

PSYCHOLOGY

The specifics of emotional reactions of children with psychophysical disabilities and their correction

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Annotation. The difficulties of emotional regulation is a common factor of emotional and behavioral problems of children with psychophysical disabilities. The approach to its study and implementation should be presented as an integrated model, built on the basis of an adequate system of psychocorrectional programs. In this study we identified the predominant emotional range of children with autism spectrum disorders, retardations of mental development, cerebral palsy, as well as of children without any pathology before- and after taking the course of dolphin assisted therapy.

Keywords: *emotional range, psychophysical disabilities, emotional reactions, children, correction, emotional regulation*

Introduction. Specificity of the prevailing emotional reactions of children with psychophysical disorders differs in between and from that of healthy children. In this connection the question of emotional and behavioral regulation often confronts parents and professionals. This article refers particularly to emotional range of healthy children and children with autism spectrum disorders (ASD), children with retarded mental development and children with cerebral palsy. Also we consider specific peculiarities and changes in emotional range of mentioned above groups of children in the context of dolphin assisted therapy correctional program.

Overview of publications on the topic. Key issues raised in relation to children with psychophysical disorders relate to the role of social skills training in the rehabilitation process.

Ian Robertson, Alison M. Richardson and Sheila C. Youngson pointed that rehabilitation should be complex and include the training of the processes of perception, cognition, motor and motivational processes, which might be impaired in people with retarded mental development. Social skills training programs mainly focused on the behavioral and motivational aspects, paying a lot less attention to the cognitive functions and the process of perception. Those programs might be much more successful in the context of the children integration into society if they were to perform also the function of a safe and stimulating environment [7].

In the studies of parent-child interaction in the families with children suffering from cerebral palsy, the traits of broken relationships were identified. In those dyads (mother-child), where more serious problems in the relationships had been discovered, more children had suffered greater social and communicational problems and difficulties of adaptation. Therefore, the purpose of early psychological correction of children was to improve the quality of relations within the mother-child dyad [6].

Researchers Marian D. Sigman, Connie Kasari, Jung-Hye Kwon and Nurit Yirmiya studied the peculiarities of attention, mimical and behavioral reactions of autistic children, children with the retardation of mental development and children without any pathology responding to adults which were under the influence of stress, fear and discomfort. Children with the retardation of mental development and children without any pathology were very attentive to the adults in all three states. However, many children with autism ignored or missed the above men-

tioned adults' negative affects. A group of children with autism paid less attention to adults which demonstrated their poor health, and they were more engaged into playing the toys, in contrast to other groups of children. Autistic children were also less sensitive to the emotions of fear of adults, but their behavior was not different from that of healthy children. Active mimical reactions were observed among children from different groups in response to the situation in individual cases. That study pointed at the importance of social learning experiences that influenced the formation of the child's personality [8].

One of the reasons why the emotional and behavioral difficulties were more common among children with cerebral palsy, was the fact that the child might consciously feel embarrassed by his / her own desire to be like other children, and as a result – experiencing emotional problems and the feeling of isolation [4].

Emotional and behavioral problems were a serious problem for children with autism spectrum disorders, which by definition had the impairments in social and communicative functioning, they had limited range of interests and needed to practice their own stereotyped behavior. Emotional and behavioral problems may lead to the increase of the initial impairments. Children with autism spectrum disorders often suffered from anxiety, depression, angry reactions. It was important to take into account all the emotional manifestations, rather than focus only on the anxiety, as that often happened [9].

The difficulties of emotional regulation is a common factor of multiple emotional and behavioral problems of children with autism spectrum disorders. The approach to its study should include a variety of methods, and be presented as an integrated model, built on the basis of an adequate system of psychocorrectional programs [10]. **The purpose** of work is identification the predominant emotional range of children without any pathology, as well as of children with autism spectrum disorders, retardations of mental development, cerebral palsy before- and after the course of dolphin assisted therapy.

Materials and Methods The sample consists of 60 people, 20 of them - children with autism spectrum disorder in the ages of 3 to 13 years (10 girls and 10 boys), 20 - with the retardation of mental development (10 girls and 10 boys) and 20 - with cerebral palsy (10 girls and 10 boys of the same age).

Organization of the study. Before the course of dolphin assisted therapy, which was held at the dolphinarium

"Nemo" (Odessa), the set of psycho-diagnostic techniques was offered to assess the emotional state of children. Then, the same set was proposed to the same children again on passing 10 sessions of the course. Tracking changes in the level of the child's emotional state was done with the help of author profiles, in which recipients were asked to mark the changes in different spheres of life and emotional state; also the changes in the emotional range of recipients were investigated using the psychodiagnostic instrument "Differential scale of emotions" after C. Izard [5].

Results and Discussion Children did the exercises in the game format together with a dolphin on the platform, aimed at correcting the impairments related to traffic organization on the cortical level. In particular in the context of improving the work with difficulties of the automation of the object actions due to the increased attention to the details of movement. Also, children were encouraged to perform exercises, aimed at correcting disorders of perception, attention and memory; exercises focused on the correct interaction with the psychologist, dolphins and other participants. After that stage the child together with the coach, and in some cases their parents went down into water to swim with dolphins. Parents attended classes staying close (in the pool) or at a distance (outside the pool) and had the opportunity to observe children, that also affected the behaviour of children and their further interaction with each other in dyads [2].

Children with the retardation of mental development showed the emotional reactions of amazement, shame, and interest; after completing the course of dolphin assisted therapy, the focus shifted to the amazement, joy and interest. The indicators of joy, sorrow, fear, shame and the coefficient of overall well-being changed at statistically significant level. The emotional reactions of joy spectrum increased in frequency and intensity of experiencing; the reactions of grief, fear and shame range, accordingly decreased and general well-being index had grown up, which meant that the state of health had improved (Table 1).

