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Peculiarities of Adaptive and Rehabilitation **Processes of Children** with Special **Educational Needs**

Olena VASYLENKO¹, Mykhailo CHAIKOVSKYI², Olena DOBROVITSKA3. Nataliia OSTROVSKA4. Svetlana KONDRATYUK⁵, Yulija LUCHKO⁶

- ¹ PhD in Pedagogy, Associate Professor, Department of Psychology and Pedagogics, Faculty of Health, Psychology, Physical Culture and Sports, Khmelnytskyi National University, Khmelnytskyi, Ukraine, e-mail: vasilenko.dm@ukr.net
- ² Doctor of Pedagogical Sciences, Professor, Director of Separate structural subdivision of the Higher Education Institution "Open International University of Human Development "Ukraine" Khmelnytskyi Institute of Social Technologies, Ukraine, e-mail: chaikov.me@gmail.com
- ³ PhD in Pedagogy, Associate Professor of Department of Legal and Information Technology, Separate structural subdivision of the Higher Education Institution "Open International University of Human Development "Ukraine" Khmelnytskyi Institute of Social Technologies, Ukraine, e-mail: libaddobr@gmail.com
- ⁴ PhD in Pedagogy, Associate Professor of Department of Psychology and Social Work, Separate structural subdivision of the Higher Education Institution "Open

Abstract: The paper examines the peculiarities of the adaptive and rehabilitation processes of children with special educational needs. It was found that one of the most significant issues of rehabilitation work with children with special educational needs is to create the conditions for their integration into society. This stipulates the determination of the state of their adaptive and rehabilitation potential formation suggesting identification of social characteristics and social relations of the children with special educational needs; definition of the levels of their learning opportunities, skills and abilities development; elucidation of the peculiarities of intra-family relations in families bringing up children with special educational needs; research of rehabilitation processes features being passed by children with special educational needs. For studying the state of adaptive and rehabilitation potential formation in working with children with special educational needs, we have conducted a diagnostic study among children with special educational needs who receive rehabilitation services at the Shepetivka City Center for Social Rehabilitation of Disabled Children of Khmelnytskyi region. The parents of the children took part in the study as well. The results of the diagnosis revealed that the children with special educational needs are dominated by medium and low levels of formation of self-concept and comprehention of their relations with the social environment; they are characterized by medium and low levels of general mental development; children with special educational needs suffer hostility and conflict in their families, while their parents experience feelings of guilt, anxiety, and mental stress; the difficulties being faced by the children with special educational needs during the rehabilitation process are mainly related to their focusing on their own illness. In this regard, we have developed and substantiated the forms and methods for regulating the adaptive and rehabilitation processes in working with children with special educational needs, which, in our opinion, should be applied by specialists at the centers for the social rehabilitation of children with disabilities.

Keywords: children with special educational needs; adaptive and rehabilitation potential; diagnostics; rehabilitation; forms and methods of working with children with special educational needs.

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International University of Human Development "Ukraine" Khmelnytskyi Institute of Social Technologies, Ukraine, e-mail: nata ostrovska@ukr.net ⁵ PhD in Psychology, Associate Professor, Chair of Department of Psychology and Social Work, Separate structural subdivision of the Higher Education Institution "Open International University of Human Development "Ukraine" Khmelnytskyi Institute of Social Technologies, Ukraine, e-mail: svetakondratvuk@ukr.net ⁶ PhD in Pedagogy, Chair of Department of Legal and Information Technology, Separate structural subdivision of the Higher Education Institution "Open International University of Human Development "Ukraine" Khmelnytskyi Institute of Social Technologies, Ukraine,

e-mail: vuliva.luchkov@gmail.com

Introduction

Ill health and deaseases are painful for everyone and even the most developed, economically prosperous society cannot prevent it. Remaining still relevant today, this issue is getting more acute and significant at the beginning of the third millennium, at a time of social change that substantially affects the fate of the individual and determines his life path.. The level of awareness of this problem in society plays an important role in creating favorable social conditions for the normal life of people with disabilities.

The current state of Ukrainian society is characterized by intensified attention to the problems of people with disabilities. After all, 2.74 million of people with disabilities live in Ukraine, this is about 6% of the population of our country. The relavence of this problem is also caused by the tendency of increasing number of children with special educational needs (Poroshenko, 2019, p. 10).

The development of modern Ukraine and its integration into the European space have a significant impact on the formation of educational policy. This issue is especially concerned with ensuring the right of children with special educational needs to education. The relevance of inclusive education is that 7.6 million children live in Ukraine and 37.7 thousand of them are children with special educational needs who study in special establishments of general secondary education as well as 15.8 thousand children are in sanatoriums, and only 11.8 thousand children are covered by inclusive education in regular schools. Therefore, the introduction of an inclusive educational environment is vitally important and topical issue for Ukraine (Poroshenko, 2019, p. 10).

