with 12 studies, for the completion of this review, with an average quality score of 4,9 (PEDro scale). MS has proven to be effective for a short term in people with advanced Alzheimer's, who can only be benefited from therapies which try to improve or to maintain cognition and function during activities of daily living.

**Conclusions:** Longer quality studies are needed, using more accurate and reliable tools to evaluate behavior, in order to confirm the

effectiveness of MS for a long term. Therefore, MS therapy could be integrated into the daily care of these patients in nursing homes, day care centers and dementia care units.

**Implications:** Current scientific evidence suggests that, for advanced stages of AD, MS physiotherapy programs will delay the effects of deprivation of stimuli.

**Key words:** Alzheimer's Disease. Elderly. Multisensory Stimulation.

**Funding acknowledgements:** None.

**Ethical considerations:** It is not necessary.

### 110. EFFECTIVENESS OF EXERCISE THERAPY IN OBSESSIVE-COMPULSIVE DISORDER. A SYSTEMATIC REVIEW

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**Background:** Obsessive-compulsive disorder (OCD) is an anxiety disorder which is characterized by recurrent obsessions and compulsions. In its treatment, it is possible to use pharmacological or psychological techniques, such as serotonin reuptake inhibitors, exposure and response prevention therapy or cognitive behavioral therapy. Exercise therapy seems to be also beneficial to reduce obsessive-compulsive disorder symptoms.

**Purpose:** To know the scientific evidence about the effects of exercise therapy in people with OCD. In addition, to know which exercise is the best in the treatment of these people, which variables get benefits and which is the dose to obtain these benefits.

**Methods:** An electronic and manual research was carried. The articles that had been included had to use exercise therapy, on its own or combined with psychological or pharmacological treatment; in them, there had to be one or more groups of treatment, measuring them before and after the treatment; the sample or part of it had to present OCD, and data from the patients; the number of participants had to be 5 or more; the participants had to be older than 18; each group had to be OCD diagnosed; studies that were published in English or Spanish until 2014 were included. In order to evaluate the methodological quality of the studies, PEDro scale was proposed.

**Results:** By electronic searching, a total of 717 articles were found; 50 potentially relevant studies. 38 were excluded because they were repeated, and nine studies did not meet one or more of the inclusion criteria. Finally, 3 articles met the selection criteria, providing a total of 2 studies. One of the studies used exercise therapy combined with drug therapy and cognitive behavioral therapy, based on exposure and response prevention and the other exercise therapy study was combined with cognitive behavioral therapy. The first study used moderate-intensity aerobic exercise, working at 55-69% of maximum heart rate. In the second study the patients walked up to 60-70% of maximum heart rate. None of the 2 studies included a control group, and the PEDro scale should not be used in these cases.

**Conclusions:** Exercise therapy provides benefits in combination with psychological therapy, pharmacological therapy or both in people with OCD. Nevertheless, it is not known which the extent of these improvements is when exercise therapy is combined with each of these therapies. Physical activity produces short-term and long-term benefits in people with OCD.

**Implications:** The limited number of studies and the heterogeneity of the therapies prevent us from making overall conclusions. It will be necessary more researches before making any clinical recommendations.

**Key words:** Obsessive-compulsive disorder. Physical activity. Physical exercise.

**Funding acknowledgements:** None.

**Ethical considerations:** It is not necessary.

### 111. EFFECTIVENESS OF PHYSICAL ACTIVITY IN ASPERGER SYNDROME AND AUTISM SPECTRUM DISORDERS. A SYSTEMATIC REVIEW

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**Background:** The Asperger syndrome (AS) is part of Autism Spectrum Disorders (ASD). Even though it is supported by clinical, neuropsychological and evolutive differences, it is classified in the CIE-10 and DSMIV-TR as a specific disorder within the evolutive generalized disorders. People suffering from AS tend to present behaviour and social problems, as well as cognitive and linguistic abilities above the average range. Is also characterized by qualitative disorders in social interaction and physical clumsiness. Regular physical activity is of crucial importance to be and keep physically fit. Children who present AS must have carefully planned activities, since they feel the need to structure everything they do. All the activities must be planned, as well as their duration and what will come next. **Purpose:** Carry out a systematic review to make an assessment based on the various studies on the effectiveness of physical activity on Asperger Syndrome.

**Methods:** Searches of Cochrane Database, PubMed, PEDro, Google Scholar, Proquest and Scopus from inception to 30 April 2015, supplemented with manual screening. The studies might be written in English or Spanish. Publication type: meta-analysis, randomized controlled trials, controlled clinical trials, and pretest-posttest studies. The study selection was focused on those related to the description of Asperger Syndrome and effectiveness of physical activity on it.

**Results:** With the search terms used, 7,609 papers were found, of which, after reading the title and summary, we selected 18. Finally, after reading full text, 8 studies were included. These studies have been grouped under different criteria: type of study, evaluation, participants, results and conclusions. Three studies demonstrating the effectiveness of physical activity in these disorders. Two evaluators analyzed independently the 8 studios according to the PEDro scale items. The methodological quality was of 5 (7 studies) to 6 (1 study).

**Conclusions:** Children with ASD and AS have less physical activity than children with no disorder. Physical activity has been effective in improving cardio-respiratory aspects, flexibility, endurance, agility and decrease in BMI and antisocial behavior in children and adolescents with ASD and AS. The profile of physical activity in children and adolescents with ASD and AS is inferior to that of children and adolescents with typical motor development.

**Implications:** The effect of physical activity in children with ASD and AS is a field of research which should be studied, since the number of studies is limited and there is little research on that area. It is necessary to carry out studies aimed at children with ASD and AS, to increase their physical activity, taking into consideration physical or cognitive impairment of this population.

**Key words:** Autism spectrum disorders. Asperger's syndrome. Physical activity.

**Funding acknowledgements:** None.

**Ethical considerations:** It is not necessary.

### 112. PHYSIOTHERAPEUTIC INTERVENTION IN A PSYCHIATRIC EMERGENCY WARD - AN INNOVATION STUDY

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**Background:** The typical patient in the Psychiatric emergency ward (M1) has emotional frustrations which can be recognized as: depressive, destructive and suicidal thoughts, anxiety and anger. The

related bodily symptoms can be: pounding heart, pain, restlessness, increased muscle tension, sleeping disorder and disturbed bodily experiences. The innovation project was carried out autumn 2015. One physiotherapist was working 8 hours a week at the Psychiatric emergency ward.

**Purpose:** This project is an innovation project aimed primary: To investigate whether a physiotherapeutic intervention is relevant and meaningful in a Psychiatric emergency ward. To develop multi-disciplinary intervention. To increase a bodily approach to optimize the participant's mental health.