The emotions of interest, fear and shame dominated in the group of children with autism spectrum disorders. At the end of the course of dolphin assisted therapy joy, amazement and interest came to be the main. The frequency of experiencing joy and amazement increased at statistically significant level, and emotions of anger, fear and shame became less distinguished. Coefficient of overall well-being also increased, children began to feel better in general (Table 2).

In the sample of children, suffering from cerebral palsy, prevailed such emotional reactions as fear, amazement and anger. By passing the 10 sessions of dolphin assisted therapy it was noted that children experienced more joy, amazement and interest. The emotions of joy, anger, fear, shame, and overall well-being coefficient changed at statistically significant level. Fear and shame decreased in intensity, joy – increased. Coefficient of overall well-being increased also (Table 3).

Children without any pathology were characterised in emotional expression by the following reactions: amazement, interest and fear, - before going through the course of dolphin assisted therapy. The emotions of joy, amazement and interest prevailed after the course. The level of emotional reactions of joy, amazement, fear, shame and the coefficient of overall well-being showed the statistically significant difference. The indicators of fear and shame had been reduced, and the performance of joy, amazement and coefficient of overall well-being had increased (Table 4).

Table 1. Dynamics of the emotional range of children with retardation of mental development before- and after the course of dolphin assisted therapy (M ± SD)

Index	Before	After
Interest	5,071 ± 2,56	6,29 ± 2,16
Joy	3,64 ± ,84	10,07 ± 1,64*
Amazement	5,57 ± 2,28	7,07 ± 2,59
Sorrow	3,86 ± 1,29	3,00 ± ,00*
Anger	3,5 ± 1,16	3,07 ± ,27
Disgust	3,36 ± ,84	3,00 ± ,00
Contempt	3,07 ± ,27	3,00 ± ,00
Fear	4,29 ± 1,20	3,07 ± ,27*
Shame	6,07 ± 1,81	3,43 ± ,76*
Guilt	3,57 ± 1,22	3,00 ± ,00
Coefficient of overall well-being	1,34 ± ,28	1,97 ± ,36*

Footnote. * – p < ,005

Table 2. Dynamics of the emotional range of children with autism spectrum disorders before- and after the course of dolphin assisted therapy (M ± SD)

Index	Before	After
Interest	5,7 ± 4,35	6,1 ± 2,28
Joy	4,4 ± 1,17	7,5 ± 3,14*
Amazement	3,9 ± 1,45	6,2 ± 3,43*
Sorrow	3,3 ± ,48	3,3 ± ,48
Anger	4,2 ± ,92	3,00 ± ,00*
Disgust	3,00 ± ,00	3,00 ± ,00
Contempt	3,3 ± ,48	3,00 ± ,00
Fear	4,5 ± 1,51	3,00 ± ,00*
Shame	4,5 ± 1,35	3,3 ± ,48*
Guilt	3,3 ± ,48	3,00 ± ,00
Coefficient of overall well-being	1,24 ± ,61	1,71 ± ,57*

Footnote. * – p < ,005

Table 3. Dynamics of the emotional range of children suffering from cerebral palsy before- and after the course of dolphin assisted therapy (M ± SD)

Index	Before	After
Interest	3,55 ± ,93	4,91 ± 2,47
Joy	3,55 ± ,69	7,91 ± 1,97*
Amazement	5,45 ± 1,29	5,73 ± 1,85
Sorrow	4,27 ± 1,01	3,64 ± ,92
Anger	5,09 ± 1,45	3,55 ± ,69*
Disgust	4,09 ± 1,30	3,36 ± ,50
Contempt	3,09 ± ,30	3,27 ± ,47
Fear	6,18 ± 1,83	3,55 ± ,69*
Shame	4,73 ± 1,01	3,18 ± ,60*
Guilt	3,45 ± ,82	3,00 ± ,00
Coefficient of overall well-being	0,94 ± ,24	1,47 ± ,50*

Footnote. * – p < ,005

Table 4. Dynamics of the emotional range of children without any pathology before- and after the course of dolphin assisted therapy (M ± SD)

Index	Before	After
Interest	5,2 ± 1,75	6,00 ± ,82
Joy	3,6 ± ,97	11,4 ± ,97*
Amazement	6,6 ± 1,71	9,2 ± 2,25*
Sorrow	3,00 ± ,00	3,00 ± ,00
Anger	3,00 ± ,00	3,00 ± ,00
Disgust	3,3 ± ,48	3,00 ± ,00
Contempt	3,00 ± ,00	3,00 ± ,00
Fear	5,00 ± 1,63	3,00 ± ,00*
Shame	4,4 ± ,97	3,00 ± ,00*
Guilt	3,3 ± ,48	3,00 ± ,00
Coefficient of overall well-being	1,34 ± ,10	2,17 ± ,14*

Footnote. * – p < ,005

Conclusions. The emotional reactions of contempt, disgust and guilt were not distinguished in children of all four groups during the investigation.

The most vivid manifestations of change in emotional reactions after the course of dolphin assisted therapy became amazement, joy and fear, as well as interest and shame, – joy, amazement and interest moved into the category of prevailing, but the fear and shame became less noticeable.

Reducing the intensity of the emotions of grief was noted specifically among the children with retardation of mental development, and anger – among the children with cerebral palsy and autism spectrum disorders.

Overall health (coefficient of overall well-being) improved at a statistically significant level in all four groups after taking the course of dolphin assisted therapy, and the emotions of joy and amazement became prevailing in the emotional range of children.

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