Children with special educational needs demand special attention, which definitely actualizes the issue of their socialization and adaptation to the world around them, creating a favorable environment to meet their needs, ensuring socio-cultural mobility and more. In this regard, there is a need to distinguish, develop and implement methods for diagnosing adaptive and rehabilitation potential in children with special educational needs as well as models of social support for these children and adapting existing standards that best meet their needs.

Some aspects of the problem of adaptation, socialization and rehabilitation of children and youth with special educational needs have been addressed and scrutinized by Ukrainian researchers O. Vasylenko (2010), Yu. Volchelyuk (2009), R. Maranchak & O. Vasylenko (2013), M. Poroshenko (2019), M. Chaykovskyi (2008).

Some researches revealed the outlined issue of the development and substantiation of forms and methods of work on the regulation of adaptive and rehabilitation processes working with children and youth with special educational needs, they are: V. Afanasenko, T. Komar, N. Potapchuk, O. Vasylenko, L. Podkorytova and V. Havrylkevych (2021), L. Akatov (2003), S. Demchuk and O. Kuts (2003), A. Globa (2010), V. Havrylkevych, L. Podkorytova, L. Danylchuk, L. Romanovska, T. Kravchyna and O. Chovgan (2021), T. Illyashenko et al. (2003), V. Lyashenko (2004), A. Shevtsov (2004).

Issues of providing individual and differentiated approach to the education of children and youth with special educational needs are considered in the researches of J. Hoover & J. Patton (2004), T. Loreman, J. Deppeler & D. Harvey (2010), J. M. McGuire, S. S. Scott & S. F. Shaw (2006).

Characteristics of methods for diagnosing the socio-psychological development of children with special educational needs can be found in the textbook of Ukrainian researchers D. Romanovska & R. Mintyanska (2019), who described in detail not only the methods for diagnosing the adaptation and microclimate in inclusive classes, but also substantiated the methods of diagnosis of indicators of the cognitive sphere and emotional and volitional sphere development of children with special educational needs.

In the dissertation Ukrainian researcher O. Vasylenko (2010) developed and tested the method and procedure for determining the levels of adaptability of primary school children with special educational needs to secondary schooling, which is based on the author's criteria and indicators of adaptability of primary school children with special educational needs to general secondary school.

Thus, we can summarize, that Ukrainian and foreign researchers pay attention to various aspects of working with children and youth with special educational needs. Scientists are convinced that the implementation of state and regional programs for improving their socio-psychological position in society depends on the introduction of effective forms and methods of work with this category of children and youth.

Issue studied

Despite the growing interest of researchers in the problem of socialization and adaptation of children and youth with special educational needs to the conditions of social life, the problem of developing and implementing forms and methods of diagnosis, development and regulation

of adaptive and rehabilitation processes in this category of children and youth is still not disclosed.

Therefore, the **aim of the research** is to diagnose the state of formation of adaptive and rehabilitation potential in children with special educational needs, and to develop forms and methods of regulating adaptive and rehabilitation processes in this category of children.

Methods and methodology of the research

The study involved 25 children with special educational needs aged 8-10 who received rehabilitation services at the Shepetivka City Center for Social Rehabilitation of Disabled Children in Khmelnytskyi region, Ukraine. Simultaneously, 22 parents of the children with special educational needs – the participants of the study – took part in the research..

It should be noted that the parents of the children who participated in the study gave verbal consent to their participation and the participation of their children and the processing of the results of the study without disclosing personal information.

Experimental work was carried out in several stages during September-December 2021:

The first stage of the research was conducted in order to diagnose the state of formation of adaptive and rehabilitation potential in the children with special educational needs. Diagnostic work was carried out in four areas:

- 1) social diagnosis suggested the study of basic social characteristics of the children and the identification of peculiarities of their behavior in various life situations. For this purpose, such diagnostic methods were used: the projective method "House-Tree-Man" and the projective method of personality study (Gilles, 1960).
- 2) pedagogical diagnostics involving the assessment of educational opportunities and achievements of the children with special educational needs applying "Test Interview (authors A. Kern J. Yerasek)".
- 3) diagnosis of the peculiarities of families upbringing the children with special educational needs, i.e. analysis of relationships in the families of the children using the projective method "Kinetic Family Drawing" and the method of "Family Anxiety Analysis" (FAA).
- 4) diagnosis of the peculiarities of the rehabilitation processes in the children with special educational needs, namely: the assessment of the level of adaptation of the children to the rehabilitation process and the evaluation of the spesialists' work of the Shepetivka City Center for Social Rehabilitation of Disabled Children by the parents of the children with

special educational needs. For this purpose, a survey of the parents of the children with special educational needs was conducted on the basis of the questionnaire developed by us.

