

## POS268

### The effect of clinical pilates exercises on the cognitive parameters of schizophrenia patients



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**Relevance:** Schizophrenia is one of the most disabling diseases around the world. Patients often do not adapt pharmacological and psychological treatments and even conventional treatments currently have limited effect. There are certain cognitive benefits of physical exercise in healthy and various mentally ill population. Regular physical exercises stimulate neurological, functional and physiological brain changes associated with mental and psychiatric symptoms. Nevertheless, little information is available concerning how different physical performance factors can impact cognitive and emotional health in schizophrenia patients.

**Purpose:** Aim of this study was to investigate the effectiveness of clinical Pilates exercises on cognitive symptoms of schizophrenia patients.

**Methods/analysis:** Twenty eligible schizophrenia patients with a mean age of  $39.80 \pm 7.235$  were included in this randomized controlled trial. They were divided into The Clinical Pilates Group ( $n = 10$ ) and The Control ( $n = 10$ ) group and, both conditions are in addition to treatment as usual. There were two data collection points; before treatment and after 6 week treatment period. Outcome measures were Brief Psychiatric Rating Scale (BPRS), Calgary Depression Scale, Scale for the Assessment of Positive Symptoms (SAPS) and Scale for the Assessment of Negative Symptoms (SANS). After the baseline assessments, patients were randomly allocated to the intervention or the control groups. Patients in the Pilates group were trained 12 sessions, two times per week for 6 weeks. Clinical pilates exercises consisted of full body gross muscles activity which focusing on core stabilization included breath control. Six-week's clinical exercise program was conducted by an experienced physiotherapist and each session lasted up to 50 minutes. These exercises were progressed from simple to complicated exercises with longer sessions and modified according to the participant's physical capability. The study had been approved by Bülent Ecevit University Clinical Research Ethical Committee (registration id: 33479383/37).

**Results:** Before intervention, both groups had similar characteristics in terms of age (The Pilates group:  $40.40 \pm 8.396$  years, The Control group:  $39.12 \pm 6.686$  years), gender (6 male in control, 6 male in study group) and cognitive symptoms (BPRS, Calgary, SAPS, SANS) ( $P > 0.05$ ). After intervention, significant improvements were observed in BPRS ( $P = 0.019$ ) and SAPS ( $P = 0.043$ ) in favor of The Pilates Group whereas there were no significant differences in Calgary and SANS ( $P > 0.05$ ). However, there were no changes ( $P > 0.05$ ) in the Control group after 6 weeks.

**Discussion and conclusions:** Despite 50 years of pharmacological and psychosocial interventions, schizophrenia remains a major cause of disability in fact. Though exercise is known to be of mental benefit, there is limited evidence to suggest that physical activity/exercise can reduce cognitive symptoms in schizophrenia patients. Our results demonstrate that, clinical pilates exercise could improve psychiatric state and reduce positive symptoms of schizophrenia patients. Moreover, according to these outcomes, we could infer that clinical pilates exercises may induce less medical management, which provides fewer side-effects, by the way of improving cognitive parameters and skills. Advanced researches about schizophrenia, interested in efficacy of exercise should be designed for more exact commentary.

**Impact and implications:** Clinical pilates exercises could be utilized in the management of schizophrenia-spectrum disorders as additional to conventional therapies.

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## POS269

### Trends in physiotherapy education – retrospective analysis of ECPE congress abstracts



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**Relevance:** The last decade both physiotherapy and education faced many demands. Educators are challenged to show evidence and report their best practices. An overview of what has been the focus in the European Congress of Physiotherapy Education (ECPE) and the main areas of interest and developments in the European Higher Education area could provide the opportunity to benchmark towards the policy statement of education of the World Confederation of Physical Therapy (WCPT), facilitating consistency and perhaps assisting in formulating a relevant research agenda for the future.

**Purpose:** The purpose of this study is to give an overview of the trends in physiotherapy education of the last decennium

as it is presented at the conferences of the European Region of the World Confederation of Physical Therapy (ER-WCPT).

**Methods/analysis:** A descriptive and retrospective study was carried out and qualitative and quantitative analysis was made on the basis of content and study design/methodology, by three independent reviewers of all abstracts presented at each of the three previous ECPE conferences of 2004 (Estoril – Portugal), 2008 (Stockholm – Sweden), 2012 (Vienna – Austria). Categories for content analyses were developed based on the distribution and main themes used in the conference.

