

Reliability and validity of a revised version of the self-care domain of the Child Engagement in Daily Life Measure



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PURPOSE

- Participation in self-care is an important outcome for young children with cerebral palsy (CP).
- This study aimed to examine reliability and validity of a revised version of the self-care domain of the Child Engagement in Daily Life Measure (CEDL).

PARTICIPANTS

- 692 children with CP ages 18-months to 11-years and their families participated in the validity portion
- A subset of 43 children participated in test retest reliability
- 54% were boys and 81% of participating parents were mothers
- Participants were a sample of convenience across Canada and the United States

PROCEDURES

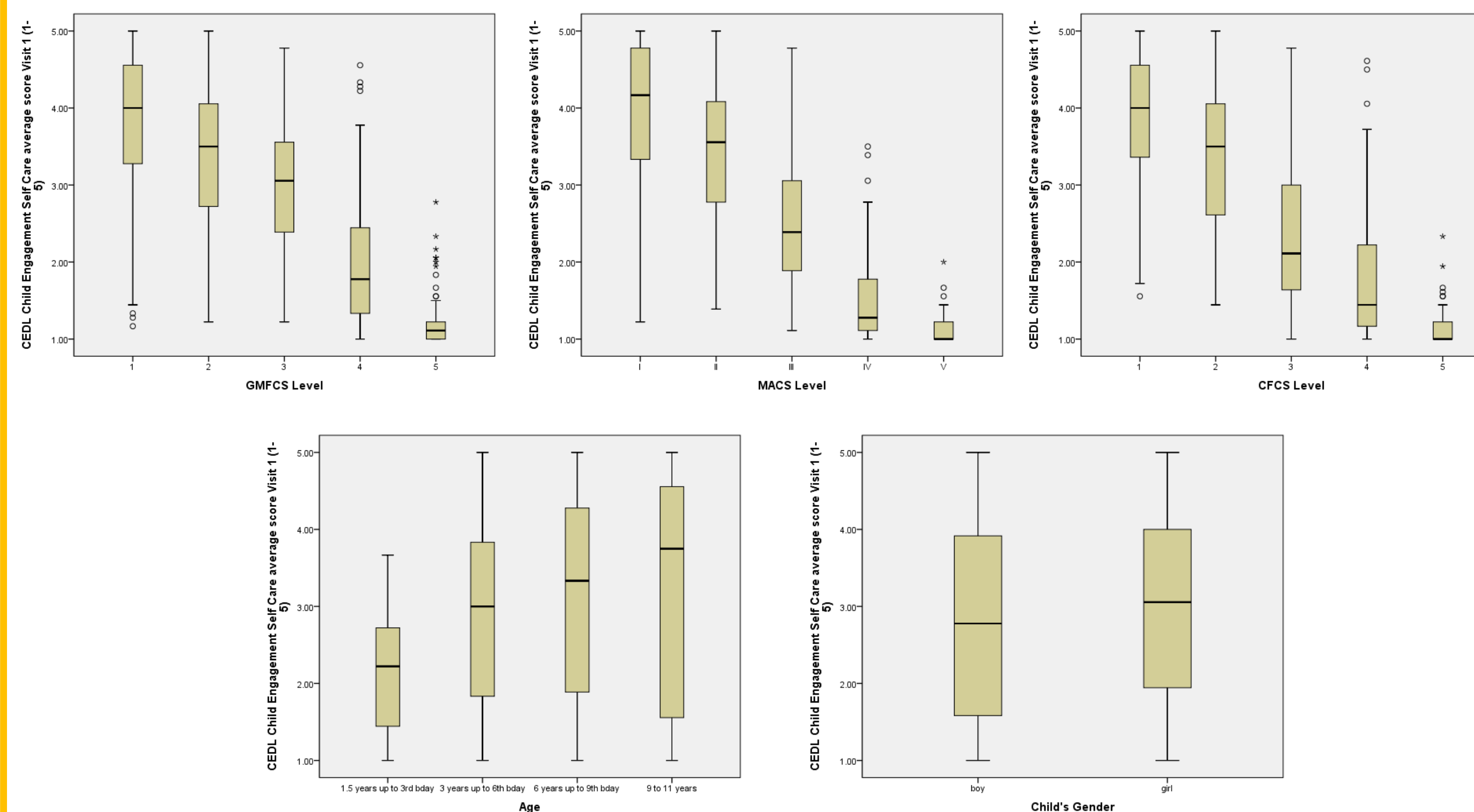
- The self-care domain of the CEDL contains 18-items asking parents to rate the degree their child is able to participate in daily self-care activities.
- Items are scored on a 5-point Likert scale from 1- does not do the activity to 5- does the activity independently most of the time.
- Parents completed this measure during the initial assessment of a longitudinal study on developmental trajectories.
- During the same assessment session, children's abilities were classified using:
 - Gross Motor Function Classification System (GMFCS)
 - Manual Abilities Classification System (MACS)
 - Communication Function Classification System (CFCS)
- For the test-retest reliability, parents completed the CEDL a second time on average 21-days later.

DATA ANALYSIS

- Children were placed into four age groupings:
 - 18-months to 3 years
 - 3 to 6 years
 - 6 to 9 years
 - 9 to 11 years.
- Test-retest reliability was calculated using intraclass correlation coefficient.
- Construct validity was established using known group methods with data analyzed using one-way ANOVAs with post hoc pairwise Tukey tests to compare group means for the GMFCS, MACS, CFCS and age groupings. An independent t-test to compare means between boys and girls.
- An alpha level of $p < .01$ was used to determine significance.

RESULTS

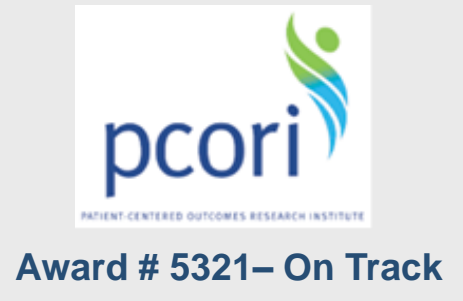
- Test-retest reliability was excellent (ICC (2,1) = .984).
- Significant differences existed in participation in self-care across all GMFCS (All $p < .001$) and CFCS levels (All $p < .001$). Significant differences also existed across MACS levels (All $p < .001$), except levels IV and V ($p = .021$). For all classifications, children with higher functioning abilities participated in self-care with more independence than children with lower functioning abilities.
- Children ages 1.5 to 3 years had significantly lower self-care abilities than all other ages (All $p < .001$). No differences in self-care participation were found for children 3-6 years through 9-11 years.
- Differences between boys and girls were not observed ($p = .109$).



CONCLUSIONS

- The self-care domain of the CEDL demonstrates excellent test-retest reliability and strong known groups validity across functional classification systems.
- Communication, manual abilities and gross motor function support children to be able to participate more independently in self-care abilities.
- CEDL can be used as a descriptive and discriminative measure of participation in self-care for children with CP.
- Future research with larger sample sizes should examine multivariate interactions between age and functional classification.

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