



Facilitation of the Dynamics of Social Interaction Skills Development in Preschool Children with Autism Spectrum Disorder

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Abstract

The increase in the number of children with autism spectrum disorders has exacerbated the problem of improving (facilitating) social interaction skills in preschoolers. This category of children is characterized by a combination of qualitative disorders, where one of the main manifestations is difficulties in verbal and social behavior. The aim is to study the dynamics of the development of social interaction skills in preschoolers with autism spectrum disorders, depending on gender and age, to identify points of facilitation, to give recommendations. On the basis of ontological and behavioral approaches, theoretical methods of analysis of philosophical, psychological and pedagogical literature are used, among the empirical methods are the Sundberg method VB-MAPP (2008), observations, qualitative analysis, Student's T-criterion. A longitudinal study (2018-2022) of 54 preschoolers with ASD from different kindergartens in Kazan is presented. The dynamics of the development of skills of children with ASD in longitudinal study is minimal, contradictory, depends not on age, but on the complexity of the defect.

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1. Introduction

The relevance of the research is that there is currently a tendency to increase the number of children with autism spectrum disorder (ASD), which has exacerbated the problem of improving (facilitating) social interaction skills in such preschoolers (Vasina, 2020). This category of children is characterized by a combination of qualitative disorders, where one of the main manifestations is difficulties in developing communication skills (Vakhrusheva & Vasina, 2020). Timely diagnostic examinations and remedial care for children with autism spectrum disorder can reduce or completely eliminate communication disorders, thereby ensuring further successful interaction with peers and adults (Warreyn, Van der Paelt, & Roeyers, 2014).

But before we talk about targeted correction, it is necessary to track the dynamics of this skill, i.e. to describe the facilitation of the dynamics of the development of social interaction skills in preschoolers with autism spectrum disorder, which determined the relevance of this research.

2. Purpose and Objectives of the Study

It is necessary to research the dynamics of the development of social interaction skills in preschoolers with autism spectrum disorder, depending on gender and age, to determine the points of facilitation, to give recommendations for building a comprehensive program of accompanying children in a kindergarten for autistic children of Kazan Federal University.

3. Literature Review

An analysis of the scientific literature has shown that timely diagnostic examination and correctional care for children with autism spectrum disorder can reduce or completely eliminate communication disorders, thereby ensuring further successful interaction with peers and adults (Accardo, 2015; Carnahan, Musti-Rao, & Bailey, 2009; Orlova & Chemodanova, 2016; Schramm, 2013). The main and main task of specialists is to develop the ability of children with ASD to master functional speech, teach them social ways of communication

and develop their ability to use verbal and non-verbal means of communication in the process of positive reinforcement (Atkinson, Slade, Powell, & Levy, 2017; Shumway & Wetherby, 2009). The dynamics of the development of communication skills is determined by the facilitation of social interaction – non-directive management, assistance, assistance to children with ASD (monitoring the dynamics, improving the dynamics).

Many researchers and scientists have focused on the issue of verbal behavior and social interaction, and behavioral analysts have focused on the sources and variables that control the functioning of language as a pure behavior (Cook, Tankersley, & Landrum, 2013; Fedorov, 2010; Sviridenko & Ermakova, 2019). Speech as behavior in applied behavior analysis has been studied for more than half a century. Skinner (1957), Sundberg (2008) and other psychologists have emphasized that the environment contains an infinite number of nonverbal stimuli and complex multiple relationships, and in the absence or insufficient formation of verbal actions, the use of conditional signs can be limited (Thurm, Lord, Lee, & Newschaffer, 2007). Violation of interaction with others is clearly manifested in the violation of the communicative function of speech in children with autism spectrum disorder. Children with autistic disorders rarely ask questions to the interlocutor, most often do not give an answer to questions addressed to them, or can answer in monosyllables. But at the same time, this category of children may have developed "autonomous speech", a conversation with themselves, depending on their age (Nikolskaya, Baenskaya, & Liebling, 2007).

