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International Conference «Humanity in the Era of Uncertainty»**ACADEMIC ADAPTATION AS OVERCOMING UNCERTAINTY
IN PRIMARY SCHOOLCHILDREN WITH DISABILITIES**

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Abstract

The article presents comparative analysis results concerning academic adaptation characteristics in primary school students with disabilities and healthy primary school students. The purpose of the study is to identify academic adaptation peculiarities in primary school students with disabilities. The study was carried out at general education and correctional schools in Saratov (Russian Federation). The study involved 85 primary school students with standard development and 32 primary school students with disabilities. Research methods included the unique questionnaire developed by the authors and scales (Cronbach's Alpha 0.76 - 0.93). We used statistical methods to process the data: U-Mann-Whitney test and factor analysis. It has been theoretically substantiated that academic adaptation is associated with the uncertainty of situation and is achieved in the process of overcoming uncertainty. The study has shown that all the levels of components of school adaptation for schoolchildren with disabilities are reduced in comparison with those for healthy students. The least manifested component is the cognitive component of academic adaptation in individuals with disabilities. The study has revealed that major indicators of adaptation are similar in all schoolchildren, which indicates that there is a single adaptive response to school conditions. The differences are related to social success/failure, i.e. students with disabilities show signs of social success absence.

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1. Introduction

Presently the problem of academic adaptation can be viewed as one of the most urgent problems in psychology. Rapidly changing conditions, including those in the field of education, require a person to quickly adapt and to find an optimal balance with the environment. At the same time, the situation of uncertainty conditions actualization of stress, a decrease in the possibilities of a rational and effective response under conditions of increased energy consumption reduces individual adaptive capabilities and adaptation's success in general. This can be especially difficult for students with disabilities. In order to provide effective psychological and pedagogical assistance, it is important to demonstrate clear understanding of academic adaptation's peculiarities when dealing with schoolchildren with disabilities.

2. Problem Statement

Educational services must be provided for all children regardless of their development characteristics. At the same time, health limitations leave an imprint on various aspects of a child's development and can reduce his/her adaptive capabilities. General patterns of mental development of such children (layering of secondary and tertiary defects, actualization of social maladjustment risk, difficulties in receiving and processing information, insufficient verbal mediation, etc.) can have a negative impact on their academic adaptation. In this regard, the issues of generality and specificity of adaptation processes in children with disabilities and their normally developing peers require detailed study. These types of studies are necessary not only from the practical point of view, but also from the theoretical one, since they contribute to a more specific understanding of the phenomenon of academic adaptation as an integral, systematized phenomenon that can be observed under different conditions.

3. Research Questions

Academic adaptation of primary school students is a complex, rarely predictable and universal process for all children, which is conditioned by a number of environment-related factors, as well as individual characteristics of every student. It is a scientifically proven fact that academic adaptation unfolds differently in children with and without disabilities, which is, in our opinion, related to the latter's difficulties in realizing their own potential, uncertainty regarding their capabilities, as well as a lack of a clear life perspective vision. Uncertainty arises when a person, who is on the verge of making a decision, cannot determine the value of objects and events, and/or when a person cannot evaluate the consequences due to insufficient information (Bailey et al., 2009). Rosenthal et al. (2001) identified 6 key reasons for uncertainty formation: 1) disease etiology, 2) treatment effectiveness, 3) predicting the course of the disease, 4) social support measures, 5) labelling (ambiguity of society's attitude towards disabled people), 6) the issue of accepting one's own limitations. Uncertainty is always frightening, especially when it comes to a child with disabilities who perceives it as something that carries a threat. This can lead to a psychological disorder known as "intolerance of uncertainty" (Saricam et al., 2020), which is expressed through an increased level of anxiety, stress, fear and depression (Carleton et al., 2012; Jensen et al., 2016).

This leads to a quite pertinent question of how exactly uncertainty caused by disability affects academic adaptation of a primary school student?

