

## **Title: Does emotional valence of personal events influence their recall in typical development and autism?**

**Keywords:** Memory, Children, Autism Spectrum Disorder

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### **Introduction**

Episodic memory, namely memory relating to the self and experiences, is extremely important in social functioning and the development of social ties (Crane and Goddard 2007). Episodic memory is often impaired in individuals with autism spectrum disorder (ASD), which could contribute to other social impairments (Crane and Goddard, 2007). Previous research indicates that children with ASD recall significantly less information on free recall tasks than typically developing (TD) children (Millward et al., 2000); they also show lower performance than TD children on tasks that require use of episodic memory (Lind & Bowler, 2008). The purpose of this study is to examine whether the observed differences between the two groups remain robust across different event types (positive vs. negative).

### **Method**

Eighteen children with ASD ( $M_{\text{age at initial observation}} = 7.1$ , range=4.6 to 10.4) and eighteen TD children ( $M_{\text{age at initial observation}} = 4.5$ , range=4.5 to 4.11) completed a cued recall test, during which they were asked to recall their last birthday party (positive event) and last doctor's visit (negative event). The children's speech was then transcribed and segmented into utterances. The number of utterances each child produced to describe an event was divided by the total number of prompts the child received. Differences in mean ratios (utterance per prompt) were compared by a two-way ANOVA, with group as between and event type as within subject factors.

### **Results**

Our preliminary results showed an effect of event type ( $p=.03$ ), but no effect of group or interaction between group and event type. All children showed better recall of the positive event than the negative event, a pattern that tended to be particularly pronounced for children with ASD.

### **Conclusion**

These findings highlight the importance of event type in influencing children's episodic memory for personal events, and show that the episodic memory for events might be influenced by the emotional valence of the event, both for TD children and children with ASD.