The purpose of the second stage of the research was to analyze the results of the diagnosis of the levels of adaptive and rehabilitation potential in the children with special educational needs.

At the third stage of the research, based on the results of diagnostic study, forms and methods of regulation of adaptive and rehabilitation processes in the children with special educational needs were developed and substantiated.

Research results

It should be noted that the Shepetivka City Center for Social Rehabilitation of Disabled Children (hereinafter - the Center) is a special educational and upbringing institution of labor and social protection system, which performs work on social adaptation in combination with correctional education and upbringing of children with physical and mental disabilities without separation from the family but involving the child's family members in the rehabilitation process. The activities of the Center are guided by the issues of comprehensive rehabilitation of persons with disabilities in accordance with the Order of the Ministry of Social Policy of Ukraine dated March 14, 2018 № 355 (Ministry of Social Policy of Ukraine, 2018).

Based on the diagnosis and diagnostic results for each child with special educational needs, the specialists of the medical advisory commission compile an individual rehabilitation program. Then the parents of a child with special educational needs or their tutors apply with an individual rehabilitation program to the Department of Labor and Social Protection of the Shepetivka City Council of Khmelnytskyi region, where they get an appointment card for rehabilitation services which they can obtain at the Shepetivka City Center for Social Rehabilitation of Disabled Children. The Center has a material and technical base that meets all the necessary needs for the rehabilitation of a child with special educational needs: rehabilitation equipment for working with children with musculoskeletal problems; base of didactic materials for correctional work; medical equipment used in combination with physical rehabilitation measures.

In the Center the rehabilitation work with children with special educational needs is provided in the following areas: prevention, reduction or overcoming of physical and mental disorders; correction of developmental disorders; training in basic social and household skills; development of abilities; creating preconditions for their integration into

society (the Shepetivka Center for Social Rehabilitation of Disabled Children, 2007).

Given that one of the most important areas of rehabilitation work with the children with special educational needs is the creation of the conditions for their integration into society, we conducted a diagnostic study with the purpose to determine the state of their adaptive and rehabilitation potential and, based on diagnostic outcomes, to develop forms and methods of regulating adaptive and rehabilitation processes in the children with special educational needs.

The first direction of our diagnostic research was to identify the behavior of children with special educational needs in various life situations and study the basic social characteristics of these children (social diagnosis). For obtaining the outcomes, we applied the projective method "House-Tree-Man" modified by R. Belyauskaite (1994) and the projective method of personality study (Gille, 1960; Lemak & Petryshche, 2012, pp. 576-587).

For evaluating the degree of formation of social ties of the children with special educational needs, their perception and knowledge about social reality, we used the projective method "House-Tree-Man" modified by R. Belyauskaite (1994). To perform this technique, children are offered paper, a soft lead pencil, a sheet of paper. The standard drawing sheet is folded in half. On the first page, in a horizontal position, "House" is written in printed letters at the top, on the second - "Tree", on the third - "Man", on the fourth - "name of the child, date of the study". A soft lead pencil is usually used for drawing, as changes in the force of pressure can be most clearly seen when using this tool. The instructions given to the child are: "Please draw the house, the tree and the person. Try to do your best." All questions which can be followed should be responded and it must be explained that the child can draw any way he/she desires.

Execution of the projective method "House-Tree-Man" in the modification of R. Belyauskaite consists of two parts: the process of drawing and conversation after it. Observing the child's drawing provides a lot of information. Usually all spontaneous statements are recorded, any unusual movements are noted. Having completed the drawing, the child is asked a few questions about his/her picture. The survey begins with a drawing of a man. For example, a child is asked about a person he/she has painted, the age of the person he/she has painted, what a man in the picture has been doing, what his mood is, if a man reminds him/her of someone he/she knows. Usually the questions about drawing grow into a conversation about the child's life perception (Belyauskaite, 1994).

The results of the diagnosis of development of such symptom complexes as hostility, conflict, aggression and negativism in the children with special educational needs by means of the method of "House-Tree-Man" are presented in Table 1.