**Results:** A total of  $n=350$  abstracts were classified. The main topics were divided between ICT – Information Communication Technology, Education and Employment, Continuous Professional Development, Teaching and Learning, Clinical Education, Evidence Based Practice: Teaching and Learning, Clinical Reasoning, Innovation and Curriculum Development, Teaching in Specific Areas, Interdisciplinary. And considering different methodological approaches: Descriptive Studies; Analytical Observational and Experimental Studies; Reviews and Mixed Methods.

**Discussion and conclusions:** This analysis was constrained by lack of transparency on the description of methodologies in the abstracts and also by the different organization of the abstract books. We needed to create a category “Information available doesn’t allow a classification” and make our decisions based on the rather classic distinction of qualitative and quantitative study types and methodology. From the results we can find an increase of total presentations from the first to the last conference. In all conference there is a clear preference for poster presentations and the qualitative studies are more favored. There is an overall increase in research and implementation research from the first conference to the last.

**Impact and implications:** The next step could be a comparison with WCPT congress education related abstracts and the proceedings of educational networks like COHEHRE and ENPHE. This kind of reflection could help researchers and educators create a research agenda and build upon earlier work. It gives an incentive to the development of high quality methodologies. An overview of reports gives the opportunity to compare with published results and could challenge publishing criteria.

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## POS270

### A comparison of physical activity levels in commonly encountered paediatric disability populations



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**Relevance:** Physiotherapy has a role in promoting physical activity in commonly encountered paediatric populations.

**Purpose:** Physical activity (PA) is a major health issue. Childhood should be marked by high levels of PA. Developmental disabilities affect approximately 17% of children and include conditions such as autism spectrum disorders (ASD), developmental coordination disorder (DCD) and cerebral palsy (CP). PA levels in typically developing (TD) children have been studied extensively, however research is only emerging on PA levels of children with disabilities. No research has yet compared PA levels across disability populations. It is important to identify if there are differences in PA levels across these populations to ensure PA intervention strategies are developed and are population specific. This study aimed to compare PA levels of children with CP, ASD and DCD to TD children.

**Methods/analysis:** A convenience sample of children aged 8 to 14 years was recruited from children attending Mid-West Children’s Services, Limerick, Ireland. This included children with a diagnosis of CP (GMFCS level I-III), ASD, and DCD. TD children were recruited from siblings of those already enrolled in the study.

PA was measured for 7 days using an activPAL™ accelerometer quantifying time spent sitting/lying, standing, walking and step count. Participants completed a Previous Day Physical Activity Recall (PDPAR) Questionnaire each day and a Physical Activity Questionnaire for Children (PAQC) at the end of the 7 days.

Statistical analysis was performed using SPSS, between group differences were assessed using a Kruskal–Wallis test and Mann–Whitney  $U$  tests. Statistical significance was accepted at  $P \leq 0.05$ .

**Results:** A total of 28 children participated (TD  $n=8$ , CP  $n=8$ , ASD  $n=7$ , DCD  $n=5$ ). A Kruskal–Wallis test revealed a significant difference in standing time and step count across all 4 groups; Standing time TD  $n=8$ , CP  $n=7$ , ASD  $n=6$ , DCD  $n=4$ ;  $\chi^2(3, n=25)=9.83$ ;  $P=0.020$ ; Step count TD  $n=8$ , CP  $n=7$ , ASD  $n=6$ , DCD  $n=4$ ;  $\chi^2(3, n=25)=11.63$ ;  $P=0.009$ . Mann–Whitney  $U$  tests revealed children with ASD spent significantly more time standing than TD children (TD Median 2.7 hours,  $n=8$ ; ASD Median 4.3 hours,  $n=6$ ;  $U=4.000$ ,  $z=-2.59$ ,  $P=0.010$ ). Similarly children with DCD spent more time standing than TD children (TD Median 2.7 hours,  $n=8$ ; DCD Median 5.2 hours,  $n=4$ ;  $U=3.000$ ,  $z=-2.21$ ,  $P=0.027$ ); and children with ASD spent more