PERSONAL RESPONSE OF ADOLESCENTS WITH CEREBRAL PALSY TO A DEVELOPMENTAL DISORDER

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Abstract

Personality formation of students with cerebral palsy is greatly influenced by the specificity of their self-awareness of impairment and personal response to existing developmental disorder. Self-awareness of impairment is understood by us as the image of pathology existing in the individual’s perception and his emotions about it.

Different alternatives of personal reaction to the existing developmental disorder can lead to developing inferiority complex, low self-esteem, low level of aspirations, as well as cause some compensatory activity, which is the source and an important condition of successful socialization.

1 The article presents theoretical analysis of research in special psychology on the problem of self-consciousness of students with disabilities.

2 The article provides grounds for construction and application of the diagnostic model (developed by the author) for verifying the types of personal response to existing disorder of students with different types of developmental disabilities, that can be applied to children with cerebral palsy.

3 It also summarizes all the obtained results of an experimental study of the personal response to motor impairment of adolescents with cerebral palsy: the types of the self-awareness are identified, their representation is established, the specific features of the structural components of each type of personal response to motor disorder are identified and characterized.

4 There is an established relationship between self-awareness and perception of existing disorders of the locomotor system, characteristics of personal development and behavior of adolescents with cerebral palsy.

5 Mechanisms and conditions of development of the personal response to an existing developmental disorder were studied. In particular, the influence of defense mechanisms and the severity of motor impairment factors on the occurrence of self-awareness types.

The results of the research presented in the article determine the socio-psychological conditions for the prevention and reformation of unsuccessful types of response in terms of personal development and social adaptation.

Keywords: personal response to a developmental disorder, self-awareness, self-awareness of impairment, cerebral palsy, children with developmental disabilities.

1 INTRODUCTION

Formation of personality of children with disabilities is greatly influenced by the degree of understanding their own disorder and the depth of emotional experiences, which develop into the «self-awareness of impairment» (SAI). Different variants of SAI can lead to the formation of an inferiority complex, low self-esteem and low level of aspirations, which complicate general achievements in mental development. On the other hand they can lead to formation of compensatory activity, which is a condition for successful development and social adaptation [1]. In special psychology there is, firstly, extremely scant information about the mechanisms of formation and the characteristic features of various types of SAI of adolescents with cerebral palsy [2], and secondly, about the possible influence of the severity of motor disorders on the specificity of SAI. In addition, a theoretical analysis of psychological studies in this area revealed a lack of information regarding the diagnostic procedure for verifying types of SAI in people with disabilities. This situation makes it difficult to find ways to form SAI that will be acceptable for a successful personal development and successful integration of students with cerebral palsy into the society. The solution of these problems prompted us to undertake an exploratory work aimed at developing a theoretical model of verification
the types of SAI of students with disabilities with the subsequent application of this model for the experimental study of the specific nature of SAI of adolescents with cerebral palsy.

2 METHODOLOGY

The starting point for constructing a verification model of the types of SAI was the identification of structural components of this mental formation. When determining the structure of the SAI, we assumed this phenomenon to be a derivative of the specific characteristics of adolescent self-consciousness. This approach allowed us to identify the components common to self-consciousness and SAI (these components appear to be the structural formations of SAI):

1. cognitive (subjective ideas of the individual about the features of the existing impairment, degree of its severity, manifestation of this deficiency outward, and also awareness of the social consequences of the defect);
2. emotional-axiological (the attitude of the subject to the existing impairment and its social consequences, which may have different degree of severity and different modality of emotional experiences);
3. behavioral (external manifestations of personal response to impairment that may be objectified both in the signs of an individual's passive attitude, and in compensatory activity, ensuring an optimal level of viability).

The structural components of the SAI formed the basis for constructing a model of verification of the types of SAI, where the qualifying features of each type of SAI serve as a peculiar correlation of the singularities of an individual's awareness of his own impairment and the specifics of experiencing it. This model has two coordinate axes. On the Y-axis: indicators of the cognitive component of different modalities (realizing the impairment and at the same time recognizing its negative consequences - ignoring the impairment and denying its negative effects); on the X-axis: indicators of the emotional-axiological component of different modalities (calm, neutral attitude to the impairment (+) - acute negative experiences of the impairment (-)). The specificity of the ratio of the described indicators (cognitive and emotional-axiological) determines the spectrum of individual behavioral characteristics, which are located in our coordinate system "fanlike" in all four squares of it, forming a circle. Thus, in each quarter of the coordinate system, depending on the ratio of the indicators of the intellectual, emotional and behavioral components, appears a «character» of the type of SAI and gets its own name. It should be noted that in determining the names of the types of SAI, we, to a certain extent, relied on the nomenclature of concepts related to the personal response to a deficiency already used in the special literature [3]. It seems to us that, in our case, doing so we are able to remain the accuracy and effectiveness of using these concepts to identify the types of SAI.