Table 1. Levels of development of hostility, proneness to conflict, aggressiveness and negativism in the children with special educational needs according to the method "House-Tree-Man"

Symptom complex	Level	#	%
Hostility	Below normal	6	24
	Norm	10	40
	Above normal	9	36
Proneness to conflict	Below normal	4	16
	Norm	10	40
	Above normal	11	44
Aggressiveness	Below normal	4	16
	Norm	14	56
	Above normal	7	28
Negativism	Below normal	2	8
	Norm	8	32
	Above normal	15	60

Source: Authors' own conception

As can be seen from Table 1, the level of aggression is lower than normal in only 16% of children with special educational needs. The same indicator was determined for the level of conflict. A high level of negativism as a type of behavioral disorder was shown by the majority of surveyed children (60%). Only the hostility indicators were positive: in most children this type of behavior disorder is within the norm (40%) and below the norm (24%).

The generalized results of diagnostics of levels of social relations formation of the children with special educational needs by means of the method "House-Tree-Man" are given in Table 2.

Table 2. Levels of social relations formation of the children with special educational needs

Levels	Test score	#	%
High	1-13	4	16

 Average	14-22	12	48
Low	23-34	9	36

Source: Authors' own conception

The data presented in Table 2 allow us to state mainly the average and low level of formation of self-concept of children with special educational needs and their relations with the social environment. The proportions of children's drawings reflected the psychological significance, importance and value of things, situations or relationships that are directly or symbolically presented in the drawing of a house, a tree and a person. Interviews with children during the drawing confirmed the results of the interpretation of their drawings and showed their inability to self-criticism, low self-esteem, pessimistic attitude to their lives and negative or indifferent attitude to learning.

The next method we used in the diagnostic study was the method of personality research (Gille, 1960; Lemak & Petrishche, 2012, pp. 576-587). The technique is visual-verbal and consists of 42 pictures depicting children and adults, as well as textual tasks. It is intended to identify the characteristics of behavior in various life situations that are significant to the child and those related to child's relationships with other people.

Before starting work using the method, the child is informed that he/she is expected to answer questions on the pictures. The child is supposed to look at pictures, listen or read the questions and answer them. The child must choose his/her place among the people depicted or identify himself/herself with a character who occupies a place in the group. He/she can choose a place closer or farther from a certain person. In textual tasks, the child is asked to choose a typical form of behavior, and some tasks are based on the type of sociometric. Thus, the technique allows to get information about the child's attitude to various people around him/her. Simplicity and schematicity, which distinguish the method of R. Gilles (1960) from other projective tests, not only make it easier for the child to get involved into the experiment, but also allow relatively greater formalization. In addition to qualitative assessment of the research results, children's projective methods of interpersonal relationships allows to present the results of psychological examination on a number of specific variables. Psychological material that characterizes the system of interpersonal relations of the child can be divided into two major groups of variables:

1. Variables that characterize the specific personal relationships of the child: attitude to the family environment (mother, father, grandmother, sister), attitude to a friend, to an authoritative adult and others. 2. Variables that characterize the child and are manifested in different relationships: sociability, isolation, desire for dominance, social adequacy of behavior.

In total, the author identifies 12 features: attitude to the mother; attitude to the father; attitude to his/her mother and father as spouses; attitude towards his/her brothers and sisters; attitude to his/her grandparents; attitude to one of the family members; attitude to the teacher; curiosity; desire for dominance; sociability; social closure; adequacy (Gille, 1960; Lemak & Petrishche, 2012, pp. 576-587).

The results of the study of the attitudes of children with special educational needs to the immediate environment are given in Table 3.

Table 3. The results of the study of the characteristics of the attitude of children with special educational needs to the immediate environment

#	Characteristics o	0/0
1.	Attitude to the mother	8
2.	Attitude to the father	8
3.	Attitude to parents as a parent couple	8
4.	Attitude to siblings	16
5.	Attitude to grandparents	28
6.	Attitude to a friend	24
7.	Attitude to the teacher as an authoritative adult	0
8.	Curiosity	0
9.	Dominance	0
10.	Sociability	0
11.	Social closure	8
12.	Social adequacy of behavior	0

Source: Authors' own conception

As can be seen from Table 3, the attitude of the children to others is dominated by attitudes towards grandparents (28%) and at the second (girlfriend) - 24%. Only 8% of the children showed a positive attitude towards their parents. The same indicators are characteristic for both in relation to the mother and the father. Unfortunately, the psychological characteristics of children with special educational needs did not show such indicators as curiosity, camaraderie, dominance, social adequacy of behavior and attitude to the teacher as an authoritative adult..

Thus, a diagnostic study based on the method of R. Gilles (1960) showed that in most children with special educational needs the general

atmosphere in families is not favorable, it is proved by the perception of their grandparents as more loving and caring people than their parents. The results of this method also revealed that children with special educational needs have a low level of ability to make friends, which may be due to an unfavorable family situation. Separation and isolation from peers in the absence of a tendency to curiosity, leadership and camaraderie, indicate the neurotic development of this category of children.