**Methods:** Baseline information about diagnoses, age and gender, were collected. A screening regarding bodily symptoms, physical activity and coping-strategies were carried out. The patients bodily symptoms such as anxiety, pain, restlessness, excessive thoughts were rated before and after the intervention using a Visual analog scale (VAS). The physiotherapeutic intervention has mainly included: centering massage with ballstick to increase sense of bodily-limits, relaxation therapy, supervised physical activity, psycho education in relation to bodily symptoms and developing coping strategies to decrease anxiety among other things. Additionally guidance was given to the other professionals in the ward. The evaluation includes: interviews with the project physiotherapists, a focus group-interview with the interdisciplinary colleagues from the Psychiatric emergency ward and 4-5 qualitative interviews with participating patients.

**Conclusions:** The project will be evaluated in the beginning of 2016. The projects preliminary findings indicates that physiotherapeutic intervention can be meaningful and effect full for patients hospitalized in a Psychiatric emergency ward. Perspective: these preliminary findings may indicate, that physiotherapeutic intervention is relevant as a part of the ordinary treatment, when patients are hospitalized in a Psychiatric emergency ward.

**Key words:** Psychiatric emergency ward. Physiotherapy. Coping strategies. Bodily approach.

**Funding acknowledgements:** Danske Fysioterapeuter.

### 113. LONG-LASTING MUSCULOSKELETAL DISORDERS, HOW ARE WE PREPARED TO DEAL WITH IT? LONG TERM PHYSIOTHERAPY?

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**Background:** Sometimes body wants to tell something else, and we, physiotherapists are not prepared to deal with something we do not know how to manage. A patient who came to treat shoulder disease, was submitted to a same treatment during 7 months (Ultrasound, TENS, cryotherapy). After reevaluation more 40 sessions. She presented muscle weakness, limited range of motion, poor functional activities, chronic pain, stress symptoms and came for evaluation at Psychosomatics Department- Psychiatry Institute- USP, after treatment with orthopedics, phisiatry and neurology views. Only with multidisciplinary and transdisciplinary view the problem was viewed from another angle. She had suffered sexual abuse and do not want to return to her function at work.

**Purpose:** The report wants to help health professionals to see other possibilities evolved in a long term treatment.

**Methods:** The patient was submitted to several evaluations: Psychiatrist, Physiotherapy, Cardiology, Orthopedic, Dentist, Psychology and Neurology. All the evaluations were discussed in weekly meetings. The aim was discover the best treatment for the patient who had been suffering for a long time.

**Results:** The report show that the reason of the shoulder disease was not related only to mechanics changes and a narrow view can extend patient suffering.

**Conclusions:** Previous traumas should always be considered and investigated. Body and mind are in constant interaction.

**Implications:** The benefit for the patient will be greater if we consider the importance of Multidisciplinary and Transdisciplinary view.

**Key words:** Long-lasting musculoskeletal disorders. Transdisciplinary. Multidisciplinary.

**Ethical considerations:** The Ethical Committee approved the study.

#### 114. LEARNING TO OBSERVE MOVEMENT QUALITY IN BODY AWARENESS RATING SCALE (BARS-MQ) - A CROSS SECTIONAL LONGITUDINAL MIXED METHODS STUDY

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**Background:** Observing, describing and assessing movement and function, guiding the patients in core movement elements and aspects, are the primary roles of the physiotherapist within treatment, rehabilitation and preventive health care. The Body Awareness Rating Scale - Movement Quality (BARS-MQ) is an observational assessment tool of movement quality within Basic Body Awareness Therapy, reflecting patients' mental health. The therapist observes the whole moving person focusing on the dynamic interplay between postural balance, free breathing, and mental awareness and how these elements are expressed in quality in everyday movements in lying, sitting, standing relational and walking coordination. It is important for clinical reasoning to learn the skill of observing, describing and assessing the movement quality, being the basis for scoring the BARS-MQ.

**Purpose:** The purpose was to study how a group of students in the international, post-graduate study program in physiotherapy, Basic Body Awareness Methodology (BBAM), observe, describe and assess physical, mental and relational aspects of movement quality through the assessment tool BARS-MQ. It is hypothesized the students improve their ability to observe and assess movement quality over time after a learning process, and scoring more equally after one year of practice, as compared to scoring after initial training.

**Methods:** The design is a cross-sectional, longitudinal mixed methods study. A group of 30, first-year students at BBAM volunteered to participate in the study, observing a video of a client. The same client was observed, described and assessed using BARS-MQ. Quantitative data from the BARS-MQ was used as the outcome measure. In addition, qualitative data of observational field notes of the learning situation supplemented BARS scores.

**Results:** Descriptive statistics of BARS-MQ and qualitative thematic analysis were combined to identify the outcome of the learning process. The result after five days of extensive tuition shows that 88% of the scores were within plus-minus 1 of the mode score. However, variability in scores differed for the twelve test items, ranging between 2.5 (item 1) and 5 (item 10). Longitudinal data will be collected one year later, to explore whether the learning process has had an impact on the variability of scoring.

**Conclusions:** The conclusion of the cross-sectional part of the study show converging results of BARS-MQ scores in BBAM students after five days of tuition of learning to observe, describe and assess movement quality.

**Implications:** Observing movement quality is of particular importance within physiotherapy as an indication of mental health. The form and structure of the learning process in tuition and syllabus may have implications on students' development of observational skills.

**Key words:** Observation. Movement Quality BARS-MQ. Cross-sectional. Longitudinal. Mixed methods study.

**Funding acknowledgements:** This study is unfunded.

**Ethical considerations:** Involved institutions have accepted the study.

#### 115. THE FLEMISH PHYSICAL THERAPY EDUCATION IN MENTAL HEALTH

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In the Flemish part of Belgium the higher education of physical therapy is instructed at three universities: the U Gent, the VU Brussel and the KU Leuven. To graduate in the Physical Therapy and Rehabilitation Science, two consecutive study programs have to be followed. Bachelor programs are the first stage of university education and consist out of 3 years. The master program (Master in Science) is spread over 2 years and prerequisites a broad theoretical knowledge and basic practical skills. All students in physiotherapy follow a 'basic truncus' in their bachelor years and the first master year that consists out of different courses in several domains: human sciences, movement sciences/kinesiology, rehabilitation sciences in the different domains of specialization (musculoskeletal, neurology, cardio-respiratory, internal disorders, geriatrics, pediatrics and mental health) and research methodology. Mental health courses are integrated in both in the bachelor and master program. The masters are in English. Only at the KU Leuven, students can choose to graduate in the 'Rehabilitation sciences and Physiotherapy in mental health care'. Since 1962, this specialization was started and evaluated during the last fifty years. Today, the major aim of this study track, which is mainly given in the second year of the master program, is to train physiotherapists in the expert knowledge, insight, skills and professional attitude needed in rehabilitation sciences and physiotherapy in mental health. The courses consist of psychopathology of children, adults and elderly; psychomotor therapy (the Flemish term for physical therapy in mental health) in children, adolescents, adults and elderly; advanced evaluation and treatment methods; mental health and advanced issues in primary mental health care and an internship. The physiotherapist specialized in mental health is able to apply evidence-based physiotherapy in both global health care and mental health care. He/she is able to develop patient assessment and intervention programs through clinical reasoning and critical scientific reflection. He/she is able to set up and conduct clinical and applied research independently. For more information: see [www.kuleuven.be/ma/MAREHSCPH](http://www.kuleuven.be/ma/MAREHSCPH).

