

# Can the Children's Communication Checklist differentiate between children with high functioning autism, ADHD, and learning disabilities?



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## Introduction

- The Children's Communication Checklist-Second Edition (CCC-2) is a rating scale designed to assess domains of communication skills in children with emphasis on pragmatics (Bishop, 2006).
- Two factor scores can be computed based on the 10 subtests of the CCC-2: a structure/content factor (SF) composed of Speech, Syntax, Semantics, and Coherence, and a pragmatic factor (PF) composed of Initiation, Nonverbal Communication, Social Relations, and Interests
- When compared to normal controls, pragmatic difficulties occurred in children with either high functioning autism (HFA) or ADHD using the original CCC (Geurts et al., 2004)

## Objective

- To examine whether the second edition of the CCC can differentiate between children with HFA, ADHD, and LD

## Method

- Two pools of archival data were used to group 41 participants into three groups: an HFA group, an ADHD group without comorbid disorders, and an LD group
- Group-specific descriptive statistics were computed for the participants' age, full scale intelligence quotient (IQ), and General Communication Composite (GCC)
- Independent samples ANOVAs were conducted on SF and PF scores to determine whether the CCC-2 could differentiate the three groups, with post-hoc comparisons subsequently assessing the individual subtests

## Results

- The three groups did not differ significantly on IQ nor SF
- There were significant differences on the PF,  $F(2, 38) = 17.81, p < .01$ . Pairwise comparisons showed that the LD group had higher scores than the ADHD group,  $t(25) = 2.56, p = .02$ , which had higher scores than the HFA group,  $t(24) = 3.12, p < .01$ .
- Within PF, the same pattern was shown on Nonverbal Communication,  $F(2, 38) = 9.29, p < .01$  and Interests,  $F(2, 38) = 17.81, p < .01$

|                | ADHD          | HFA           | LD            |
|----------------|---------------|---------------|---------------|
| Sample Size, N | 12            | 14            | 15            |
| Age, M (SD)    | 9.5           | 11.95         | 10.13         |
| IQ, M (SD)     | 98.17 (11.76) | 93.79 (17.72) | 95.81 (15.14) |
| SF, M (SD)     | 8.85 (1.88)   | 8.25 (1.38)   | 9.83 (2.48)   |
| PF, M (SD)     | 7.79 (1.64)   | 5.48 (2.06)   | 10.18 (2.88)  |

## Conclusions

- Compared to children with LD, children with ADHD and HFA demonstrated pragmatic difficulties on the CCC-2, suggesting its utility in distinguishing LD
- Although there was some overlap between the pragmatic language characteristics of children with ADHD and children with HFA, the CCC-2 demonstrated utility in distinguishing the two disorders on nonverbal communication and interests
- These preliminary findings suggest the CCC-2 is a useful tool in the differential diagnosis of LD, ADHD, and HFA