The next direction of our diagnostic research was pedagogical diagnostics, i.e. assessment of educational opportunities and achievements of the children with special educational needs by means of of "Test Interview" (Yerasek, 1978; Maksymenko et al., 2003, pp. 64-67). The main purpose of this technique is assessing the general mental development of the child, his/her perception of the environment, the level of formation of mental operations and the development of coherent speech.

The results of the interview are evaluated by the sum of points obtained from individual questions. Children with a score of 12-15 points are "immature". They should be carefully examined to find out what is causing the poor performance of the test, to determine effective measures for the formation of their school maturity and to make an individual decision with the parents regarding the "immaturity" of the child. "Mediummature" are children with a score of 20-24 points. "School-mature" are children with a score of 24-29 points.

The results of the reseach with "Test Conversation" (Yerasek, 1978) are given in Table 4.

Table 4. Levels of formation of learning skills in the children with special educational needs

Levels	Test score	#	0/0
High	24-29	3	12
Average	20-23	14	56
Low	15-19	8	32

Source: Authors' own conception

The results shown in Table 4 prove that the majority of the children with special educational needs have average (56%) and low (32%) levels of general mental development, mental operations and coherent speech development. They are unconfident in their knowledge, have low motivation for learning, show irritability and impatience.

The third direction of our diagnostic research was the diagnosis of the peculiarities of family upbringing the children with special educational needs. First, we used the projective method "Kinetic Family Drawing" (Lemak & Petryshche, 2012, pp. 501-507), and then - the method of "Family Anxiety Analysis" (FAA) (Olyfyrovych et al., 2006, pp. 282-284).

The projective method "Kinetic Family Drawing" (Lemak & Petryshche, 2012, pp. 501-507) is used to study the causes of child aggression and other types of behavioral disorders determined by intrafamily relationships. Interpreting this technique, the main attention is paid to the following aspects:

- analysis of the family picture structure (comparison of the composition of the real and drawn family, location and interaction of family members in the drawing);
- analysis of the features of the drawing of individual family members (difference in drawing style, number of details, drawing scheme of individual family members);
- analysis of the drawing process (comments, pauses, emotional reactions during drawing).

To study the causes of aggression of the child and other types of behavioral disorders determined by intrafamily relations, such symptom complexes as conflict and hostility in family relationships are identified.

The results of the projective method "Kinetic Family Drawing" among children with special educational needs are given in Table 5.

Table 5. Levels of intrafamily relations formation in families of children with special educational needs

Levels	Test score	#	%
High	1-8	3	12
Average	9-13	9	36
Low	14-26	13	52

Source: Authors' own conception

The data shown in Table 5 prove the presence of low and average levels of intra-family relations in the families of the children studied. This is confirmed by the results of conversations with children during the drawing process (their comments, pauses, emotional reactions during the drawing). Most of the children surveyed demonstrated that the actual family composition did not match the drawn family members, and in some cases certain members of the family were located on the reverse side of the picture. All these details are convincing evidence of hostility and conflict in families with the children with special educational needs.

In order to investigate how parents of children with special educational needs assess the psychological atmosphere in their families, we implemented the method "Family Anxiety Analysis" (FAA) among 22 parents of children under study (Olyfyrovych et al., 2006, pp. 282- 284).

The instructions on this method provided to parents are: "The proposed questionnaire consists of statements about your feelings and well-being at home and in the family. Read and circle the statement number on the form if you agree with it. If you find it difficult to choose the answer, put a question mark, but there should be no more than three. Remember that you describe your well-being in the family. Answer what you really feel".

Characteristics of the results of the implied "Family Anxiety Analysis" (FAA) method among 22 parents of children with special educational needs are given in Table 6.

Table 6. The results of the family anxiety analysis as an indicator of a typical family status in families upbringing children with special educational needs

Scale	Level	#	%
Feelings of guilt («G»)	Below normal	0	0
	Norm	4	18,2
	Higher than normal	18	81,8
Anxiety	Below normal	0	0
(«A»)	Norm	2	9,1
	Higher than normal	20	90,9
Nervous and mental stress («S»)	Below normal	0	0
	Norm	6	27,3
	Higher than normal	16	72,7
Integral indicator of family anxiety («F»)	Below normal	0	0
	Norm	2	9,1
	Higher than normal	20	90,9

Source: Authors' own conception

The results given in Table 6, convincingly show that the integral indicator of family anxiety as a typical family status is present in most of the

studied parents (90.9%) and only two of them (9.1%) have this indicator within normal limits. All other parents experience feelings of guilt in the family (81.8%), mental stress (72.7%) and anxiety (90.9%).

