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**SOCIO-PSYCHOLOGICAL PRESCHOOLERS WITH SPECIAL**  
**NEEDS ADAPTATION'S DIAGNOSTICS WITHIN THE**  
**INCLUSIVE EDUCATION ENVIRONMENT**

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*Abstract*

The present study aims at assessment of the socio-psychological adaptation of senior preschool children with intellectual disabilities. Our purpose is to test the effectiveness of the developed physical education system for senior preschool children with special health needs in the inclusive educational environment with the help of the methods of diagnostics of socio-psychological development. The target group of inclusive physical education consists of children aged 5-6 years old: 14 children with intellectual disabilities, 7 children with Down's syndrome, 38 children with mental development delay or general speech underdevelopment, and 72 children without development disorders. There are following indicators of social adaptation of children with special needs in their peer group: trust, rapport, independence and emotional-volitional qualities. The expert has assessed the level of socio-psychological adaptation observing the children's behaviour in the physical training classroom. We have identified three levels of socio-psychological adaptation of senior preschool children with special needs: sufficient level of adaptation, low level of adaptation and inadaptability. The quantitative and qualitative results of socio-psychological diagnostics allow identifying three subgroups of senior preschool children with intellectual disabilities with different forms of inclusive physical education: targeted inclusion, partial inclusion and full inclusion. The obtained results evidence the proper arrangement of physical education process for preschool children with special needs within the inclusive educational environment that ensures comfortable interaction of children with special needs with children without developmental disabilities.

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**Keywords:** Socio-psychological adaptation, preschool children, children with special needs, inclusive education, physical education.



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## **1. Introduction**

Today, children with speech disorders, hearing impairments, blind and visually impaired, having Down's syndrome, mental developmental delays, intellectual disability, motor function disorders, emotional-volitional problems, etc. attend preschool educational institutions like any well-developed children. Therefore, the implementation of inclusive practices in a preschool education aimed at the individual educational program for a child with special health needs (CSHN), his/her mental and physical and socio-psychological development, his/her "inclusion" in a group of well-developing peers as the "equal partners", including physical exercise and health improvement, becomes of particular relevance.

## **2. Problem Statement**

The development of inclusive education in the field of physical education at preschool institutions represents one of the essential components of improvement of the entire preschool education system for children with special needs (Kornev & Pravdov, 2008; Pravdov et al., 2013; Pravdov & Kornev, 2013).

In accordance with the Federal state preschool educational standard, the targets in physical education are not subject to direct assessment in the form of pedagogical and/or psychological diagnostics and cannot be compared with the actual achievements of children. However, the diagnostics of mental and physical and socio-psychological development shall be a part of physical education system for children with special needs within the inclusive preschool educational environment to determine whether a child with special health needs is able to be engaged in physical activity together with their well-developed peers as well as to assess the effectiveness of physical education programs.

## **3. Research Questions**

Based on the analysis of scientific and methodological literature have identified three factors that constitute the basis of diagnostics of mental and physical development: the number and severity of somatic diseases concomitant to primary diagnosis and developmental disabilities, including the level of the functional state of the organism, physical fitness level and the level of socio-psychological adaptation (Shmeleva et al., 2016; Veraksa et al., 2016; Almazova et al., 2017).

## **4. Purpose of the Study**

This technique has been used for diagnostics of mental, physical, and socio-psychological development of senior preschool children with intellectual disabilities. One should note that the physical development of children with intellectual disabilities has its own special features. Such children get tired quickly; they have muscle tension, gross motor dysfunction, general stiffness and slowness of movements, incoordination, disorientation, fault posture, flat-foot, slow process of mastering basic movements, the lag in indicators of basic physical qualities, strength, dexterity and speed. The intellectual development disability also results in pronounced changes of the major indicators and mental development of the child. Abnormality in mental health primarily comes out in cognitive processes delay: perception, attention, memory and thinking. Such children tend to have a low level of perception and poor concentration. The

identification process of complex diagnostics of mental and physical development considers these characteristics also (Ainsworth, 2004; Kislyakov, 2017; Kislyakov et al. 2017; Speck, 1999; Vygotsky, 1983).

The following indicators of social adaptation of special needs children in their peer group are selected: trust, rapport, independence and emotional-volitional qualities (Table 1).