Facilitation of long-term dynamics is necessary, because often these children may have delayed verbatim reproduction of previously heard things in life, there are pathological speech forms: delayed and immediate speech echolalia, chanted pronunciation, unusual drawl intonation, neologisms (Kuleshova, 2015). Conversational skills are most preserved in Asperger's syndrome in children with autism spectrum disorder (Drew, Baird, Taylor, Milne, & Charman, 2007).

Psychologists have paid great attention to the importance of verbal behavior in the formation of behavior in general, especially in children at an early stage of speech and communication development (Akhmetzyanova, 2016; Cain, Oakhill, & Bryant, 2004; Dosshe, 2019). They include all verbal actions – speech, reading, writing, a child with ASD learns to speak due to the influence of various verbal stimuli and reinforcers, especially when the spatial-temporal elements of the anticipatory coherence of children with general speech delay are disturbed (Akhmetzyanova, 2014). In his research, Skinner (1957) paid great attention to working with children with ASD and made a great contribution to the development of the method of analyzing verbal behavior and applied behavior analysis in general. One of the most significant and serious results of his research is the classification of types of verbal behavior (The Behavioral Classification of Language). This classification describes nine types of verbal behavior, according to which a child with ASD can effectively interact and communicate, provided that he learns to use words within each type, which helped (Sundberg, 2013). create the diagnostic toolkit VB-MAPP.

4. Methodology

Based on the ontological and behavioral approaches, the author's concept of facilitating social interaction in the longitudinal research's (2018-2020), theoretical methods of analyzing philosophical, psychological and pedagogical literature are used; among the empirical methods are the Sundberg (2013). VB-MAPP method, observations, qualitative analysis, and the Student's T-test. The experimental base of the study is 54 preschool children with autism spectrum disorder from different kindergartens in Kazan (Russia).

5. Results

Within the framework of the ontological approach, we have determined that the facilitation of social interaction is the building of the process of effective communication by changing the representations of the subjects of interaction in the presence of an observer. The behavioral approach has led to the understanding that facilitating the dynamics of social interaction skills development in preschoolers with autism spectrum disorder is a process of observing changes in behavior, improving communication, and creating a new complex system of intervention that does not reduce to the sum of the previous ones (2018-2020). Preschool boys with ASD in different kindergartens in Kazan (Russia) More girls were identified than girls, which is consistent with a systematic review of studies and confirms the general population data on a greater number of boys with autism spectrum disorder and gender differences in the social behavior of children with ASD. Girls - 11%, boys – 89% were found in the sample. Due to the small number of girls with ASD surveyed, the results of the sample on average coincide with the results of boys with ASD.

When research's the dynamics of the development of verbal and social interaction skills in different samples of preschool children with autism spectrum disorder in a longitudinal study, using the methodology developed on the basis of the analysis of verbal behavior by VB-MAPP Sundberg (2013), the strengths of the respondents were found: a) visual perception, b) echo skill, c) group behavior. Weaknesses are noted: a) requests, b) social skills, c) introverbal properties. The girls of the sample have higher linguistic skills in naming and listening, while the boys have better visual perception. The request skills and introverbal skills were the least developed during the year.

The analysis of the results of children with ASD by age was carried out. Due to the uneven development of children with ASD, it is impossible to clearly divide them into age-related communication groups: in one of

the skills, a child may meet the age norm (or even be ahead of it), but lag far behind in others, and due to this, a simple calculation of the total number of points in the test is not indicative and cannot act as an objective assessment. A highly functional child of a younger age may be better developed and socialized than an older preschooler, which was confirmed in 2018, 2019 and 2020. The children grew, but did not level out. The dynamics of the development of skills of children with ASD during the year of longitudinal study is minimal, inconsistent and does not depend so much on age as on the complexity of the defect, the second year of research did not bring any qualitative changes. The Student's T-test shows no significant differences between the results of different years.