The final direction of our diagnostic study was the diagnosis of the peculiarities of rehabilitation processes in the children with special educational needs, namely: assessment of children's adaptability to the rehabilitation process and work of the Shepetivka City Center for Social Rehabilitation of Disabled Children (2007) by the parents of the children with special educational needs. For fulfilling this task we conducted a survey among 22 parents of the children with special educational needs according to the composed questionnaire.

The questionnaire included questions that allowed parents to look at their children's relationships with the world around them and assess the child's attitude to: the rehabilitation process at the Center on a five-point scale; to evaluate the specialists working at the Center; individual classes provided by the Center's specialists; various activities in the Center. This gave us the opportunity to distinguish psychological and pedagogical factors affecting the adaptation of the children with special educational needs to rehabilitation activities and identify negative factors that cause their maladaptation not only in the Center but also outside it.

It should be pointed out that the respondents had to give written answers to the questions in the questionnaire. The questionnaire contained the questions formulated in such a way that the answers were evaluated on a five-point scale as they were graded.

The following results are considered as the generalized conclusions of the survey among 22 parents of the children with special educational needs:

- 20% of the parents have an inaccurate, superficial knowledge about the level of their children adaptation to the rehabilitation process and the work of specialists;
- 42% still do not have a sufficiently formed opinion about the work of the Center's specialists in improving the adaptation and rehabilitation of their children as well as clear idea about their children's attitude to the rehabilitation process;
- About 38% of the surveyed parents expressed a desire and willingness to continue working with the Center to improve the adaptation and rehabilitation processes of their children with special educational needs, which indicates an increase in parents' self-awareness and concern.

At the next stage of our research the analysis of the received data of the conducted diagnostic study among the children with special educational needs and their parents was performed. Based on the analysis of diagnostic data we can draw the following conclusions:

- the results of social diagnostics of the children with special educational needs have shown that these children are dominated by medium and low levels of formation of perception of themselves and their relations with the social environment; they are separated and closed for communication with others; tend to communicate more with grandparents than with parents; show low self-esteem and inability to self-criticism, pessimistic attitude to their lives;
- the results of the pedagogical diagnosis of the children with special educational needs applying the "Test Interview" (authors A. Kern J. Yerasek)" have proved that most children with special educational needs are insecure, have low motivation for learning, show irritability and impatience, i.e. are characterized by medium and low levels of formation of general mental development, mental operations and coherent speech.;
- as provided by the results of the diagnosis of perculiarities of family upbringing the children with special educational needs, it was definied that children with special educational needs in their families suffer hostility and conflict while the parents of these children experience feelings of guilt, mental stress and anxiety.
- the data obtained as a result of the diagnosis of the peculiarities of rehabilitation processes with the children having special educational needs suggest that the difficulties encountered by the children with special educational needs during the rehabilitation process are related mainly to their focusing on their own illness, which causes the emergence of feelings of inferiority, anxiety, insecurity and fear of the future. The parents of the children under study believe that their children treat the friends and acquaintances they have met at the Center the best and enjoy playing with them, simultaneously the children demonstrate the worst attitude towards training and rehabilitation classes. Therefore, corresponding to parents' opinion, the Center's specialists should think carefully and diversify the content and conditions of classes with children with special educational needs.

Thus, the data obtained during the diagnostic study became the basis for the development and substantiation of the forms and methods of regulation of adaptive and rehabilitation processes working with the children with special educational needs, and constitute the final stage of our research. We believe, that the Center's specialists working with the children with special educational needs should apply the following methods and forms: art therapy, bibliotherapy, music therapy, garden therapy, fairy tale therapy,

game therapy, puppet therapy, animotherapy, sand therapy, sensory integration. Let's consider all these methods and forms of work with the children with special educational needs in detail.

- 1. Art therapy as a method of rehabilitation by means of art helps children with special educational needs to expand their circle of communication and reduce aggression in behavior. The method of art therapy is aimed at: the development of small motility skills, the capabilities of other parts of the child's body; self-concept; correction of the psychoemotional sphere; broadening horizons, perception of the environment; development of memory, attention, associative and figurative thinking. The rehabilitation effects of this method for the children with special educational needs are: increasing the child's self-esteem; formation of an active life position; evolution of self-confidence; formation of independence and creativity, the possibility of actualization of mental reserve capabilities; formation on the basis of adequate behavior by means of creative art activity. The main activities of children in art therapy are: explanation, dialogue, demonstration, game, illustration, encouragement. Forms of work can be individual or group.
- 2. The method of bibliotherapy includes various activities utilizing books and printed materials (discussions, literary evenings, readings of stories, meetings with characters and their authors, literary and poetic clubs, book exhibitions, working in the reading hall). The rehabilitation effect of bibliotherapy for the children with special educational needs is the development of their imagination, memory, artistic taste; expanding their cognitive sphere, horizons, meeting information needs; establishing communication between children and peers; development of their articulatory and linguistic abilities, formation of logical thinking while retelling.
- 3. The method of music therapy facilitates the development of social activity, communication skills of the children with special educational needs, their self-realization, enrichment of aesthetic experience, expansion of the aesthetic interests and skills of children to realize the beauty, seek to communicate with it. Music therapy suggests such activities for as: playing children's musical instruments; games with musical accompaniment; listening to works or fragments; chanting and singing. The rehabilitation effect of music therapy for children with special educational needs involves aestheticization of the child's taste; development of his sense of rhythm; perception of musical images; evolution of skills using his voice, breathing; development of moral and volitional sphere, activity, independence,