**Table 01.** Indicators of socio-psychological adaptation of senior preschool children with intellectual disabilities within the inclusive physical education environment of a preschool educational institution

Indicators	Indicators (assessment measures)
Rapport	1. Easily engages with children during active games
	2. Easily engages with children when doing exercises in pairs
	3. Easily engages with a PE instructor/teacher when doing exercises
	4. Rarely conflicts with other children during classes
Trust	5. Friendly relationship with peers during physical exercise and health-improvement events
	6. Prefers to be among peers during physical exercise and health-improvement events
	7. Feels at ease during physical education classes
	8. Feels at ease during physical exercise and health-improvement mass events
Independence	9. Is able to play ball by himself/herself without PE instructor/teacher assistance
	10. Copes with difficulties without assistance
	11. Is able to focus during the classes
	12. Observes the rules of active games
Emotional-volitional qualities	13. New exercises do not cause nervousness
	14. General emotional background of behaviour is positive
	15. Response to a change in activity familiar situation is adequate (no anxiety)
	16. Is able to complete the exercise
	17. Shows an adequate response to PE instructor/teacher comments
	18. Demonstrates an adequate response to PE instructor/teacher evaluation when doing exercise

We have carried out the experimental work at a kindergarten of the combined type during the period 2016-2017. The aim of the study is to assess the effectiveness of the developed physical education system for senior preschool children with special health needs in the inclusive educational environment with the help of methods of diagnostics of mental, physical, and socio-psychological development. The inclusive physical education target group consists of children aged 5-6 years old: 14 children with intellectual disabilities; 7 children with Down's syndrome, 38 children with mental developmental delay or general speech underdevelopment, and 72 children without developmental disorders.

## 5. Research Methods

The expert assessed the level of socio-psychological adaptation observing the children behaviour in the physical training classroom according to the relevant indicators. The expert was a kindergarten

psychologist. The indicators of socio-psychological adaptation of the preschool children with the special needs within the physical education inclusive system were assessed on the scale from -2 to 2:

- 2 – does not match completely;
- 1 – rather mismatches than matches;
- 0 – difficult to say;
- 1 – rather matches than mismatches;
- 2 – matches completely.

The indicators are interrelated and function in a close relationship. They allow determining the level of the socio-psychological adaptation of senior preschool children with special needs:

- sufficient level of adaptation (36 - 18 points) – the child is in a predominant happy or consistently calm emotional state during exercises and during physical exercise and health-improving mass events. He/she is in active contact with the physical education instructor, children, surrounding objects, quickly adapts to new conditions, independent;
- low level of adaptation (17 - -17 points) – a child's emotional state is unstable: a new stimulus causes a recurrence of negative emotional reactions. However, in case of emotional support from a physical education instructor or coach-tutor, the child shows physical activity, easier adapts to new situations and engages with peers during exercises;
- maladjustment (-18 - -36 points) – the child is dominated by autistic behaviour, aggressive-destructive reactions as the way out of a situation (motor protest, aggressive actions), he/she does not engage with peers during exercise and during mass events, the emotional state is active (crying, screaming), or the child shows no motor activity, and passive obedience, depression, tension are typical during exercise.

## 6. Findings

The diagnostic assessment of the psycho-pedagogical experiment was conducted in October 2016. The assessment of socio-psychological adaptation of senior preschool children with intellectual disabilities showed that 52% of the children had a sufficient level of adaptation, 19% - low level; 29% of the children found evident signs of inadaptability to the general type preschool environment.

Options of integrated and differentiated arrangement of physical exercise and health-improving activities were found in the course of educational activities and search for new forms of work with the children with special health needs. Quantitative and qualitative results of motor tests performance, socio-psychological diagnostics allowed identification of three subgroups of senior preschool children with intellectual disabilities with the different forms of inclusive physical education (Table 2):

- “targeted inclusion” – a child with special health needs was included in the system of physical education, mastering the physical education adjustment program individually with elements of group work in sensitive moments of intervention and educational activities (leisure activities, physical exercise and health-improving recreation events);
- “partial inclusion” – a child with special health needs was included in the system of physical education, mastering the physical education adjustment program in the course of the small group work, with elements of group work in sensitive moments of intervention and educational

activities (morning gymnastics, leisure activities, physical exercise and health-improving recreation events);

- “full inclusion” – a child with special health needs was included in the system of physical education on full-time basis within his/her age group (independently or with assistance), mastering the physical education adjustment program together with peers.

**Table 02.** Distribution of the preschool children with intellectual disabilities according to the forms of inclusive physical education at a preschool institution

Inclusion type	Children’s summarized profile	Number	%
Full inclusion	The children having no any concomitant developmental defects or having an Attention-Deficit/Hyperactivity Disorder/ autistic behaviour; good or average level of cardiovascular system functional condition; sufficient or low levels of physical fitness, adequate or low level of socio-psychological adaptation	6 (5 years) 6 (6 years)	57%
Partial inclusion	The children having an Attention-Deficit/Hyperactivity Disorder/ autistic behaviour; satisfactory level of cardiovascular system functional condition or average heart failure; low or unsatisfactory level of physical fitness, sufficient or low level of socio-psychological adaptation	2 (5 years) 2 (6 years)	19%
Targeted inclusion	The children having concomitant developmental defects (somatic diseases, heart failure, etc.), unsatisfactory level of physical fitness; socially maladjusted	3 (5 years) 2 (6 years)	24%

Meanwhile, the conducted psychological and pedagogical diagnostics served as a basis for determining fields of the relevant, nearest and perspective development of mental, physical and socio-psychological qualities.