70% of respondents with ASD at the control stage of 2020 still cannot interpret the facial expressions and views of other people, and have difficulty expressing their own emotions. Thus, in children with autism spectrum disorder, violations of almost all mental processes are observed, which is expressed in the features of the emotional-volitional sphere, verbal and non-verbal behavior, social relationships and affects their development, adaptation and life activity in general. With specially directed training, some children with autism spectrum disorder have mastered a small number of gestures in 2 years, much less than in other preschoolers, but spontaneous use is almost inaccessible to them. In severe forms of this disorder, there is a total absence of visual contact, gestures and facial expressions, which smooths out the results presented in average values, since individual children have reached a maximum of 5 points by 2020. But these are units and each has only one separate scale (1 skill). But if in 2018 there were no children in this sample with a high level of development of communication skills (the children were young), then by 2020 there were 8% of such children (the children grew up and received some general and correctional development). Due to this, the number of children with a low level of communication development decreases from 54% to 48%, and from the middle level there was a transition to a high level.

Facilitation of the dynamics of the development of social interaction skills in preschoolers with autism spectrum disorder showed in a longitudinal research's (2018-2022) that the main and main task of specialists is to form the ability of children with ASD to master functional speech, teach them social ways of communication and develop their ability to use verbal and non-verbal means of communication in the process of positive reinforcement. The development of speech can occur at different times, but regardless of this, even after a year of correctional work, most children with ASD have violations of the formation of speech utterance and insufficient formation of the communicative function of speech.

The results confirm the general population data on the higher number of boys with autism spectrum disorder and gender differences in the social behavior of children with ASD. The strengths of the respondents were found: a) visual perception, b) echo skill, c) group behavior. Weaknesses are noted: a) requests, b) social skills, c) introverbal properties. The girls of the sample have higher linguistic skills in naming and listening, while the boys have better visual perception. The least developed were the request skills and introverbal skills. Due to the uneven development of children with ASD, it is impossible to clearly divide them into age-related communication groups: in one of the skills, a child may meet the age norm (or even be ahead of it), but lag far behind in others, and due to this, a simple calculation of the total number of points in the test is not indicative and cannot act as an objective assessment. Facilitation of the dynamics of the development of skills of children with ASD during the longitudinal study showed that the changes are minimal, inconsistent, and not so much depend on age as on the complexity of the defect. A highly functional child of a younger age may be better developed and socialized than an older preschooler, which was confirmed in 2018-2022. The children grew, but did not level out.

6. Discussion

There are still questions for further research.

1. Probably, needs a comprehensive remedial program to support children with autism or structural - functional model (Nigmatullina & Tvardovskaya, 2020).
2. Considering the psychological characteristics of subjects who required long duration of the classes for a more visual changes in the level of social interaction and timely assessment of the quality of preschool education of children with autism (Nigmatullina & Dadakina, 2020).
3. If you spend with these children enough time to regularly and systematically deal with them, the development of an autistic child can be as close as possible to the development of peers, especially when you have a good mediator – facilitator of social interaction (Vasina, 2020).
4. As the prospects of the research should indicate whether a quantitative increase of the sample divided by age and gender of the respondents.

7. Conclusion

Facilitation of the dynamics of the development of social interaction skills in preschoolers with autism spectrum disorder showed that it is necessary to monitor individual changes in each child, since the average values for the group do not show personal progress. The results of the research can be used in the practical activities of speech pathologists-facilitators. The data obtained are a good basis for various types of assistance measures in building effective communications, for developing programs for socio-psychological correction,

socialization and adaptation of children with ASD, for clarifying the adapted basic educational program of preschool education, for building a model of comprehensive support for preschool children with autism spectrum disorders.

The basis for the development of modern educational and medical technologies in teaching preschool children with autism spectrum disorders on the topic of scientific research included in the plans of scientific works of scientific and educational organizations of higher education that carry out scientific research at the expense of the federal budget is studied.

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