A clear awareness of an individual's own deficiency with a fairly calm emotional attitude towards him causes behavioral reactions aimed at maximum existing developmental disorders compensation and, accordingly, is called the “compensatory type of SAI” (right upper square).

Awareness and recognition of an existing developmental disorder, accompanied by negative emotional experiences, lead to asthenic behavioral reactions and is given a similar name: “asthenic type of SAI” (left upper square).

Ignoring the individual's own deficiency, due to the action of defense mechanism repression, minimizes asthenic emotional reactions about it and leads to a lack of desire to compensate impaired functions ("SAI of the form of repression" (right lower quadrant).

Demonstrative external disregard of an existing developmental disorder, combined with the individual's inner experiences about it, leads to desire to prove to others and to themselves that the impairment does not matter ("hypercompensatory type of SAI” (lower left square on the axis) .

Taking into account all the above, a coordinate system is formed, reflecting the location of the SAI types with their names, which allows to verify the SAI type of each subject (Fig. 1).

Verification of the SAI types of adolescents with cerebral palsy was carried out on the basis of quantitative and qualitative analysis of empirical data obtained during an individual psychological experiment. The quantitative analysis was subordinated to the main task - on the axes of coordinates to reflect the total value of the unified results of the adolescents completing the tasks for each component of SAI. At the intersection of the normals located on Y- and X-axes a point is formed, reflecting the SAI type of the particular subject. Depending on the location of this point, the identified
SAI type may have a distinct intensity (located at the center of the quarter), or have signs of neighboring SAI types (located closer to the axes). Qualitative analysis of experimental data was aimed at identifying and evaluating the weight of interacting factors that ultimately determine the origination of a particular SAI type.

![Figure 1. Model of verification of types of SAI](image)

When organizing a study of SAI of adolescents with cerebral palsy, we were faced with objective difficulties that lie in the absence of psychodiagnostic techniques aimed directly at studying this mental and personal formation. If we consider SAI to lie in the structure of self-consciousness, it allows us to use diagnostic techniques for studying self-consciousness. However, focusing empirical research on the study of the SAI of adolescents, rather than their self-consciousness as a whole, we considered it expedient to carry out a known modification of the existing methods that could capture the specifics of the structural components of the subjects' SAI. The main criterion in the selection and modification of psychodiagnostic methods was their maximum focus on the study of the subjective markers of SAI that we identified. Subjective markers show "pain points", areas of the individual's most intense experiences in connection with an existing deficiency. They are projected in all the structural components of SAI and allow one to "targetedly" study its essential aspects.

We subsumed to subjective markers of SAI the following: 1) health/illness; 2) appearance, physical abilities; 3) social status, popularity; 4) perceptions of the compensatory possibilities, of their own future; 5) occurrence/absence of anxiety and fears caused by a motor deficiency and its social consequences; 6) subjective feeling of happiness and satisfaction with life. On the basis of the formed complex of diagnostic methods, the features of the structural components of the SAI of adolescents were studied. For an experimental study of the cognitive component of SAI we used Twenty Statements Test (TST), developed by M.Kuhn, T.McPartlend, and questionnaire «Health, Activity, Mood», developed by researchers of 1st Moscow Medical University. We revealed the specificity of the emotional-axiological component of SAI with the use of a modified version of the “Unfinished sentences” technique, the Pierce-Harris Children's Self-concept Scale and the Rosenberg Self-esteem scale (RSES). The behavioral component of SAI was studied by us using the Self-efficacy Scale, the Personal Strain Questionnaire (PSQ), and the method of expert assessments.