determination; ability to control himself; sense of collectivism; formation of cooperation skills; desire to win.

- 4. The method of garden therapy contributes to encouraging the children with special educational needs to work with plants and involves: the development of small motility, orientation of the child in space; development of logical thinking; enlargement of his aesthetic tastes; relaxation. Feeling part of nature, a child with special educational needs in a new way, more emotionally perceives the world around him, other people, which, in turn, has a positive impact on the process of his socialization and adaptation. Forms of garden therapy can be varied, namely: care, collecting, drying of plants and making composition. The rehabilitation effect of garden therapy for children with special educational needs is that the child feels like a discoverer and experiences joy of experimenting with wildlife; discovers the new in the familiar and the familiar in the new; becomes aware of the simplest laws of nature. Garden therapy can be used in combination with elements of music therapy, art therapy, bibliotherapy.
- 5. Fairy tale therapy is the instrument of emotional and mental, pedagogical and socio-moral influence, which suggests the activation of creative potential in a child with special educational needs and promotes the development of associative figurative thinking. Types of activities in fairy tale therapy are: storytelling, retelling, dramatization. Forms of activity can be group, individual, mass. The rehabilitation effect of fairy tale therapy for children with special educational needs is: the formation of the child's attitude to the character of the fairy tale; manifestation of their own positions in behavior necessary for socialization; identification of his own "I" with one or another character; satisfying the need to understand the magical mysterious manifestations of life; collective participation in joint actions; involvement in folk art. Forms of work with a fairy tale in sociocultural activities with children with special educational needs can be: holidays, theatrical performances, participation in competitions, shows, literary and artistic events, exhibitions of drawings based on fairy tales, family evenings.
- 6. Game therapy is a set of socio-cultural rehabilitation measures, based on the use of game techniques, forms, situations in order to give a child with special educational needs the opportunity to solve his/her problems, resolve conflicts. The main types and forms of activity of children in game therapy are: play (in education, upbringing, sports, rehabilitation, communication, obtaining information, career guidance); dialogue; training; informativeness; illustrations; demonstrations. The rehabilitation effect of game therapy for children with special educational needs is: the formation of

communication skills, communicative relations of the child; formation of his/her arbitrary mental processes (memory and attention); development of his/her mental activity, imagination, language, musculoskeletal and volitional activity.

- 7. The method of puppet therapy is a branch of art therapy, which uses a doll as the main method of psycho-corrective action and as an intermediate object of interaction between a child and an adult. The main forms of application of this method are games, namely: the child as the spectator watches a game of dolls; the child himself/herself is a participant in a role play in which he/she is invited to play himself/herself or someone else (brave, timid, kind, aggressive, small, adult); the child plays spontenaously without the guidance and prompting of adults; the child plays games with the help of game material (dolls, paints, sand), and during the game the adult directs or reveals the hidden possibilities of the child. The rehabilitation effect of puppet therapy for children with special educational needs is to: relieve children's emotional stress; develop their speech; form their social skills and the ability to resolve conflicts.
- 8. Method of animation therapy is the treatment involving animals (birds, aquarium fish, dogs, hamsters, horses). The rehabilitation effect of the animation therapy method for the children with special educational needs is: improving their physical and psycho-emotional state; reducing aggression and increasing the level of self-control; developing of small motility skills and speech; relieving mental tension and stress.
- 9. The method of sand therapy or psychotherapy with sand is currently one of the most popular in psychological, psychotherapeutic, rehabilitation and pedagogical practice. Pictures made of sand give the chance of creative changes, forms, a plot, events, relations. Due to the rules that the game takes place in the context of a fairy-tale world, the child can creatively change the situation or condition that worries him/her. By turning a situation into a game with sand, the child gains experience in resolving both internal and external conflicts. The accumulated experience of independent constructive changes gives the child the opportunity to transfer it to reality. The rehabilitation effect of the sand therapy method for children with special educational needs is that their tactile-kinesthetic sensitivity and small motility skills of the hands develop, the amplitude of joint movements, coordination of movements and eyesight improves, and the muscular corset is strengthened. Interaction with sand stabilizes the emotional state of children with special educational needs. Their speech, thinking, random attention, memory and phonemic hearing are improving. Children learn to understand themselves and others and positive communication skills are

formed. Playing with sand opens up the child's potential, the creative flight of his/her imagination.