#### 116. WHICH (KEY-)THEMES OF KNOWLEDGE ABOUT PSYCHIATRY AND MENTAL HEALTH HAS TO BE INCLUDED IN PHYSIOTHERAPY EDUCATION?

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The inclusion of mental health and psychiatry courses within the curriculum of physiotherapy education differs from country to country. This is probably due to different reasons. In some countries, physiotherapists has no long tradition with working with peo-

ple with mental illness. In other countries, physiotherapy is not considered as a primary profession in mental health care. On different occasions, the IOPTMH received the question which mental health topics need to be included in the education of physiotherapy. In general, the education is to deliver colleagues who are better engaged in a person-centered physiotherapy care connecting the body and mind. The Executive Committee (EC) of the IOPTMH wants to be more specific. Therefore, the EC organized this survey. The aim is to make a non-limited, detailed inventory of topics related to mental health and psychiatry, which in an ideal situation, could be included in physiotherapy education. This conference is a unique platform to consult colleagues which are all experts in the field of physiotherapy and mental health about the ideal content (theory, strategies, skills,...) of mental health and psychiatry courses in the curriculum of physiotherapy apart from the level of education (undergraduate or post graduate/bachelor or master). To do: please note your proposals on the form that you find in your conference map and put the form in the box at the bottom. Your ideas, as an expert, are very important, please take part of this survey.  
**Funding acknowledgements:** The IOPTMH Executive committee.

### 117. DO YOU SUPPORT THIS DEFINITION OF PHYSIOTHERAPY IN MENTAL HEALTH?

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At a workshop in Bergen (supported by the Bergen University College; 28-29 January 2015), during a network session at the WCPT 2015 Singapore Conference (2 May 2015) and in a meeting in Copenhagen (supported by the Danish Physiotherapy Association (Danske Fysioterapeuter); 7-8 September 2015) the executive committee of the International Organization of Physical Therapy in Mental Health (IOPTMH) draw up a definition of physiotherapy in mental health. The proposed definition is the one which was published in the IOPTMH newsletter (June 2015) with some adaptations. The Executive committee wants to know if this definition is widely supported by the colleagues. To do: please note your remarks on the form in your conference map and put the form in the box at the bottom. "Physiotherapy in mental health is defined as a specialty within physiotherapy. It is implemented in different health and mental health settings, psychiatry and psychosomatic medicine. Physiotherapy in mental health is person-centered and aimed at children, adolescents, adults and elderly with mild, moderate and severe, acute and chronic mental health problems, in primary and community care, inpatients and outpatients. Physiotherapists in mental health provide health promotion, preventive health care, treatment and rehabilitation for individuals and groups. Physiotherapists in mental health create a therapeutic relationship to provide assessment and services specifically related to the complexity of mental health within a supportive environment applying a bio-psycho-social model. The core of physiotherapy in mental health is to optimize well-being and empowering the individual by promoting physical activity, exercise, movement awareness and functional movement bringing together physical and mental aspects. Physiotherapists in mental health play a key part in the integrated multidisciplinary team/interprofessional care. Physiotherapy in mental health is based on the available scientific and best clinical evidence."

### 118. THE IMPACT OF A MINDFULNESS PROGRAMME ON THE STRESS IN COLLEGE STUDENTS

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**Background:** College students face significant academic stressors throughout their training. The inability to successfully cope with the enormous academic stress may lead to a cascade of consequences at both personal and academic levels. Mindfulness meditation programmes have been shown as an effective intervention to reduce stress levels.

**Purpose:** Gather perceptions regarding the impact that the practice of mindfulness has on the stress level experienced by subjects at academic and personal levels.

**Methods:** 30 third-year students of physiotherapy participated in a 12-week mindfulness meditation programme. Measurement Tools: The instrument used for data collection was a survey based on three fields: academic, clinical practice and personal. Design: Qualitative. **Results:** 29 out of the 30 participants perceived a positive impact. None of the participants perceived a negative impact. Issues that arose during the qualitative data research were: a) academic: study related benefits, decrease in the stress responses and changes in stress coping strategies; b) clinical practice: increased patience with patients, increased confidence in the clinical practice, better handling of difficult situations, better relationship with patients, increased focus on the clinical practice; c) personal: increased awareness, increased acceptance, decrease in the stress levels, benefits at an emotional level, cognitive changes and changes in stress coping strategies.

**Conclusions:** The results suggest that mindfulness meditation can be effective in decreasing the level of perceived stress, changing coping strategies when facing difficult situations, decreasing the number of responses to stress and promoting positive cognitive and emotional changes in physiotherapy college students.

**Implications:** Mindfulness not only promotes beneficial effects on subjects during their academic stage but presumably also during their professional development. Therefore, given the fact that there are beneficial effects on the clinical practice, such as increased patience, increased confidence and better handling of difficult situations, patients may also benefit.

**Key words:** Mindfulness. Stress. College students.

**Funding acknowledgements:** I would like to thank the third-year students of Physiotherapy degree of the University of A Coruña for their participation in this study.

**Ethical considerations:** This research was developed in accordance with the ethical and legal principles regarding human research in the field of education. Participation was based on the formal informed consent.

### 119. SOMEBODY®: PROMOTING WELLBEING, HEALTH AWARENESS AND FUNCTIONING OF YOUNG PEOPLE

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**Background:** Among young people exclusion from society, education and social situations is a growing problem due to the increasing problems they have in social functioning and interaction. To address this problem new approaches for enhancing multiprofessional co-operation are needed in the welfare sector.

**Purpose:** The purpose of the SomeBody<sup>®</sup>-project was to develop, pilot and elaborate new working methods for professionals who work with children and young people in various environments, e.g. in school and substitute care. In SomeBody<sup>®</sup>- approach the methods of physiotherapy are combined with the psychosocial counselling and methods that strengthen dialogue between the professionals and the young people they work with.

**Methods:** In the SomeBody<sup>®</sup>- approach, psychomotor exercises are combined with methods of dialogic interaction and psychosocial counselling in promotion of functioning. The approach was first piloted in a mixed student group of physiotherapy and social work students. Based on their feedback the approach was developed further in order to apply for funding to further development of the approach in different environments by educating professionals to use it. The participants for education were chosen from our six partner organizations and they were given a four-day introductory course about SomeBody<sup>®</sup>. The psychomotor exercises were elaborated through functional group actions and discussions in order to enhance feeling of inclusion of the participants. After the introduction course the professionals piloted the method in their own working environments. Experiences of both the professionals and the participants of the pilot groups have been collected through group discussions and questionnaires.

