Inferential language in Russian children with autism spectrum disorder: Mental state verbs and their degrees of certainty

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The present study explored whether high-functioning children with autism spectrum disorder (ASD) can process complex sentences with different mental state verbs correctly forming inferences about the truth/false/uncertainty value of their sentential complements. Very few experiments were designed to specifically look at this particular ability in children with ASD using a paradigm other than a classic false-belief task. We expected to find that children with ASD will be able to make some but not all the inferences correctly demonstrating greater difficulties associated with non-factive conditions. A group of 15 high-functioning children with ASD were compared with a control group of 20 typically developing classmates on a sentence-picture-matching task. The materials included 32 pictures illustrating 32 mental state verbs presented in a sentential context and further subdivided into 16 factive (e.g., Alex knew that it was raining outside) and 16 non-factive (e.g., Alex thought that it was raining outside) conditions. Accuracy and justification of choices represented the two dependent variables of interest. The results indicated significant difference in performance between the two groups. Children with ASD performed considerably worse than the control group in both accuracy and justification of their choices. The present study asserts that Russian children with ASD are able to make some but not all the inferences from various mental state verbs correctly differentiating between truth and false/uncertainty value of their complements. Surprisingly, the overall performance was not affected by the condition which contradicts general developmental trajectory well established among typically developing children.

Keywords: mental state verbs, autism.