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[1].
- Participation of children with traumatic brain injury (TBI) found to be restricted in comparison to typically-developing peers[2] due to impairments and the environmental barriers[3].
- There is a need for reliable and valid instruments to monitor recovery over time.

- The CASP[4] assesses participation of children and adolescents with TBI in home, school and community settings.
- Prior studies report on the psychometric properties of the CASP[3-5].

This study examines the convergent validity, internal consistency and factor structure of the CASP across a 3-year period[6].

Methods

- Longitudinal prospective cohort study[7]
- 926 children ages 0-18 years (TBI = 729 ; Arm injury = 197) - 10 hospitals

Parents Version

After injury

Pre-injury functioning - 3 – 12 - 24 - 36 months Following trauma

Child and Adolescent Scale of Participation (CASP)[4]	Participation of children and adolescents with TBI and other acquired brain injuries in home, school and community settings
Pediatric Quality of Life Inventory (PedsQL)[8]	Health-related quality of life in healthy children and adolescents
Adaptive Behavior Assessment Scale (*2nd ed.*) (ABAS-II)[9]	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

NEW FINDINGS

- Similar to previous studies[3,5] 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.

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 hospitals, level of severity, missing data, reporter, using both English and Spanish versions).

References

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