**Results:** The professionals perceived the SomeBody<sup>®</sup>-approach to give them new and useful tools to work with children and young people and to elaborate issues concerning body awareness, self-esteem and self-perception. They explicated that after the SomeBody<sup>®</sup>-course they had learned how the bodily experiences and movements were connected to emotions and interaction as well as to experiences of inclusion and participation.

**Conclusions:** SomeBody<sup>®</sup> was developed to renew professional method giving a possibility to bring forward the individual's relationship with others and to society. These aspects have not been considered adequately in the current practices and research on awareness skills. As a result, the individual approach is extended of functional capacity is placed in a wider social context. Measurement tools to document the change in the children or young behavior, communication and body-awareness need to be elaborated further in the future.

**Implications:** Multiprofessional work is a two-way road: physiotherapists have an essential role in educating other professionals to use simple body awareness exercises. At the same time physiotherapists have to learn from psychosocial counseling and dialogic methods that are in the core of knowledge of other professionals.

**Key words:** Body awareness. Body image. Counselling.

**Funding acknowledgements:** The National Institute for Health and Welfare.

## 120. COMPARISON OF CURRENTLY ACCURATE KNOWLEDGE OF PAIN AMONG HEALTH PROFESSIONALS, STAFF AND PATIENTS AT A MENTAL HEALTH CENTRE IN QATAR

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**Background:** Persistent pain is a common experience reported by patients presenting with problematic substance use and is associated with poorer outcomes following residential treatment. Pharmacological interventions for pain in a population who may already exhibit problematic opiate use presents challenges and requires consideration of alternatives. Current evidence suggests the use of pain education as valuable in reconceptualising pain as an indicator of perceived threat and not as a marker of tissue damage. This facilitates a focus on gradually improving physical performance, which in turn decreases catastrophisation, pain and disability.

Reconceptualization of pain is particularly important where health professionals, non-clinical staff and patients approach is entrenched in robust beliefs and attitudes that reinforce a structural pathology model of pain. This model considers persistent pain to be caused by unresolved tissue damage or a psychologic disorder. Considering the progress that has recently been made in the pain sciences, the prevalence of these beliefs is intriguing.

**Purpose:** This study aims to evaluate the level to which health professionals, non-clinical staff and patients understand currently accurate information about the neurophysiology of pain within a mental health setting.

**Methods:** The revised Neurophysiology of Pain Questionnaire (rNPQ) will be used to evaluate the current level of pain knowledge amongst a mental health/substance misuse patient cohort and staff (clinical and non-clinical). This is a validated qualitative 12 point questionnaire with true/false answers. The rNPQ would be delivered to patients attending naufar entre as inpatient or outpatients over a 1 month period. All clinical and non-clinical staff will also complete the questionnaire. There is no current evidence of the questionnaire being used in Arabic populations or in a substance abuse setting. Outcome measures: Primary: revised Neurophysiology of Pain Questionnaire. Follow up studies will look at rNPQ results following a pain education intervention and the effect on other outcome measures used in mental health and substance abuse.

**Results:** It is hypothesised that clinical staff should have a more accurate pain knowledge than non-clinical staff and patients. It is also hypothesised that there will be a significant difference in rNPQ scores between different health professions.

**Conclusions:** This study provided evidence on the level of currently accurate pain knowledge amongst clinical, nonclinical staff and patients in the treatment of mental health conditions and problematic substance use.

**Implications:** Accurate pain education programs should be included in the management of problematic substance use for all staff and clients.

**Key words:** Education. Neurophysiology. Pain. Treatment. Mental health.

**Funding acknowledgements:** Naufar: addiction, wellness and recovery.

**Ethical considerations:** The Ethical Committee of the naufar Centre, Doha approves the study.

## 121. BACK TO WORK WHEN FACING COMMON MENTAL DISORDERS OR MUSCULOSKELETAL DISORDERS. PHYSIOTHERAPY AS PART OF AN INTERDISCIPLINARY TEAM

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**Background:** Sick leave from work is a challenge for the individual and our society. Registration made by the Norwegian Labor and Welfare Administration (NAV) shows that 58.2% of absence from work is caused by musculoskeletal disorders or poor mental health. As a project, Telemark Hospital established an interdisciplinary occupational rehabilitation outpatient clinic (ARR) in September 2012. Target groups are people with musculoskeletal disorders or poor mental health that are on sick leave or in danger of falling out of work. ARR's interdisciplinary team consists of physician, psychologist, physiotherapist and work counselor from NAV. The patients are being followed up for 3 months. They have three mandatory meetings with the team, two during the first week and one at the end of the period. The team and the patient agree upon an individualized rehabilitation plan. Treatment offered at ARR consists of individual follow up by the psychologist or physician, Basic Body

Awareness Therapy or Psychomotor physiotherapy individually and in groups, Stress mastering course and work counseling. Cooperation with the local community and the employer is also part of the program. In 2014, 130 patients participated in the program.

**Purpose:** To create and evaluate an outpatient rehabilitation clinic program based on cooperation between specialized health workers and work counselors from NAV.

**Methods:** After three years an extensive implementation analysis of the program was performed. In data collection, both qualitative and quantitative methods were used; participating observation, focus group and individual interviews, collecting data from registers and user evaluations. The data analysis was based on Linnan & Stecklers model and suggestions for process measures.

**Results:** The report revealed that more than half the patients increased their labor participation 6 and 12 months after starting the program. Patients and employees experienced the program offered as work directed. The patients experienced to be actively involved in their own rehabilitation process. In the interviews, the interdisciplinary team was described as open, supportive and understanding, taking time to listen and creating a safe frame. The report states that the team offered a professionally strong program based on a bio-psycho-social understanding. From the non-mandatory interventions offered, Basic Body Awareness Therapy and Psychomotor physiotherapy showed to be the most frequently chosen.

**Conclusions:** The results showed promising effects in increasing the patients' labor participation. Physiotherapy was the most frequently used intervention.

**Implications:** The results indicate that this multifactorial program can be effective in work rehabilitation for patients suffering from musculoskeletal disorders or poor mental health, which has implications for further development of the program.

**Key words:** Interdisciplinary team. Musculoskeletal disorders. Mental health. Sick leave. Physical therapy.

**Funding acknowledgements:** FARVE Fund from the Norwegian Labor and Welfare Administration, NAV.

**Ethical considerations:** Ethical considerations are taken according to the Helsinki Declaration.

## 122. EFFECTIVITY OF PHYSIOTHERAPY ON REHABILITATION OF PATIENTS WITH DEPRESSION DISORDER

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**Background:** Depression is a common illness worldwide. The point prevalence of depression in Latvia is within the European average. Certain socio-demographic and health related factors are associated with higher risk of morbidity with depression. Exercise is suitable for most individuals, participation in an exercise program promotes social integration and successful adaptation increases self-esteem.