Another significant question concerns negative consequences of uncertainty that prevent full-fledged academic adaptation, their identification and neutralization of their influence. Diagnosing and predicting uncertainty, which is a psychological stressor for children with disabilities (Koocher, 1984; Lenhard et al., 2005), are of great importance for correcting the process of their academic adaptation. Emotional stress associated with uncertainty caused by one's disability prevents the child from fully implementing coping strategies in the educational environment. Physical uncertainty and uncertainty due to disability are predictors of depression (Lynch et al., 2001), which, in turn, lead to increased anxiety and withdrawal, which are the most obvious signs of school alienation (disadaptation) (Grigoryeva, 2017; Gurov, 2009; Shamionov, 2012). Family or "psychological resilience" (McConnell & Savage, 2015) is of great importance in terms of overcoming psychological distress, which is a result of primary schoolchild's personal uncertainty. Formation of psychological resilience, positive interaction among all its members are the factors necessary for overcoming uncertainty by a child in the process of academic adaptation (Muir & Strnadova, 2014). According to the supporters of the so-called "Hope theory", hope is a tool of motivation, thanks to which an individual is able to adapt to the new environment and its conditions (Snyder et al., 2000). Based on the foregoing, it can be assumed that uncertainty, as a psychological factor hindering full realization of a disabled student's potential in the process of academic adaptation, can lead to a number of psychological disorders in the absence of measures for timely diagnosis and correction of the situation (Smirnov, 2011).

4. Purpose of the Study

The purpose of the study was to single out peculiarities of academic adaptation in primary school students with disabilities.

5. Research Methods

The study involved 85 primary school students with normal development (28 second-graders: 13 males, 15 females; 27 third-graders: 12 males, 15 females; 30 fourth-graders: 15 males, 15 females). The study was carried out on a sample of students attending secondary school No. 59 in Saratov (Russia). The group of students with disabilities included 32 primary school students (8 first-graders: 5 males, 3 females; 12 second-graders: 4 males, 8 females; 4 third-graders: 2 males, 2 females; 8 fourth-graders: 7 males, 1 female). Based on the nosological criteria, the respondents were distributed as follows: visual impairment (visual acuity 0.05 – 0.2 on the better seeing eye with correction) - 18 primary school students, hearing impairment (hearing loss of the 3rd, 4th degrees) - 14 primary school students. The study was hosted by State Budgetary Educational Institution of Special Education "Boarding School (adaptive educational programmes) No.1 of the town of Engels" (Russia) and State Budgetary Educational Institution of Special Education "Boarding School (adaptive educational programmes) No. 3 of the city of Saratov" (Russia).

Research methods involved the unique questionnaire developed by the authors and scales. The survey form for primary school students includes 57 points, in which students are asked to evaluate

motivational, emotional, cognitive, communicative, personal (regulatory), and psycho-physiological characteristics of academic adaptation. We used four-dimensional scales. The validity of all scales is theoretically substantiated; the scales have been checked by the internal consistency criterion (Cronbach's Alpha 0.76 - 0.93). The following statistical methods were used for data processing: descriptive statistics (mean value), Cronbach's Alpha test, Mann-Whitney U-test, and factor analysis.

6. Findings

Table 1. Comparative analysis of mean values for academic adaptation characteristics in primary school students with and without disabilities

Groups of primary school children	Motivational component		Emotional component		Self-assessment of													
Socialization with friends	3,26	2,03	1,82	3,29	3,92	3,16	1	1,77	0,91	1,42	3,17	3,73	3,29	3,38	2,77	3,27	2,92	1,7
Receiving good marks	2,5	2,6	2,9	3,04	3,85	3,02	1,6	1,78	1,07	1,31	1,9	2,99	2,28	2,35	3,29	3,44	3,15	1,48
Cognitive motivation	221	432	134	445	465	460	457	482	412	427	133	410	223	342	433	408	425	439
External positive motivation	0,01	0,08	0,001	0,09	0,47	0,44	0,32	0,63	0,27	0,38	0,001	0,06	0,01	0,04	0,08	0,21	0,12	0,17
External negative motivation																		
Emotionally-positive environment																		
Positive emotions during the lesson																		
Positive emotions during the break																		
Positive emotions while interacting with a teacher																		
Positive emotions while thinking about school																		
Cognitive component																		
Randomness																		
Communicative component																		
Personal component																		
Intelligence																		
Behaviour at school																		
Academic success																		
Psycho-physiological component *																		

Note: *- reverse scale.

The Table 1 shows that motivational component of academic adaptation in all schoolchildren, both with and without disabilities, is moderately expressed. In primary school students with normal development external negative motivation for academic activity is more pronounced, while cognitive motivation is manifested to a lesser extent (see Table 1). Students with disabilities demonstrate a more pronounced

external negative motivation to study, while motivation to socialize with friends at school is manifested to a lesser extent. Comparative analysis has shown that significant differences in the strength of the cognitive motivation for academic activity can be observed, i.e. it is higher in schoolchildren with disabilities (see Table 1). It is possible that limitations of the channels of information flow in primary students with hearing or vision impairments increase the value of new information in the course of the learning process.

