O12 Child-caregiver agreement and test-retest reliability of nine PROMIS item banks in pediatric physical therapy

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Objective: While self-reported patient-reported outcome measures (PROMs) are preferred, proxies are sometimes necessary. To interpret proxy PROMs scores responsibly and correctly, it is important to know the level of child-caregiver agreement on PROMs. Furthermore, assessing stability of PROMs over time is crucial for ensuring test-retest reliability. Thus, our aim is twofold: (1) examine child-caregiver agreement across nine PROMIS® v2.0 instruments, and (2) to assess the test-retest reliability of three paediatric self and proxy PROMIS® v2.0 instruments in a pediatric physical therapy (PPT) setting.

Methods: Children (8-17 years) in PPT, and their caregivers (of children aged 5-17 years), completed three pediatric and proxy PROMIS item banks v2.0 (Pain Interference, Mobility, Upper Extremity) and two legacy instruments (Pediatric Quality of Life Inventory 4.0, NRS Pain Intensity). PROMIS instruments were completed again within three weeks. At this measurement occasion, participants also completed six PROMIS instruments in computerized adaptive testing format (Anxiety, Depressive Symptoms, Fatigue, Peer Relationships, Sleep Disturbance) or as short-form (Anger). Agreement within child-caregiver dyads for all PROMIS measures and legacy instruments was explored with intraclass correlation coefficients (ICC). Test-retest reliability was assessed for PROMIS Pain Interference, Mobility and Upper Extremity using ICCs. ICC estimates were deemed moderate if ≥0.50 and strong if ≥0.75.

Results: For child-caregiver agreement (*aim 1*), 227 child-caregiver dyads completed the PROMIS Pain Interference, Mobility, Upper Extremity item banks and legacy instruments. 146 child-caregiver dyads completed the six additional PROMIS instruments. PROMIS and legacy instruments showed moderate (Anxiety and Fatigue; ICCs=0.73) to strong (all other instruments: 0.75-0.84) ICC estimates.

For test-retest reliability (*aim 2*), 85 children and 127 caregivers participated at first and second administration. Moderate ICC estimates were found for the pediatric and proxy PROMIS Pain Interference (0.71; 0.72), Mobility (0.69; 0.67), Upper Extremity (0.63; 0.66) item banks.

Conclusions: Child-caregiver agreement on the nine pediatric PROMIS Item Banks v2.0 was generally strong, similar to legacy instruments, suggesting that parent-proxies can be reliably used when a child is unable to self-report. Test-retest reliability of pediatric and proxy PROMIS Pain Interference, Mobility, Upper Extremity item banks v2.0 in PPT showed to be sufficient for use in clinical practice.