**Purpose:** To investigate the efficiency of active therapeutic exercises and aerobic exercises on patients with mild to moderate depression episodes.

**Methods:** 20 patients (age group 21-60 years, mean 51 ± 11) were involved in research; all patients were diagnosed with mild or moderate depressive episodes; all patients were examined using: structured interview, posture and gait assessment by Kendall, six-minute walk test, HADS, Romberg's test, coordination evaluation and Body Awareness Questionnaire; all patients received combined rehabilitation such as psychiatry, drugs, psychology, physical therapy (massage, water procedures, electrical procedures) and patients of research group received extra therapy (active therapeutic exercises 5 days a week and subsidized aerobic exercises 3 times a week which were accomplished by Nordic walking).

**Results:** Comparing the 6-minute test results before and after the rehabilitation course it was found that the walked distance of the research group increased by an average of 27 ± 18 meters, while the control group by average of 7 ± 13 meters. Analyzing the correlations of performance indicators between the physical and mental state, it was found that the 6-minutes test distance is credibly ( $p < 0.05$ ) associated with the severity of anxiety (after HADS). The amount of subjective effort during the 6-minutes test (after Borg scale) was an average closely linked to the level of anxiety. The walked distance during the 6 minutes test was credibly ( $p < 0.05$ ) associated with Body Awareness questionnaire results and Romberg's test results. The results of Body Awareness questionnaire showed an average close correlation with anxiety and weaker correlation with the severity of depressive symptoms. Symptoms of depression (according to HADS) were also related to the intensity of pain (by VAS) in movement support apparatus.

**Conclusions:** Patients with mild to moderate depression episode typically have postural disturbances, excessive muscle strain, balance and coordination disturbances and diminished functional ability of the heart and the circulatory system. Body pain syndrome is a frequent complaint of patients with mild to moderate depression episode, which has an effect on patient's physical and emotional condition. Combined rehabilitation with active therapeutic exercises and aerobic exercises can substantially produce better rehabilitation results. Results show that physical and emotional conditions interact, which must be taken into consideration during patient examination and treatment process.

**Key words:** Depression disorder. Aerobic exercises. Nordic walking.

**Ethical considerations:** The Ethical Committee of Riga Stradins University approved the study.

## 123. GESTALT APPROACH TO EDUCATIONAL INTERVENTION IN PATIENTS WITH FIBROMYALGIA

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**Background:** Fibromyalgia is the most common cause of chronic rheumatic pain characterized by generalized muscular pain and associated with other disorders. The worldwide prevalence impacts on the health of the general population is 2-4%. Because pharmacological treatment is not fully effective, the intervention of an interdisciplinary team includes a rheumatologist, physiotherapist and psychotherapist support, among others is required. The psychotherapeutic approach being studied is a cognitive behavioral perspective and posits that emotions and behavior of individuals are influenced by their perceptions of events. While Gestalt proposes a holistic approach, because the latter does not have series of patients. We proposed to work with a group of patients with Fibromyalgia, with Gestalt oriented educational intervention, to assess the impact of the intervention on quality of life.

**Purpose:** To investigate what are the feelings and the therapeutic factors influencing the improvement of symptoms in patients in this group and therefore their life quality.

**Methods:** A qualitative study in which we worked with a group of 8 patients, between 20 and 60 years old, diagnosed with Fibromyalgia who were referred by a rheumatologist. 12 sessions of group work (2 hours per week), with re-educational intervention was conducted using Gestalt approach. The information that was generated in the encounter was recorded (audio), transcribed and subjected to discourse analysis. The interpretive framework used was Gestalt, taking as axes: here and now, self-help, responsibility, realize and therapeutic factors in group therapy proposed by Yalom.

**Results:** Among the emotions and feelings in this group of patients, these were: outrageous psychological abuse experienced by the

doctors and their families, anger, sadness, helplessness, emotional lability, and in some cases a strong need of recognition of the loss of self-recognition. Among the main factors favoring therapeutic improvement there are: universality, interpersonal learning, group cohesion, development of socialization techniques, catharsis, altruism and actualization.

**Conclusions:** We consider important in future research to see what is the role of demand (external or internal) as a trigger factor of symptoms (specially pain) in patients with Fibromyalgia and to make larger series of studies on patients where it's working with the elements identified in the educational process.

**Implications:** Implications for practice/management/education/policies, etc.

**Key words:** Psychotherapy. Gestalt. Fibromyalgia. Educational Intervention.

**Funding acknowledgements:** None.

**Ethical considerations:** The patients signed informed consent.

#### 124. THE ROLE OF THE PHYSIOTHERAPIST IN MENTAL HEALTH IN AN INTERDISCIPLINARY HEALTH TEAM IN THE CARE OF OLDER ADULTS

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**Background:** The complexity of management of geriatric patients in different clinical, functional, psychological and social aspects, requires a range of knowledge, skills and abilities that are usually not available to a single professional. It has been shown that an interdisciplinary approach is essential to ensure maximum autonomy. The health of the elderly is considered a complex phenomenon which must be met in various areas to understand their multidimensionality. Experience has shown the importance of this model for efficient work. Physiotherapists, mainly in northern European mental health institutions, have developed a number of proprietary techniques that improve the prognosis. Though figure is still unknown in many countries.

**Purpose:** To review the literature on what is the role of the physiotherapist in the interdisciplinary mental health team engaged in the care of older adults.

**Methods:** For the location of documents, bibliographic search was performed from September to November 2015 in various documentary sources (Central PubMed, Medline, Cochrane, Pedro), using descriptors: Physiotherapy, Mental Health, Interdisciplinary, Elder. Selected articles were reviewed with emphasis on those that mention the role of the physiotherapist in mental health. The study was descriptive, not experimental.

**Results:** We found that mental health physiotherapy is widely used in older adults and primarily in its mode of pursuit. Also we found a documented as the favorite in hospitalized patients with mental problems. It has proven effective in improving the quality of life, self-esteem, sleep and function; reduction of addictive behaviors, anxiety, depression and pain. We also determined that the specialized professionals in this field are rare to find in many countries around the world and this includes the various techniques developed for this field in northern Europe that could be used to improve the prognosis of this age group.

**Conclusions:** The global population becomes increasingly vulnerable and fragile by the significant increase in advanced age groups. An interdisciplinary approach to a gerontological scenario where Physiotherapy in Mental Health could actively participate in the management and prognosis of psychiatric and physical disorders and the forgotten population affected by the indiscriminate use of drugs. It is important to conduct more research to assess the effect of physiotherapy interventions in mental health with pharmacological and psychotherapeutic treatment.

