Results: In depth research will investigate the transition readiness for young people with cerebral palsy associated with independent functioning in daily living and in healthcare systems.

Conclusion: Investigation of the transition process has a crucial importance for Latvian young people with cerebral palsy and their future independence, integration, and well-being.

Poster presentation 70

Personal factors in international classification of functioning may be coded

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Introduction: The Biopsychosocial Model of International Classification of Functioning (ICF) of the World Health Organisation (WHO), codes for body structure, body function, activity and participation, and environmental factor, but not yet for personal factor. This leaves an important factor and its consequences unstandardised.

Patients and method: This was a pilot study to postulate suitability of coding of personal factors in three children with cerebral palsy (CP) using the ICF. We analysed the personal factors collected in three children with CP to see if there could be a pattern enabling coding of personal factor in a standardised way as is used in the ICF. First, we collated and then stratified personal factors met during ICF Core Set coding for clinical usage. Subsequently, we analysed the stratification to see if acceptable ICF coding patterns emerged or not.

Results: Seven personal factors were clearly code-worthy using the standard ICF coding pattern with qualifiers. These were (1) personality (introvert/extrovert), (2) achievement orientation, (3). physical state, (4) adaptability, (5) resilience, (6) sensation thinking style, and (7) self-image. Three more personal factors showed partial code-worthiness, namely, (8) demeanour, (9) intuition feeling style, and (10) intuition thinking style.

Conclusion: This pilot study opens up the possibility of full-length research into ICF coding of personal factor, either age-group, and condition specific or as a whole as a fundamental research area into human health and disability.

Poster presentation 71

Development of a new classification system for childhood cerebral visual disorders

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Introduction: Cerebral visual impairment (CVI) is the most common cause of childhood visual impairment in the UK. However, this is an umbrella term for all visual difficulties with brain origin and clarification of its core features required to advance research and clinical practice. This study aimed to develop a classification system for childhood CVI to increase our understanding of the condition.

Patients and method: Sixty-nine children with suspected/diagnosed congenital CVI covering all levels of vision, cognition, and comorbidities participated (n=31 males, median age=8.53y, range=5.06–16.46y). Basic vision (Sonksen LogMAR; Frisby Stereotest; LEA contrast sensitivity optotypes; form/motion coherence thresholds) and higher vision assessments (LEA rectangles; LEA postbox; Beery Test of Visuomotor Integration; Test of Visual Perceptual Skills) were conducted for classification. Additional cognitive, paediatric, and ophthalmological data were collected. Hierarchical agglomerative cluster analysis using Ward's linkage and squared Euclidean distance was conducted. Internal validation examined cluster stability and external validation examined characteristics differentiating clusters.

Results: Forty-one participants completed full assessment and were included in statistical analysis (n=28 low-functioning). Cluster analysis revealed two groups with distinct profiles according to overall severity of visual difficulties, showing stability in internal validation.

Conclusion: This sample had heterogeneous visual symptoms and comorbidities, making standard assessment challenging. A low-functioning subgroup could not be included in statistical analysis due to incomplete data sets. Cluster analysis revealed two groups on the participants were able to complete assessment, with distinct profiles according to visual symptom severity. Further research is required to investigate the reliability and clinical utility of this proposed classification.

Poster presentation 72

Read and write with all your senses: a multi-sensorial method

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Introduction: Learning difficulties to read and write are commonplace in today's education institutions. It is thus of utter importance to develop research in teaching methodologies, to enable children to achieve academic success. This project's goal is to document and understand changes in the reading and writing learning processes, through the development and implementation of a multi-sensorial methodology based teaching program.

Patients and method: Using a qualitative multiple case study methodology, five participants were selected with the following three criteria: presence of intellectual and developmental disabilities, phonological disorders and severe learning difficulties. We evaluated participants with Infant/Toddler Sensory Profile and Language Competencies Evaluation for Reading and Writing (a Portuguese language test). The aim was to map the sensory profile of each participant and to verify his/her learning evolution during the program, in the areas of phonological awareness, reading, and writing. The multi-sensorial program was applied with weekly interventions during a four-month period.

