

# Measuring Reciprocity in Children with Autism



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## Objectives

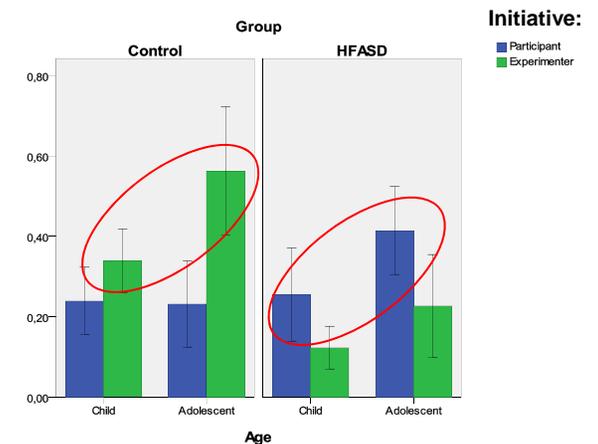
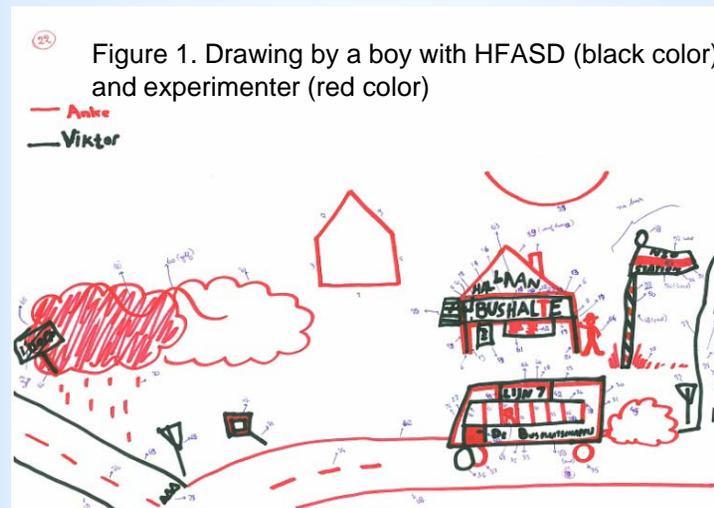
- Few instruments have been developed that directly measure reciprocal behaviour, a core problem in autism
- We aim to investigate the quality and style of reciprocity in children and adolescents with or without high functioning ASD (HFASD) by means of a new instrument: the interactive drawing test (IDT).

## Method

- Participants. Children with HFASD (n=24) and typical development (TD, n=25), matched on mental and chronological age were divided equally over age cohorts of 6-10 and 16-20 year olds.
- The Interactive Drawing Test (IDT). Children were invited to draw with an experimenter on a single piece of paper. The only instruction was: 'we are going to draw together'. The experimenter was instructed to start with drawing specific elements, followed by adding various kinds of input to the child's drawing.
- Background measures. Social Responsiveness Scale (SRS, Constantino, et al., 2003), Peabody Picture Vocabulary Task (PPVT, Dunn & Dunn, 1997).
- Scoring. Reciprocal responses were scored when the child joined the experimenter in drawing a mutual element (e.g., they both contributed to a house). Interrater reliability: .94 to .97.

## Results

- Children with HFASD generally showed less reciprocal responses (e.g. contributing meaningful elements to the drawing) than controls
- Children with HFASD did reciprocate similar to controls when drawing elements based on their own initiative (e.g., the bus in Figure 1).
- In the TD group, age effects were found on reciprocal responses to experimenter's initiatives (e.g., the red house in the middle, Figure 1). In the HFASD group, age effects were found on reciprocal responses based on responses to their own initiatives.
- IDT performance correlated negative ( $r = -.47$ ) with SRS scores. No correlation was found with PPVT.



Proportion of reciprocal behavior based on participant or experimenter initiated elements of the drawing as a function of Group and Age.

## Conclusion

- Compared to the control group, HFASD participants showed less reciprocity.
- They reciprocated mainly in self-initiated drawing elements, showing the importance of their self/other orientation.
- Their performance was related to age and social impairment severity, but unrelated to verbal ability.
- The group differences suggest that IDT is a promising instrument to assess reciprocity.

Financial support by Stichting Nuts Ohra [SNO-T-0701-116].