3 RESULTS

3.1 Representation and characteristics of types of SAI of adolescents with cerebral palsy

As a result of the analysis of empirical data, individual adolescents' perceptions about their motor disorders and the degree of concentration on them were revealed; characteristics of the experience of the social consequences of the deficiency were studied. Also the severity of the defense mechanisms were examined, the styles of behavior of the respondents, their perception of their own activity and social self-efficacy were studied. The detected specificity of the personal reaction of the subjects to their own deficiency allowed us to verify their types of SAI. In the group of adolescents with cerebral palsy the following representation of SAI types was revealed: asthenic (30.3%), compensatory (20.2%), astheno-compensatory (18.2%), hypercompensatory (21.2%), SAI in the form of repression (10.1%). Quantitative and qualitative analysis of empirical data revealed significant differences in the structural components of the SAI types that we identified, which allows us to consider each of them to
be an independent type. Summarizing the data obtained, we consider it appropriate to characterize the identified SAI, taking into account the specifics of their structural components.

**Asthenic type of SAI:**

Cognitive component: hypertrophied or realistic ideas about the existing deficiency, a clear awareness of the limitations of their own capabilities; excessive fixation, "obsession" of consciousness on the existing motor disorder; focus on the negative social consequences of motor failure; underestimation of motor disorders compensation; lack of confidence in oneself and in the possibility of positive life prospects; general negative self-perception, low self-esteem, manifested in the predominance of negative and neutral self-characteristics.

Emotional-axiological component: negative feelings about the existing deficiency and its outward manifestations; emotionally painful reaction to the difficulties and failures associated with motor failure; acute experience of the social consequences of motor failure; occurrence of anxiety and fears caused by motor failure and its social consequences; presence of desires associated with deliverance from the disease (they usually have fantasy character and are not the motive of activity); general self-satisfaction; lack of feeling subjectively happy, depressive states.

Behavioral component: passive life position, indifference, non-participation in activities and communication; low assessment of self-efficacy, lack of self-reliance and ability to diffuse the manifestations of the deficiency; the absence of an outwardly expressed intention to overcome difficulties, episodes of despair, blocking the general activity; stubbornness, tearfulness, irritability; desire for social exclusion; egocentric attitudes, dependent and accusatory attitudes towards parents are possible, which are caused by ego-protective mechanism of projection.

**Compensatory type of SAI:**

Cognitive component: clear and adequate understanding of the existing deficiency; a fairly realistic evaluation of the social consequences of motor failure, realization of the limitations of their capabilities in certain types of activities; lack of excessive concentration on the existing disorder; a high assessment of their own compensatory opportunities, combined with an awareness of personal responsibility for the well-being in the future; overall positive self-perception, the predominance of positive self-characteristics.

Emotional-axiological component: adequate, fairly calm emotional reaction to a motor failure and its outward manifestations; absence of strong asthenic experiences, anxiety and fears associated with the existing developmental disorder and its social consequences; adequate emotional response to success and failure; optimistic perception of their future, confidence in their own success and well-being; general self-satisfaction, self-acceptance, feeling of happiness; episodic decrease in mood (on a general positive emotional ground).

Behavioral component: high social activity; desire to overcome existing problems, to diffuse the effects of the deficiency; persistence and diligence when completing of recommendations of specialists; ability to overcome difficulties caused by motor failure; self-reliance, self-efficacy; initiative in communicating with adults and peers; behavior is determined by defense mechanisms of rationalization and compensation.

**Astheno-compensatory type of SAI:**

The cognitive component: in its manifestations is identical to the compensatory type of SAI with a prominent tendency to concentrate on the existing developmental disorder, which increases as the motor failure becomes heavier.

Emotional-axiological component: emotional response to a motor failure and its social consequences is similar in manifestations to the asthenic type of SAI, but is less prominent; it is typical for asthenic experiences to increase with the weighting of the deficiency; despite the negative experiences associated with motor insufficiency, self-esteem remains high enough, the overall self-attitude is positive, their own future is perceived optimistically, regardless of the severity of the impairment.

Behavioral component: active life position prevails, the desire to overcome the existing negative effects of the deficiency; there is an understanding of the need for regular training with specialists, diligence in the tasks completion is typical; activity aimed at overcoming motor deficiencies and their social consequences is occasionally replaced by inactivity, due to lack of confidence in their own strengths, depressive states; behavior instability is determined by the complex action of ego-defensive
mechanisms of rationalization, projection and compensation, with a tendency to increase projection and weaken compensation as the deficiency worsens.

