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**Elena E. Lyakso<sup>1</sup>, Olga V. Frolova<sup>2</sup>,  
Aleksandr S. Nikolaev, Viktor A. Gorodnyi,  
Aleksey S. Grigorev, Anna V. Kurazhova  
St Petersburg State University,  
Saint Petersburg, Russian Federation  
lyakso@gmail.com<sup>1</sup>, olchel@yandex.ru<sup>2</sup>**

**GENDER, AGE, CHILD STATE: PERCEPTUAL STUDY OF SPEECH OF  
8–9 YEAR OLD TYPICALLY DEVELOPING CHILDREN,  
CHILDREN WITH AUTISM SPECTRUM DISORDERS AND DOWN SYNDROME**

**Abstract**

The paper describes the specificity of recognition by adults of the gender, age, and psychoneurological state of typically developing (TD) children, children with autism spectrum disorders (ASD), and children with Down syndrome (DS). The perceptual study was recruited 145 adults – native speakers of the Russian language and foreigners with different professional experience of interacting with children, who listened to the speech material of 8–9 year old boys with TD, with ASD and with DS. It was shown that all listeners classify speech material as uttered mainly by boys and less – by girls. The listeners indicated the age of TD children higher than the age of children with ASD and DS, but lower than the real age. The ability of foreign students to determine the age and emotional state of children without linguistic information was shown. Russian listeners determine the psychoneurological state (typical development – developmental disorder) of children with ASD and DS better vs foreigners. The professional experience of Russian listeners interacting with children influenced the recognition of the children's psychoneurological state. IT undergraduate students determined the state of TD children better than pediatrician students and postgraduate students majoring in psychiatry. The latter were most successful in recognizing developmental disorder by speech signals of children with ASD and DS. All groups of listeners were better at determining the state of developmental disorder in children with DS vs. in children with ASD. The data obtained can be used for training medical students and are useful to parents and teachers of children with DS and children with ASD. The results of the study are considered in the frame of the works on voice biometry and expand the knowledge about the voice portrait of a person with typical and atypical development.

**Keywords:** perceptual experiment, children, listeners with different experiences, typical development, autism spectrum disorders, Down syndrome.

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