We can observe significant differences in motivation to socialize with friends at school, i.e. it is less expressed in younger schoolchildren with disabilities than in their healthy peers (see Table 1). In this case, communication restrictions associated with hearing or visual impairments in primary school students reduce the motivation for socializing with classmates. The communicative component of academic adaptation is also more pronounced in primary school students without disabilities

Emotional positive environment of academic adaptation is assessed by the students of both groups equally – above average (see Table 1). It can be seen that positive emotions are expressed to a higher degree during the break; they are weaker in the course of interaction with a teacher. The cognitive component of academic adaptation is more pronounced in students without disabilities (see Table 1), which is obviously associated with a longer period of receiving and processing information necessary for logical thinking processes.

The personal (regulatory) component of academic adaptation in primary school children with disabilities is less pronounced in primary school students with disabilities than that in their peers without disabilities (see Table 1), which indicates the problem area related to self-organization and self-regulation, as well as the need for external assistance in these matters.

One's self-assessment as a student is slightly higher in primary school students with disabilities (see Table 1), however, no significant differences were found in the two groups. The psycho-physiological component of academic adaptation is expressed in both groups slightly above average, taking into account the inverse scale (see Table 1). No significant differences were observed.

As a result of factor analysis, which was conducted using the principal component method with Varimax rotation and Kaiser normalization in the group of primary school students with disabilities, we have identified 7 factors that explain 65% of the variations and correlate with the types of their academic adaptation.

Previously, we carried out a factor analysis of the results of academic adaptation in the group of primary school students without disabilities. Seven factors were identified as well, which explained 52% of the variations. Let us compare academic adaptation types in primary school students with and without disabilities (see Table 2).

Table 2. Academic adaptation types in primary school students with and without disabilities

Academic adaptation types	
Primary school students with disabilities	Primary school students without disabilities
Positive emotions and states at school related to avoiding school problems	Avoiding school problems based on emotional self-regulation and thinking through actions at school
Easiness of adaptation based on emotional self-regulation and fulfilling teacher's requirements	Desire to improve normative behaviour at school
Good self-assessment and positive emotions of a student	Orientation towards academic autonomy and socialization with peers

Negative physical well-being based on the desire to improve one's academic activity	Psycho-physiological ill-being
Social ill-being in informal communication at school	Social success at school
Being focused on the role of a good student	Constant self-assessment as a good student
General emotional well-being at school	General emotional well-being at school

Table 2 shows that, in general, the types of academic adaptation in both groups of primary school students are similar in terms of their content. Both groups of students can adapt and avoid school problems, while using good emotional regulation. Academic adaptation based on normative behavior and fulfilling the teacher's requirements is also characteristic of students from both groups. Good self-assessment can form the basis for academic adaptation in both the first and second group of students. The types of adaptations associated with the role of a good student and general emotional well-being are similar in both groups. In the process of academic adaptation, negative psycho-physiological states can be experienced by both primary school students with disabilities and their healthy peers. The difference in the academic adaptation types can be observed in one point only, which is characterizing social success or absence of thereof in students. In the group of children with disabilities, there are signs of social failure in informal relationships, while in the group of schoolchildren without disabilities the result of academic adaptation is formalized in the form of social success. This emphasizes the importance and, at the same time, the difficulty of social interactions with peers and teachers for children with disabilities.

7. Conclusion

External negative and external positive motivation prevails in the structure of educational motivation of primary school students with disabilities and in that of conditionally healthy children, which indicates the dominance of external motivation control. Significant differences have been found in the cognitive motivation manifestation level: persons with disabilities are characterized by significantly higher indicators.

All school adaptation components of schoolchildren with disabilities are reduced in comparison with those pertaining to conditionally healthy students. The least pronounced component is the cognitive component of academic adaptation in students with disabilities, which indicates significant difficulties in their cognitive activity and the need for specially organized assistance, which is necessary to adapt to educational activities.

As a result of academic adaptation characteristics' factor analysis we determined its main types. Despite certain differences in the factor structures of healthy schoolchildren and schoolchildren with disabilities, the main indicators of adaptation reveal similarities, which indicate a unified adaptive response to school conditions. The differences relate to the social success/failure of schoolchildren expressed through their diametrical opposite in the adaptation process.

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