**Implications:** The specialized mental health therapist can significantly support the interdisciplinary team in treating older adults, so it is important to raise awareness of the role they play and the benefits for patients and health systems in the cost-benefit ratio.

**Key words:** Physical. Mental health. Aging. Interdisciplinary.

**Funding acknowledgements:** None.

**Ethical considerations:** None.

#### 125. FIGHTING WITH STIGMATIZATION. POLISH PERSPECTIVE

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Mental conditions are still neglected, and not treated equally to other medical states. Challenges of psychiatry, even though widely recognized as a medical issues, are usually pushed aside and not widely discussed on global scale. Unpopular among students and young healthcare workers, mental disorders are perceived as difficult due to limited capacity of diagnostic and therapeutic options, as well as restricted availability of reliable scientific data. It's commonly believed that psychiatric patients are violent and unpredictable, even though they are more likely to be a victim of violence themselves. This attitude results in unwillingness to have any relations with mental patients due to fear of them being aggressive. Additionally, mental health services often meet with unfair evaluation and stigmatization, which have little to do with real challenges present in the field. This study, based on latest research regarding health care workers' attitudes toward mental health, available policy reviews, educational programs, and own experiences, focuses on possible solutions to make mental health facilities more attractive to students and early graduates.

#### 126. THE BASIC RADIOLOGIC AND MAGNETIC-RESONANCE-IMAGING FINDINGS IN LUMBAR PAIN

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**Background:** Presentation of technical details on exercises included in "Escuela de columna" (column training) exposed at the "oral presentation" by Dr Claus Knapp-Boetticher and physiotherapist Mrs Esther Eiras. The Poster shows interesting facts that are complemented and procure better view and understanding.

**Purpose:** Show the images, drawings, x-rays and magnetic resonant imaging of some of the most interesting questions. The use and technical details of some important exercises are exposed.

**Methods:** The results of the most diagnostic image-procedures are presented and discussed. (Rx - CT-Scan - RMI)

**Results:** With our new interpretation of radiologic signs a differentiated diagnosis of lesions and different forms of inflammation allows better and localised differential diagnosis.

**Conclusions:** To apply the proposed physiotherapeutic treatment, without surgery, we established some diagnostic signs. The knowledge and use of these signs allows a selection of special techniques and a prognostic of treatment results.

**Implications:** The method cure, but needs precise control and shall be applied always by physiotherapists. It's an excellent method to avoid surgical interventions in most cases of "back pain" (without specification of the nowadays frequently erroneous diagnosis)! The "back-school" indicates that the patient can learn to realize and execute the method by himself.

**Key words:** Back-Pain. Lumbar-Pain. Back-School-Dr Knapp. Escuela de columna Dr. Knapp.

**Funding acknowledgements:** All paid by Dr Knapp during the more than 20 years of investigation.

**Ethical considerations:** Escuela de columna uses only normal exercises, but applied in a specific way. No more approval, than for the normal professional physiotherapeutic care, are necessary.

## 127. NEUROTIC DISORDERS IN INTERNALLY DISPLACED PERSONS IN UKRAINE

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We have a complex psychopathological and clinical research 97 internally displaced people in volunteer center, to study the clinical features of neurotic disorders. The results showed that 75.9% of IDPs observed have violations of adaptation: long-term depressive reaction (F 43.21) and predominant disturbance of other emotions (F 43.23). The clinical picture is dominated by the depression, anxiety, inner tension, inability to relax, asthenic symptoms, various fears and paroxysmal autonomic instability. The results of the diagnostic psychological studies have found that men reactive alarm indicators (average -  $37,7 \pm 3,0$ ), were higher than trait anxiety (average -  $32,6 \pm 2,9$ ). On the contrary, women figures trait anxiety (average -  $38,6 \pm 2,9$ ) were higher than reactive anxiety (average -  $34,7 \pm 3,0$ ). Severity of depressive symptoms also slightly prevailed in women. The mean score on the Hamilton scale for men was  $17,0 \pm 2,3$  points, women -  $18,0 \pm 2,3$  points. Test results on a scale of quality of life showed no significant differences between men and women. The lowest total scale were rated "emotional state", "Interpersonal interactions", "The general perception of the quality of life". We have developed a medical and psychological support system to correct the neurotic disorders in internally displaced persons.

## 128. BREATHING BASED STRESS-REDUCTION (BBSR): A PHYSIOTHERAPEUTIC GROUP-INTERVENTION IN NON-INSTITUTIONAL PSYCHIATRIC CARE. A FEASIBILITY STUDY

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**Background:** Anxiety or stress often has a negative impact on the quality of life. It is common that persons with stress-related illness or anxiety have a disrupted breathing-pattern. Several treatment programs include breathing exercises, but there are no standardized physiotherapeutic interventions for stress and anxiety management based on breathing-practices.

**Purpose:** The aim of this study was to develop a manualized physiotherapeutic group-intervention program, 'breathing based stress-reduction' (BBSR), for patients in non-institutional psychiatric care, considering tolerance-to-treatment and feasibility.

**Methods:** Six patients, with a diagnosis of an anxiety-syndrome according to DSM-IV, were recruited from a non-institutional psychiatric care unit based on interest in participating in the group intervention consisting of eight group-gatherings. A mixed method approach was applied to evaluate change in self-evaluated anxiety-related symptoms and heart rate variability (HRV), before and after the intervention, and to describe the participants' experi-

ence of participation in the intervention programme. Qualitative and quantitative data were collected simultaneously and considered as important in interpreting the data. Measurements used were; Beck Anxiety Inventory (BAI), Perceived stress scale (PSS-14), Insomnia severity index (ISI), WHO-5 and HRV. The development of the BBSR intervention was based on theoretical knowledge of breathing physiology, autonomic and emotional regulation theory, psycho-education and group dynamics. Further, BBSR was inspired by basic body awareness and yoga and was adapted to the MBSR-format (Mindfulness based stress reduction). The quantitative data were analysed on individual basis evaluating change before and after the intervention. The qualitative content analysis addressed the participants' experience of the intervention program, e.g. the tolerance-to-treatment.

**Results:** The results showed that all six participants scored reduced anxiety-symptoms. Four participants also had reduced their use of anxiolytic medication. All participants showed an increase of mean-heart-rate post intervention, which was surprising but can be explained by different aspects, for example the reduced use of anxiolytic medication. Regardless of increased mean-heart-rate two participants showed increased HRV, which could be interpreted as increased self-regulation. Content analyses showed that the participants gained different kinds of knowledge and that they considered the group intervention program as an attractive and useful alternative to pharmacological treatment.

**Conclusions:** The study showed good feasibility and tolerance-to-treatment as well as preliminary positive results regarding anxiety and stress reduction after the intervention. A future randomized controlled study is needed to evaluate the efficacy of BBSR more extensive and comprehensively.

**Implications:** To standardize interventions as well as evaluating autonomic dysfunction could be important steps towards evidence and recognition for physiotherapeutic interventions in mental health.

