Conclusions/Significance: Self-rated spasm scores on the PSFS demonstrated better correlation with pain levels and interference than physician ratings on the MAS. Pain also increased with age but not with increasing GMFCS level. The PSFS is self-reported and refers to spams throughout the day rather than a static measure, and thus may better assess spasticity-related pain in this population. Also, the MAS represents both tissue stiffness, contracture and spasticity whereas the PSFS may better represent hyperactive muscle activity. This may be a preferable assessment of the degree of spasticity in adults with CP. Further investigations discriminating hypertonia from fixed contracture are still needed in this population.

SP 38
Participation and goal-oriented metacognitive intervention and self-efficacy in children and youth with dystonia and other hyperkinetic movement disorders

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Background and Objective(s): Children with childhood-onset dystonia and other hyperkinetic movement disorders (HMD) often experience day-to-day difficulties and as a result low self-efficacy. Self-efficacy is the best predictor of future performances; thus, improved self-efficacy can lead to enhanced performance. New evidence suggests that Cognitive Orientation to daily Occupational Performance (CO-OP) improves occupational performance in children with HMD. Objective: To determine if CO-OP leads to changes in self-efficacy in children with HMD.

Study Design: A single case experimental design (SCED) was used to examine changes in self-efficacy, allowing us to compare the outcome of interest (e.g., participants’ target behaviours) before they receive an intervention to that during and after the intervention. Two approaches were used: (1) observational measure of self-efficacy using SCED; (2) self-report measure of self-efficacy using a quasi-experimental pre-test post t-test research design. This study was a part of the larger scale study exploring the effect of CO-OP in HMD.

Study Participants & Setting: There were six participants, aged 9–19, with childhood-onset dystonia and other HMD, manual ability classification system (MACS) levels I–IV and with Deep Brain Stimulation in situ. These participants were recruited for the purpose of a larger scale study carried out by the Complex Motor Disorders Service in the Evelina London Children’s Hospital (London, UK).

Materials/Methods: (1) A behavioural coding sheet was developed and frequency of verbal and non-verbal expressions of self-efficacy recorded. Inter-rater reliability was established as 89% agreement between the two raters. Video-recordings of participants were analysed for occurrences of verbal and non-verbal expressions of self-efficacy and analysed using paired t-test. Videos of performance at baseline, during intervention and post-intervention were randomly chosen (blinded to the rater) and with meta-data removed. (2) Participants self-rated scores of self-efficacy were measured using the Self-Efficacy Gauge-Pediatrics (SEG-P) at pre-, post- and follow-up.

Results: A gradual decrease in negative signs over the course of CO-OP with a significant reduction in the frequency of negative signs of self-efficacy at post-test compared to pre-test measurements (p=0.001). Frequency of positive signs of self-efficacy at post-test was statistically significant compared to pre-test (p=0.05). At pre-test, percentage of negative signs of self-efficacy (~84%) was much higher than the percentage of positive signs (~16%). Throughout the intervention, there was a gradual increase overtime in the ratio of positive to negative signs of self-efficacy. At post-test, percentage of positive signs was 96%, compared to 4% negative signs (see figure 1). The SEG-P mean scores pre-test, post-test and 3 month follow up were 3.30, 7.39 and 7.60 showing an improvement in subjective self-efficacy rating.

Conclusions/Significance: There is a lack of evidence about rehabilitation interventions in children and young people with HMD. Further, there are limited studies that have explored changes that therapeutic interventions may have on self-efficacy. In this study, significant shifts in self-efficacy were found with decreased signs of negative self-efficacy and increased signs of positive self-efficacy following CO-OP intervention with HMD. Results from our study indicate that continued investigation of CO-OP as a means of improving self-efficacy in children and youth with motor impairments is warranted.

SP 40
Eat, sleep, play, connect – participation outcome measures for infants birth to two years: a systematic review

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Background and Objective(s): Participation is considered the ultimate health outcome and therefore interventions should aim to impact a child’s participation outcomes if they are to make a meaningful difference in children’s lives. However, little is known about outcome measures evaluating infant participation. This study aimed to identify and examine the psychometric properties of participation outcome measures for infants aged birth to 2 years 11 months.

Study Design: Systematic Review according to PRISMA guidelines.

Study Participants & Setting: Systematic review.

