CONSISTENCY OF PSYCHOMETRIC PROPERTIES OF THE CHILD AND ADOLESCENT SCALE OF PARTICIPATION (CASP) IN A NATIONAL SAMPLE (USA) OF CHILDREN WITH TBI ACROSS 3-YEARS
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Introduction

- Participation in activities affects children’s health and quality of life.
- Participation of children with traumatic brain injury (TBI) found to be restricted in comparison to typically-developing peers due to impairments and the environmental barriers.
- There is a need for reliable and valid instruments to monitor recovery over time.
- The CASP assesses participation of children and adolescents with TBI in home, school and community settings.
- Prior studies report on the psychometric properties of the CASP.

This study examines the convergent validity, internal consistency and factor structure of the CASP across a 3-year period.

Methods

- Longitudinal prospective cohort study
- 926 children ages 0-18 years (TBI = 729; Arm injury = 197) - 10 hospitals
- Participation of children and adolescents with TBI and other acquired brain injuries in home, school and community settings
- Health-related quality of life in healthy children and adolescents
- Adaptive behavior and skills of individuals who are school-aged

Results

| Sample | 926 children ages 0-18 (TBI - 78.7%; mild - 66.5%, moderate - 10.4%, severe - 1.8%; Arm injuries - 21.3%)
| Majority: White (63.3%); male (64.6%); English speakers (92.2 %) |

- Convergent validity
  Correlations between CASP → PedsQL and ABAS-II scores
  Pearson correlation coefficients moderate to high at all time periods
  CASP & PedsQL: r = 0.504 to 0.602;
  CASP & ABAS-II: r = 0.488 to 0.650, p < 0.01
  A pattern of gradual increase in correlations over time.

- Internal consistency of the CASP
  High internal consistency of the CASP and its sub-sections
  (α = 0.900 - 0.956)
  A pattern of gradual increase in α over time

- Factor analysis
  Clearer four factor solutions at 3, 12 and 24 months resembling the four CASP sub-sections: Home participation; School participation; Community participation; and Home and community living activities
  (67 - 69 % of the variance was explained).
  Factor solution less clear-cut for pre-injury and at 36 months

Conclusions

- Evidence of convergent validity
  (with PedsQL and ABAS-II)
  Gradual increase in correlations & internal consistency over time

- Similar to previous studies, the results provide additional evidence regarding internal structural validity of the CASP, but the factor solutions were different.
- Prudence should be taken when considering use of factor scores - can also create composite scores with items most relevant to research / practice needs and information goals.
- Results contribute to current psychometric evidence of the CASP and support its use in assessing participation of children and adolescent with TBI over time.

References


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Parents’ greater familiarity with their child’s participation and/or Child’s participation being more stable over time.

This evidence is important to consider when selecting participation measures for use in research and practice.

Limitations: different factors might have affected the results (differences associated with each hospital, level of severity, missing data, reporter, using both English and Spanish versions).