Results: Results showed improvement in participants' reading and writing abilities. It is also worth mentioning that, despite not being a goal of this research, there was also an increase of the phonological awareness of all participants.

Conclusion: The multi-sensorial methodology integrates strategies with a great number of sensory aids: visual and audition, as well as kinesthetic and tactile. This seemed to work as a compensation technique, which increased the probabilities of success in the children's reading and writing learning process.

Poster presentation 73

High intensity circuit training and progressive resistance training improve intervention-specific functional performance in children with cerebral palsy

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Introduction: Progressive resistance training (PRT) is an established and effective intervention to improve muscle strength in children with cerebral palsy (CP). However, the impact of PRT on functional ability is limited. This study investigated if high intensity circuit training (HICT) might be a more suitable intervention for children with CP.

Patients and method: Twenty-two children (14 diplegic and 8 hemiplegic, mean age 12y 10mo, 19 in Gross Motor Function Classification System [GMFCS] level I and 3 in GMFCS level II) were randomly assigned either to a home-based eight week PRT or HICT. Each exercise program was performed three times a week, consisting of five identical functional exercises. The PRT group trained with a progressive overload while the HICT group performed as many repetitions as possible within 30 second intervals. Outcome measures included total isometric strength, Muscle Power Sprint Test (MPST), Timed-Stairs-Test, 6-minute walking test, Gait Profile Score, Timed Up and Go Test, and participation questionnaires (ASKp and PODCI).

Results: Both groups enhanced the total isometric muscle strength with only the improvement of the HICT-group reaching significance (17.8%). While the HICT group improved the Muscle Power Sprint (18.7%), the PRT group accomplished better Timed Stairs Test (14.7%) and Timed up and Go Test results (9.7%). Only the PRT group showed improvement for both participation measurements. There were no significant changes in any other outcome measures.

Conclusion: Both training programs improved functional outcomes specific to the exercise program. Nevertheless, the HICT program was more effective in improving total strength and might therefore be a preferable muscle strengthening intervention in children with CP.

Poster presentation 74

A comparison of quality of life of ambulatory and nonambulatory children with myelomeningocele

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Introduction: Walking abilities are affected by levels of lesion in children with myelomeningocele and their mobility is decreased over the years due to physical limitations. Moreover, emotional problems and social isolation affect their quality of life negatively. In our study, we aimed to compare the quality of life (QoL) of ambulatory and nonambulatory children with myelomeningocele with healthy children by evaluating them with general QoL scales.

Patients and method: Fifty children with myelomeningocele between 5 and 15 years of age from the Istanbul Medical Faculty, Department of Pediatric Neurology and fifty healthy children of the same age range were included in the study. The levels of lesion and walking status of children with myelomeningocele were evaluated. The myelomeningocele and healthy child evaluation form, the KINDL 4–7 year and 8–16-year-old family form, and the CHQ-PF–50 (Child Health Questionnaire Parent form 50) form were filled out for participants.

Results: The mean age was 8.96 years for myelomeningocele and 9.50 years for the healthy group ($p>0.05$). KINDL and CHQ-PF–50 scores of children with myelomeningocele were compared, the QoL scores of nonambulatory children were found to be significantly lower than the ambulatory group. QoL scores of children with myelomeningocele were significantly lower than the healthy group. KINDL and CHQ-PF–50 scores for ambulatory group with myelomeningocele were lower than healthy children.

Conclusion: Our results showed that the children with myelomeningocele have decreased QoL and nonambulatory children's QoL was the worst among them. We strongly believe that the physiotherapy programs should focus on ambulation with myelomeningocele.

Poster presentation 75

Research on the effect of dual-task balance exercises on balance and learning in children with dyslexia

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Introduction: The aim of this study was to research the effect of dual-task balance exercises on balance and learning in children with special learning disabilities (SLD).

Patients and method: A total of 27 children diagnosed with SLD with their age ranging between 8 and 16 years were included in the study. Thirteen participants were identified as the study group, and 14 participants as the control group. While the control group attended the SLD Support Training