

P13 Responsiveness of pediatric v2.0 and v3.0 PROMIS Pain Interference, Upper Extremity and Mobility

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Objective: To support clinical decision-making and treatment evaluation, outcome measures need to accurately detect changes in patient health. As such, we aim to assess the responsiveness of the self and proxy PROMIS® Item Banks v2.0 and v3.0 for Pain Interference, Mobility, and Upper Extremity in the context of pediatric physical therapy (PPT).

Methods: Children (8-17 years) in PPT, and their caregivers (of children 5-17 years), completed three pediatric PROMIS item banks v2.0 (Upper Extremity, Mobility, Pain Interference). Caregivers indicated the domain (upper extremity, mobility or pain) on which PPT focused the following six months (*intervention domain*). At follow-up, a self-assessment of change question (SCQ) was administered per domain.

Responsiveness was assessed using two construct-based approaches (efficacy-approach and known-groups-approach; based on the *intervention domain*) and one anchor-based approach (based on SCQ).

For construct-based approaches:

Efficacy-approach: T-scores on baseline and follow-up were compared using a paired samples t-test to assess responsiveness of PROMIS given the PPT *intervention domain*.

Known-groups-approach: Change in T-scores between baseline and follow-up was compared between participants in different *intervention domains*, using an independent t-test.

For anchor-based approach:

Change in T-scores was compared between participants reporting perceived change (SCQ) and those who did not. To compare responsiveness of v2.0 with v3.0, responses were recoded/collapsed and T-scores were recalculated. Subsequently, all above analyses were performed on v3.0 T-scores as well.

Results: Currently, 76 children and 100 caregivers participated (data collection ends May 2025).

For construct-based approaches:

Efficacy-approach: Preliminary results show participants improving for all PROMIS v2.0 instruments given PPT *intervention domain* (p-values<0.05; Cohen's D's=0.6-4.4).

Known-groups-approach: Participants focusing on upper extremity as *intervention domain* showed a larger improvement on PROMIS v2.0 Upper Extremity T-scores compared to people not focusing on upper extremity as *intervention domain* (p=0.006; D=1.4). For mobility (p=0.2; D=0.5) and pain interference (p=0.5; D=0.3), this statistically significant difference was not found.

For anchor-based approach:

Results will be presented at the conference.

Final results, including a comparison between v2.0 and v3.0, will be presented.

Conclusions: Preliminary results show indications of sufficient responsiveness of pediatric PROMIS item banks for PPT.