Materials/Methods: Four electronic databases (PubMed, CINAHL, Embase and Cochrane) were searched from 2001 (coinciding with the International Classification of Functioning Disability and Health) to August 2016 to identify assessments that (1) measured at least one participation concept of ‘attendance’ and/or ‘involvement’ according to the Imms et al. ‘Family of Participation Related Constructs’, (2) in infants or children aged birth to two years eleven months, (3) had
psychometric data available for this age group and (4) were published in English in full text in a peer reviewed journal. Studies with infants at risk or diagnosed with cerebral palsy were included. Secondary searches included reference list checking, searches for test titles and authors, and citation tracking of included articles. Psychometric data and clinical utility information was extracted for each measure by two independent raters. The CONsensus-based Standards for the selection of health Measurement INstruments (COSMIN) Checklist was used to evaluate each measure according to the quality of evidence for reliability, validity and responsiveness. Clinical utility was evaluated using the CanChild Outcome Measures Rating Form.

Results: Searches identified 1249 articles, of which 6 outcome measures (12 studies) met the inclusion criteria, including: the Assessment of Preschool Children’s Participation, Canadian Occupational Performance Measure (COPE), Child Engagement in Daily Life Measure (CEDL), Children's Assessment of Participation with Hands (CAP-Hands), Daily Activities of Infants Scale (DAIS), and Young Children's Participation and Environment Measure (YC-PEM). All six measures measured ‘attendance’ through diversity and/or frequency. Three also measured involvement: the COPM, CEDL and YC-PEM. There was a paucity of psychometric data for all tests in the target age range. COSMIN ratings were poor for all measures for reliability, validity and responsiveness. In terms of clinical utility, four measures were available for children aged >18 months, therefore most were unable to measure participation of younger infants.


SP 41
Enabling physical activity participation for children and youth with disabilities: a knowledge-to-action approach
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Background and Objective(s): There is a paucity of literature describing interventions primarily targeted at enhancing participation in physical activity for children and youth with disabilities. This research aimed to evaluate how an intervention enables children and youth with disabilities to participate in physical activity, to provide evidence of operative strategies that may enhance the design and effectiveness of future participation interventions.

Study Design: Qualitative.

Study Participants & Setting: Participant recruitment occurred through purposive and theoretical sampling of children with physical and intellectual disabilities (n=31, mean age 12y 6mo (SD 2y 2mo); 18 males), parents (n=44, 26 mothers 18 fathers), staff (n=13, allied health, research, administration), and paediatric service providers (n=7, allied health, education) involved in the Local Environment Model intervention at Beitostolen Healthsports Centre in Norway.

Materials/Methods: Recommendations of the Medical Research Council’s Complex Intervention Framework and the Canadian Institute of Health Research Knowledge-To-Action Cycle were applied to identify how and why the intervention works, and to adapt and tailor identified knowledge. Semi-structured interviews with participants explored the active ingredients and outcomes of the intervention, and overt observational methods determined relationships between viewpoints and participant behaviours. Data analysis were an iterative approach of constant comparison, where data collection, coding and analysis were undertaken simultaneously. Methods to ensure trustworthiness were employed.

Results: The inter-related findings between participant groups described components of an intervention that enabled physical activity participation, promotion, and sustainability of practices for children and youth with disabilities. Thematic analysis revealed three overarching themes detailing how the intervention elicits outcomes, and include; (1) support and relationships: the primary mechanism (2) a participation-focused approach, and (3) investing in the future. Based on these findings, knowledge products were developed, including recommendations for clinical practice that comprised guidelines for (1) goal-directed and family-centred interventions, (2) geographically organised family groups, (3) support networks for service providers, and (4) environmental considerations.

Conclusions/Significance: This research addresses key steps to bridge the knowledge-to-action gap and enable children and youth with disabilities to participate in physical activity. These findings add new knowledge to key stages of physical activity intervention development and evaluation that have received little attention in childhood disability literature. Outcomes of this research may be applied by researchers and health professionals attempting to optimise participation in physical activity for children and youth with disabilities.

SP 42
The impact of initial power mobility on functional independence and participation
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Background and Objective(s): Children with musculoskeletal disorders often lack functional mobility limiting independence and participation in activities of daily living. The objective of this study was to determine the impact of first time power wheelchair (w/c) ownership on functional mobility, independence and participation within the home, school, and