**Key words:** Anxiety. Breathing exercises. Heart-rate-variability. Autonomic regulation. Stress.

**Funding acknowledgements:** The study was unfunded.

**Ethical considerations:** The intervention was evaluated safe. Informed consent was obtained from participants and the head of the psychiatric care-unit.

## 129. IS PAIN ACCEPTANCE A GOOD INDICATOR FOR DIFFERENTIAL RESPONSE TO ACT AND CBT REHABILITATION PACKAGES?

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**Background:** Behavioral medicine and inter-professional rehabilitation is considered as the state of the art in the area of chronic pain. Rehabilitation programs based on Acceptance and Commitment Therapy (ACT) and Cognitive Behavioral Therapy (CBT) are known to have strong evidence. What is not known is which patient benefits of what kind of rehabilitation program. One way to explore differences in patients' response to rehabilitation is to stratify and group them according to their behaviors in order to identify common rehabilitation needs. How patients relate to, and accept their pain can potentially be a useful and pragmatic indicator, according to prior studies.

**Purpose:** To investigate patients' differential response to ACT respectively CBT-based pain rehabilitation programs and to explore

the usefulness of clustering patients according to their pain acceptance.

**Methods:** This study includes 391 patients who underwent ACT or CBT based rehabilitation at Danderyd's Rehabilitation Clinic in Sweden. Measures of physical, mental and social function were gathered. Patients were grouped into four clusters based on their pain acceptance scores measured through the Chronic Pain Acceptance Questionnaire- 8 items. Baseline differences between ACT and CBT groups were analyzed with independent t-tests and chi-square tests while the differences between the four clusters were explored with a one-way ANOVA. To compare patients' response to rehabilitation t-tests and mixed between-within-subjects ANOVAs were performed.

**Results:** Patients in the ACT group suffered from widespread pain while the patients in the CBT group had local pain (neck- and/or back). Both groups improved during rehabilitation, but only the ACT group improved regarding physical function. When clustering patients according to their pain acceptance, each cluster became homogenous regarding the patients' status and distinct differences were found between clusters. Differential response to treatment could be identified: cluster including patients that had lower functional level and quality of life before rehabilitation, got best results from the ACT program. Overall, the group that underwent CBT decreased their kinesiophobia, but only the group that underwent ACT showed an increase of physical function.

**Conclusions:** This study provides further support for the usefulness of clustering patients according to their pain acceptance. Results from this study suggest that patients with the lowest quality of life, highest pain and lowest function benefit more from rehabilitation with ACT than CBT. Results also suggest that ACT better targets and improves patients' physical function compared to CBT, which in this study only induced cognitive changes regarding patients fear of movement and failed to improve their actual physical function. These preliminary results would need to be replicated with randomized controlled trials in order to be conclusive.

**Key words:** Pain acceptance. Acceptance and Commitment Therapy. Cognitive Behavioral Therapy. Rehabilitation. Chronic pain.

**Funding acknowledgements:** The study was granted ethical clearance by the Regional Ethics Board in Gothenburg (approval number 815-12).

### 130. DEPARTMENT OF JOB & HEALTH, A NEW WAY OF TREATING AND PREVENTING STRESS IN A MUNICIPALITY

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**Background:** Stress has become a huge burden in modern society, both for the person of interest, his relatives and for the workplace. For the men and women who is currently unemployed, dealing with stress requires significant coping strategies and mind-body understanding in order to return successfully to the employment market. Strategies they often lack. In Denmark it is the municipality in which the citizen inhabits that is obliged to offer programmes that support citizens in returning to the employment market. Most municipalities in Denmark do not address stress management but in Høje-Taastrup municipality, there has been established a local department called Job & Health. The department has specialized in preventing and treating work-related stress and so-called life stress.

**Purpose:** This poster presents the Job and Health department and suggests an example on how to establish a stress management and prevention team as structured and operating in the Danish municipality of Høje-Taastrup.

**Methods:** The Job & Health department comprises of one psychologist and two physical therapists. They are organized under the pub-

lic health care centre of Høje-Taastrup municipality. When a citizen becomes sick with stress for a longer period of time or a citizen is unemployed, they are obligated to participate in an interview with a social case worker of the municipalities employment centre. If the social worker determines the citizen would benefit from a stress management program and the citizen is motivated they refer to the department of Job & Health. The citizen is then enlisted to one or more of the current treatment programs that exists. The stress management treatment is either performed by a skilled psychologist or physical therapist. The programmes differ slightly according to the persons involved and the severity of their stress problems. The programmes consists of both theory and practise, and are based on the most resent knowledge regarding stress management, empowerment, self-efficacy, cognitive based mindfulness therapy, coping strategies and relational therapy. The programmes lasts 6-8 weeks.

**Results:** The department of Job & Health has significant results with the citizens enrolled in our stress management programs. The citizen is measured before and after the programme with a self report questionnaire, WHO-5 and one month follow up interviews. Most of the employed citizens return to their job from their sick leave with success and many of the unemployed citizens reports of less life-stress, greater self-efficacy and belief in the future.

**Conclusions:** It is possible to establish a stress management team in a municipality setting and treat stress among the citizens so they can achieve the necessary tools to return to the labor market with success.

**Implications:** Establishing a public health care stress management department in a municipality should be common practise.

**Key words:** Stress. Stress management. Municipality.

### 131. PROMOTING EGO-STRENGTH: A REPORT ON SCHARFETTER'S BODY-ORIENTED THERAPY

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**Background:** Scharfetter's body-oriented therapy (Leibnahe Therapie, Leiborientierte Therapie) is a key concept taught in Austrian Bachelor programmes. On the basis of his clinical experience as a psychiatrist Scharfetter has built up a construct of ego-strength explained in five dimensions (vitality, activity, consistence/coherence, demarcation, identity; cf. also Jaspers 1973). He has found those aspects more or less disturbed within a certain hierarchy in psychotic patients. Later this had been investigated with the Ego Pathology Inventory (Scharfetter 2002). The body-oriented approach is based on the construct of those five dimensions (Scharfetter & Benedetti 1978) and has been developed together with physiotherapists. As it reflects on disturbances on a continuum from healthy to severely ill persons, it has been also applied to treating other psychiatric and psychosomatic conditions. The overall therapy goal is to promote ego-strength initiated by a bodily process, by stimulating the basic dimensions of ego-consciousness.

**Purpose:** In current studies Scharfetter's findings are not discussed. Reasons might be that the concept itself wasn't framed and that there were no systematic investigations. According to that the main purpose is in a first step to share this widely unknown tradition to a broader colleague community. It may be of special interest for colleagues working with other concepts and may open a fruitful discussion.

**Methods:** Content analysis of published articles and unpublished workshop manuscripts; interview with an expert in the field of psychiatric and psychosomatic physiotherapy with experience in the Scharfetter concept since the late 1970s.