The design of the educational trajectory for the adapted physical education program development was based on the principle of “substituting ontogeny”: a sufficient level of social adaptation of the child could serve as compensation basis for successful mastering of motor skills and, alternatively, a sufficient level of physical fitness would allow the child to adjust successfully in a peer group.

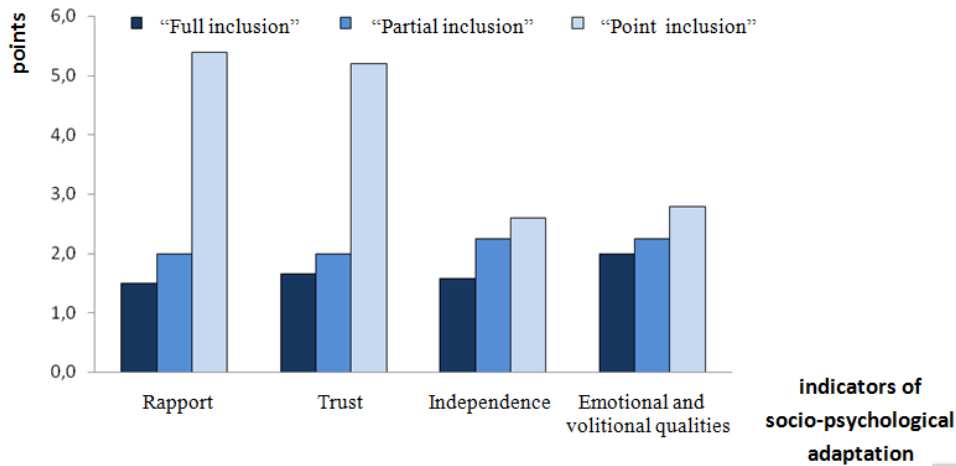
We conducted a control part of psycho-pedagogical experiment in June 2017. The data obtained were processed using methods of mathematical statistics – G-Criterion (signs criterion). The number of positive changes in the development of physical qualities and growth rates of physical qualities as well as the increase of socio-psychological adaptation were selected as a criterion of the study effectiveness.

The experiment showed that there was a positive dynamics of socio-psychological adaptation of the children with intellectual disabilities (Table 3) ( $p \leq 0,01$ ).

**Table 03.** Shifts level estimation of indicators for the socio-psychological adaptation of preschool children with special needs at the beginning and the end of the school year (G-Criterion)

Indicators	Shifts			$G_{emp}$	$G_{cr}$ $p \leq 0,01$
	Positive	Negative	Zero		
Rapport	18	0	3	$0 \leq 3$	
Trust	19	0	2	$0 \leq 4$	
Independence	17	0	4	$0 \leq 3$	
Emotional and volitional qualities	16	0	5	$0 \leq 2$	

Comparative analysis of the socio-psychological adaptation of the senior preschool children with different intellectual disabilities in all the three typological sub-groups showed the indicators largest increase in “targeted inclusion” group as compared to the other groups (Fig. 1).



**Figure 01.** Trends in the indicators of the socio-psychological adaptation of the children at senior preschool age with various disabilities in the different subgroups

## 7. Conclusion

The obtained results evidence the proper arrangement of physical education process for preschool children with special needs within the inclusive educational environment that ensures comfortable interaction of children with special needs with children without developmental disabilities. Emotional support of a physical education instructor and a teacher as well as the inclusion of parents/legal representatives promote the involvement of the child with special health needs in individual and group physical activity. At the end of adaptation period (1-2 months), most of the children have joyful or consistently calm emotional state during the exercises, and physical exercise and health-improving mass events. Talks to the children without developmental disabilities held jointly by a teacher and psychologist allow to form their adequate perception of children with special needs as well as a sense of responsibility for their actions in relation to peers with special needs. A comfortable interaction of the pupils during physical education classes has contributed to the development of social trust sense in the children with intellectual disabilities: trust in peers and trust in the physical education instructor when they performed movements that caused difficulties.

Our psycho-pedagogical experiment has resulted, as well, in the children without developmental disabilities starting to show much more compassion, empathy and understanding, and becoming more tolerant to the children with special needs. This is especially important during their inclusive physical education.

Thus, the implementation of inclusive physical education program for senior preschool children with special needs has resulted in a sufficient level of socio-psychological adaptation expressed by the indicators of independence and confidence in the children with special needs, and tolerance and responsibility among the “standard” children as well as indicators of efficient interaction during physical education classes.

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