**Hypercompensatory type of SAI:**

Cognitive component: demonstrative disregard of a motor failure with a clear awareness of the very fact of its presence; deliberate denial of the negative effects of the deficiency; the desire not to focus on the existing impairment, not to give it meaning; overestimated self-esteem and over-evaluation of their own compensatory capabilities; idealized view on the future, ignoring the limitations of their own capabilities; overall positive self-perception.

Emotional-axiological component: external demonstration of indifferent and insensible attitude to deficiency is combined with inner experiences about their own motor disorders, which manifest in mood swings; the desire to emphasize the insignificance of the existing impairments and convince themselves and others in it; no trace of anxiety and fears associated with a motor failure and its social consequences; a demonstrative denial of the dependance of the arising difficulties and problems on the motor pathology; general self-satisfaction, self-acceptance.

Behavioral component: polarity of behavior: increased compensatory activity, the mobilization of internal forces against the ground of emotional uplift is replaced by short-term states of despair arising from failures and unjustified expectations of fast and effective results of their own compensatory activity; activity of the defense mechanism of denial.

**SAI in the form of repression:**

Cognitive component: inadequate, distorted perception of the existing developmental disorder, manifesting in the ignorance of a motor deficiency and its social consequences; lack of awareness of the limitations of their own capabilities in certain activities; unrealistic, high self-esteem, positive self-perception; optimistic perception of their own future.

Emotional-axiological component: the absence of negative emotional experiences about the motor defect, its social consequences, as well as outward manifestations; lack of recognition of the dependance of life difficulties on motor failure; lack of anxiety and fears associated with a motor impairment and its consequences; euphoric mood; unconditional self-acceptance, self-satisfaction, a feeling of happiness.

Behavioral component: prominent activity of the defense mechanism of repression, leading to a distortion of self-perception and blockage of compensatory efforts; moderate activity and social activity that does not have a focus on overcoming the deficiency due to the lack of need for it; lack of diligence and persistence is typical, lack of motivation and purposeful behaviour; besides the repression defense mechanism, projection and denial are also expressed, which reflects real, but unresolved internal and external conflicts.

### 3.2 Influence of the severity of motor failure on the development of SAI of adolescents with cerebral palsy.

We examined the percentage ratio of the occurring SAI types of adolescents with different severity levels of cerebral palsy, which made it possible to trace the influence of the severity factor of motor insufficiency on the formation of SAI. The analysis of quantitative data showed that the asthenic type of SAI is most often found with mild cerebral palsy (37%) and to a lesser extent (28% each) with moderate and severe. The astheno-compensatory type of SAI prevails with a moderate degree of cerebral palsy (21%) and is less expressed with severe (15%). The frequency of occurrence of the compensatory type of SAI decreases as the motor failure becomes heavier from 27% with a mild degree to 15% with a severe degree. The opposite tendency is observed in the hypercompensatory type of SAI: the worse the impairment, the more often this SAI type occurs (24% is severe, 21% is average, 18% is light). The latter tendency is especially acute in SAI in the form of repression: in case of mild motor insufficiency this type of personal reaction to the defect does not occur at all, and as the defect worsen, its percentage ratio increases (average level - 12%, heavy level — 18%).

### 4 CONCLUSIONS

1 A structured approach to the study of self-awareness and personal response to the existing impairment of students with disabilities allowed to develop a diagnostic model for verifying types of SAI.
2 An experimental study of the personal response to a deficiency of adolescents with cerebral palsy using the developed diagnostic model made it possible to verify the SAI types in this category of children, to give them a qualitative characterization and determine their representation.

3 The obtained data on the SAI types allowed us to individualize the approach of creating the socio-psychological conditions for the prevention and adjustment of the process of the formation unfavorable SAI types.

4 Research data suggests that the most important mechanism for the formation of the specificity of SAI is the action of psychological defense mechanisms: such productive defense mechanisms as rationalization and compensation contribute to the formation of the most successful compensatory type of SAI. The acute effect of the ego-defense mechanisms of projection, denial and repression leads to the formation of types of SAI that are less successful for personal development.

5 On the basis of experimental data, it was established that the severity of a motor impairment is one of the most important factors in the SAI formation: as the motor failure becomes worse, the likelihood of the formation of a repressive form of SAI is increased, as well as the hypercompensatory type of SAI. The inverse trend is observed in the formation of a compensatory type of SAI: the probability of its occurrence decreases when the motor insufficiency worsen.

REFERENCES