**Results:** It has been shown that the Scharfetter concept may be a helpful tool in treating psychiatric and psychosomatic patients of

various conditions, in particular treating patients with structural deficits. It may give a good and practicable framework in planning and implementing group and individual physiotherapy and gives plenty of aspects for designing specific exercises. The approach fits for both resource and symptom oriented therapy, since the dimensions refer to healthy and pathological ego-states.

**Conclusions and implications:** In future research is needed at all to show clinical experience and effectiveness. This might open the concept to a broader field of discussion.

**Key words:** Body-oriented therapy. Ego-strength. Ego-consciousness.

**Funding acknowledgements:** Unfunded work.

**Ethical considerations:** Not required.

### 132. PREREQUISITES FOR TEACHING MINDFULNESS AND MEDITATION. EXPERIENCED TEACHERS FROM DIFFERENT TRADITIONS SHARE THEIR INSIGHTS

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This study utilizes the method of Thematic Analysis, TA, to research the question: How do mindfulness and meditation teachers' describe the prerequisites for effective mindfulness and meditation teaching? It aims at providing deeper insight of the importance of the teachers in this field. In the scientific literature there is a lack of evaluation of mindfulness teachers (Grossman et al 2014) and how to teach mindfulness meditation effectively (Shapiro 2009). The interpretations of what twelve experienced teachers, from different traditions, say in the in-depth interviews of this study results in three main themes and nine subthemes: main theme; Teacher qualification with subthemes; Becoming teacher, Being teacher, Pedagogic skills and Social skills, and main theme; Student qualities with subthemes; Positive for learning and Negative aspects to deal with, and main theme; Context with subthemes; Fields of application, Levels and Supporting factors. The results lead to the argument that anyone can assume the role of mindfulness and meditation teacher, depending on the students and the context. The study shows the interdependence between the teacher, student and other contextual circumstances and gives clear indications in which direction one should go.

**Key words:** Mindfulness. Meditation. Qualitative. In-depth interviews. Teaching. Thematic analysis

### 133. SEX-DIFFERENCES AMONG PATIENTS ENTERING INTER-PROFESSIONAL AND BEHAVIORAL BASED REHABILITATION: PAIN ACCEPTANCE LEVELS AND FUNCTIONAL MEASURES

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We know that interprofessional pain rehabilitation "works", what we do not know is for whom. Patients with chronic musculoskeletal pain have different rehabilitation needs and thus some respond to these packages, some fail to respond. Clustering patients

according to their pain acceptance levels allowed the identification of four distinct groups (clusters). These four 'pain-acceptance' clusters showed clear difference in their function (physical, mental and social) revealing different rehabilitation needs, a knowledge that can contribute in the development of rehabilitation programs that can target each clusters' needs. However, we also know that men and women react differently to pain and therefore will be of value to further explore if that is the case even in within the same 'pain-acceptance' cluster. Included in this study were 1775 patients (women 78.5%) entering one a specialty rehabilitation clinic in Stockholm. They completed the SF-36 and EQ-5D; the Hospital Anxiety and Depression Scale (HAD); the Multidimensional Pain Inventory (MPI); Tampa Scale for Kinesiophobia (TSK). The clusters were performed using the scores from the Chronic Pain Acceptance Questionnaire (CPAQ) 8 items. The differences between women and men in each cluster was analyzed with chi-square tests and with a one-way ANOVA. Women scored a higher level of acceptance. However, they experienced higher pain intensity and pain in several body locations (widespread) but were less afraid to move. They also scored experiencing a higher affective distress than men. Men, in turn reported having localized pain, higher vitality and physical functioning than women in the same pain acceptance cluster. The distribution between men and women in the four cluster was uneven, there were more men proportionally in the cluster with low pain acceptance and more women in the high-acceptance cluster. Men and women, even if they express the same level of pain acceptance, they still differ in levels of physical, mental and social functioning. Despite men having higher fear of movement, they had a higher level of physical activity, which may be also due that they had more localized pain conditions. While women demonstrated having higher pain level, and generalized pain, but they had higher pain acceptance and lower fear of movement. These results indicate how important is to understand the patient different functional levels and thus the importance of create different group based-rehabilitation packages to better target each group's needs. This in turn may allow to 'individualize' rehabilitation even when working in groups, wish is highly recommended. Clustering patients according to their acceptance is a sensitive way to identify their functional level, however more is needed, since these sex differences may point to differential rehabilitation needs with in turn may also show differential response to rehabilitation packages.

**Key words:** ACT. Pain rehabilitation. Chronic pain. Sex differences. Behavioral medicine.

### 134. POSTURAL DISORDERS IN PATIENTS IN THE AREA OF MENTAL HEALTH

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**Background:** In patients with mental chronic pathology there exists postural serious disorders, related directly to the psychological and/ or secondary conditions to the administration of psychoactive drugs. Based on this, a protocol of physical therapy is needed, it should be personalized and adapted to each mental illness, together with programs of cognitive stimulation, being the best strategy to prevent the postural alterations which will improve quality of life.

**Purpose:** To analyze the influence of secondary vertebral deviations in chronic mental illness. To validate the effect of the application and custom protocols and prolonged physiotherapy with multidisciplinary intervention as the best option to prevent postural disorders and improve the quality of life of psychiatric patients.

**Methods:** Among them we must distinguish two groups: 1) Front deviations: inclination of 40-50 degrees of anterior trunk, in-

creased deviation based on their psychiatric state, anxiety or depending on the speed they move. They are able to rectify stance despite being sustained, which does not increase the risk of falls, provided that this preserved cognitive status and development of the basic activities of daily life. As a common feature, all cases studied were in treatment with benzodiazepines. 2) Lateral deviations: the side deviations keep an inclination of 15-20 degrees, either left or right. The deviation is maintained in walking or sitting, unable to rectify by muscular atrophy. All the cases studied were in treatment with neuroleptics, benzodiazepines and antipsychotics.

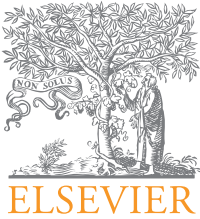
**Results:** Spinal deviations are a problem of low incidence in the group of patients with psychiatric disorders. Case studies applying

the protocol found: decrease the number of falls; stabilization of the spinal deviation without progress; decrease the pain of the spine; maintenance of movement quality; establishment of an awareness of self-care by the patient.

**Conclusions:** The physiotherapeutic programs towards the spine postural deviation do not affect the basic mobility of the individual and avoid complications. Psychiatric characteristics of each patient determine the will to rectify its position and involvement in the recovery process and emphasize the postural deviation.

**Key words:** Disorders. Psychotropic drugs. Protocol.

**Ethical considerations:** In this study, it was warranted confidentiality and privacy of patients, and it has been respected ethical standards set.



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