

Youth Report Version of the Child & Adolescent Scale of Participation (CASP): Psychometric properties & comparisons with the parent report version

Gary Bedell, PhD, Tufts University; Janette McDougall, Ph.D., Thames Valley Children's Centre, Virginia Wright, PhD, Bloorview Research Institute

Background & Purpose

- Participation in activities that provide a sense of accomplishment & enjoyment during childhood & youth helps to foster positive outcomes in adulthood¹⁻⁴
- Participation is an indicator of overall health & well-being and is a key rehabilitation outcome¹⁻¹⁰
- Children & youth with disabilities are often restricted in their participation³⁻¹⁰
- The Child & Adolescent Scale of Participation (CASP) is often identified as a key measure of children's participation⁶⁻⁸
- The CASP was originally designed as a parent-report measure as part of the Child & Family Follow-up Survey (CFFS) to assess outcomes and needs of children & youth with acquired brain injuries & their families.^{4,5} Now it can be used separate from the CFFS and for children/youth with other conditions.
- The CASP has prior evidence of test-retest reliability (ICC = 0.94), internal consistency ($\alpha = 0.96$) and construct validity^{4,5}
- Prior & most recent factor analytic testing⁴ indicated that items loaded onto 3 factors with a large degree of variance (63%) explained:
 - social and leisure participation/communication (50%)
 - advanced daily activities (7%)
 - basic daily activities/mobility (6%)
- Because the original CASP is completed by parent-report, a youth-report version of the CASP was developed to obtain youth perspectives
- The purpose of this study was to:**
 - Examine psychometric properties of the Youth-report CASP
 - Further validate the Parent-report CASP
 - Compare findings from the Youth-report CASP & Parent-report CASP

Methods

- Baseline data were examined from a large longitudinal study investigating predictors of changes in quality of life of youth (ages 11-17) with disabilities from eight children's rehabilitation centers in Ontario, Canada^{9,10}
- Data from the CASP parent-report & new youth-report versions were examined in this study. The two CASP versions have the same content & format. Youth or parents compare their own or their child's participation to same age youth:
 - 20 items divided into 4 subsections: 1) Home, 2) School & 3) Community Participation, & 4) Home & Community Living
 - Items rated on a 4-point scale (1=unable, 2=very limited, 3=somewhat limited, 4=age expected/full participation)
- Data analyses: Comparative / Correlation (Independent t-tests, Analysis of Variance, Intra-class correlation); internal consistency (Cronbach's α) & scale structure (exploratory factor analyses)

Participants (n= 409 youth with disabilities)

- Youth mean age was **14 years** (SD=2.2); **55%** were male
- 35%** had cerebral palsy, **14%** acquired brain injury, **11%** communication disorders / cleft lip or palate, **8%** spina bifida, **7%** autism spectrum disorder, **6%** developmental delay, **4%** amputation, and **15%** another condition
- Parents' mean age was **45 years** (SD = 6.5); **88%** were female
- English spoken in 90% of families' homes**, French in 2%, others in 8%

RESULTS

Group Differences in Youth CASP Scores

- Significant differences** in CASP scores existed for **disability groups** ($F = 4.33$; $p < 0.0001$), but NOT for age ($F = 0.50$; $p < 0.81$) or sex ($t = 1.56$; $p < 0.12$)
 - Youth with cerebral palsy had significantly lower scores than those with amputation ($p < 0.01$)
 - Youth with autism had significantly lower scores than those with communication disorders/cleft lip or palate ($p < 0.01$) & those with an amputation ($p < 0.0001$)

Factor Analyses: CASP Youth Report & Parent Report

- Three conceptually similar factors** were identified for both CASP versions contributing **44% of the variance in the youth report & 65% in the parent report:**
 - social and leisure participation/communication** (17% & 22% respectively)
 - advanced daily activities** (14% & 17% respectively)
 - basic daily activities/mobility** (13% & 26% respectively)

*Some items loaded (shared variance) on more than one factor in both CASP versions

Internal Consistency: CASP Total & Factor Subscale Scores

CASP Total & Subscale Scores	Youth	Parent
• CASP total score	0.87 *	0.95 *
• Social, leisure & communication	0.80†	0.90 *
• Advanced daily activities	0.67‡	0.86 *
• Basic daily activities & mobility	0.74‡	0.89 *

Subscale scores derived from factor analyses

Internal consistency (Cronbach's α) was high*, moderately high †, moderate ‡

Comparative Analyses: CASP Total & Factor Subscale Scores

CASP Total & Subscale Scores	Youth Mean (SD)	Parent Mean (SD)	t *	ICC**
• CASP total score	69.5 (8.2)	63.5 (12.8)	10.93	0.70
• Social, leisure & communication	27.6 (4.1)	25.9 (5.2)	7.26	0.65
• Advanced daily activities	21.1 (2.8)	18.6 (4.5)	12.52	0.59
• Basic daily activities & mobility	20.7 (3.0)	19.2 (4.3)	9.00	0.74

*Independent t-tests show significant differences between all youth-report & parent-report CASP scores ($p < 0.0001$)

**Intra-class Correlation Coefficients (moderately high correlations between all youth-report & parent-report CASP scores)

Discussion

- Results provide evidence of internal consistency and scale structure for the CASP Youth-report & confirmatory evidence for the Parent-report version.
- The moderate internal consistency for the youth-report advanced & basic daily activities subscales might have been due to shared variance of some items on these two subscales.
- The 3-factor scale solution for the CASP youth-report was virtually the same as the parent-report in this study & previously reported scale structure.⁴
- Results from this study reflect a more equal distribution of the percent of variance explained among the 3 factors than in prior research⁴ – possibly due to differences in research protocols & samples, e.g., the **largest subgroup of children in this study had CP & the largest subgroup in prior research had traumatic brain injury.**
- All CASP youth report & parent report scores were moderately to highly correlated & were also significantly different suggesting that each report contributes to an understanding of a youth's participation.¹¹
- Youth report could be used in conjunction with parent report when comparisons might be helpful, or separately when only youth reports are of interest.
- Results reflect other studies' results that youth with chronic conditions / disabilities report higher scores related to quality of life measures.¹²⁻¹⁴
- Youth might have reported higher CASP scores due to youth: a) having more accurate views of what they do across multiple environments; b) participating more than their parents realize; &/or c) idealizing the extent to which they participate.
- Similar to prior research with the CASP parent –report,⁴ the youth report appears to discriminate among groups of youth with different disabilities.
- Further psychometric testing** of the youth-report CASP using larger, more diverse samples is needed & should include assessment of test-retest reliability & convergent/divergent validity & confirmation of the 3 factor scale solution. Studies to assess responsiveness to change over time for both the youth and parent report are currently underway.

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For more information about the CASP: <http://sites.tufts.edu/garybedell/measurement-tools/>