10. The method of sensory integration can be used in a specially equipped sensory room, where the environment is specially organized, consisting of a large number of different types of stimulators (light, sound, tactile) that affect the organs of sight, hearing, smell, tactile and vestibular receptors of children with special educational needs. A sensory room equipped with various elements creates a feeling of comfort and security. This facilitates the rapid establishment of warm contact between the specialist and the child with special educational needs. The sensory room is used as an additional tool of therapy and increases the effectiveness of any measures aimed at improving the mental and physical health of the child. It can be used to relax children with neurotic and psychosomatic disorders and to stimulate various body functions (hearing, sight, smell, tactile sensations, motor functions, speech) of children with cerebral palsy, mental disorders. The rehabilitation effect of the method of sensory integration for children with special educational needs is: improving their emotional state, reducing anxiety and aggression; removal of nervous excitement and anxiety; normalization of sleep; activation of brain activity; acceleration of recovery processes; development of independence, communication skills and selfcare.

Conclusions and prospects of further research

Thus, the effectiveness of the development and regulation of adaptive and rehabilitation processes of the children with special educational needs depends on diagnosing the state of their adaptive and rehabilitation potential as well as developing and applying effective forms and methods of regulating adaptive and rehabilitation processes of these children. Considering that, we conducted a diagnostic study of the state of formation of adaptive and rehabilitation potential of the children with special educational needs, which included four areas: social diagnosis; pedagogical diagnostics; diagnosis of features of family upbringing of the children; diagnosis of the peculiarities of the rehabilitation processes of these children.

The results obtained during the diagnostic study testify that the children with special educational needs are dominated by medium and low levels of formation of self-concept and self perception perception as well as their relations with the social environment; they reveal medium and low levels of formation of general mental development, mental operations and coherent speech; in families where the children with special educational needs are brought up they suffer hostility and conflict while the parents of

these children experience feelings of guilt, mental stress and anxiety. The difficulties faced by the children with special educational needs during the rehabilitation process are mainly related to their focus on their own illness, which causes feelings of inferiority, anxiety, insecurity and fear of the future.

Given the results of diagnostic research, we have developed and substantiated forms and methods of regulating adaptive and rehabilitation processes of the children with special educational needs, which, in our opinion, should be implemented by the specialists at social rehabilitation centers for the children with disabilities. These forms and methods include: art therapy, bibliotherapy, music therapy, garden therapy, fairy tale therapy, game therapy, puppet therapy, animation therapy, sand therapy, sensory integration.

Prospects for further research in this area suggest studying the effectiveness of the proposed forms and methods of regulating adaptive and rehabilitation processes of children with special educational needs who receive rehabilitation services at the Shepetivka City Center for Social Rehabilitation of Disabled Children of Khmelnytskyi region, Ukraine.

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References

- Afanasenko, V., Komar, T., Potapchuk, N., Vasylenko, O., Podkorytova, L., & Havrylkevych, V. (2021). Socio-psychological features of students with special educational needs as a cause of conflicts in inclusive groups. BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12(2), 1-17. https://doi.org/10.18662/brain/12.2/188
- Akatov, L. (2003). Sotsial'naya reabilitatsiya detey s ogranichennymi vozmozhnostyami zdorov'ya. Psikhologicheskiye osnovy [Social rehabilitation of children with disabilities. Psychological bases]. In *Uchebnoye posobiye dlya studentov vysshikh uchebnykh zavedeniy*. VLADOS.
- Belyauskaite, R. (1994). Risunochnyye proby kak sredstvo diagnostiki razvitiya lichnosti rebenka [Drawing tests as a means of diagnosing the development of a child's personality]. In *Detskiy prakticheskiy psikholog* [Children's practical psychologist] (pp. 30-34). http://psychlib.ru/inc/absid.php?absid=179435

- Chaykovskyi, M. (2008). Model' sotsial'no-pedahohichnoyi reabilitatsiyi molodi z osoblyvymy potrebamy [Model of social and pedagogical rehabilitation of young people with special needs]. *Naukovi zapysky, 22,* 342-346. https://drive.google.com/file/d/0B1qfvJJXxAt9ajNBTFI4bFgzcjA/view?resourcekey=0-SbShwlAArGUD3vjUAp1wkA
- Demchuk, S., & Kuts, O. (2003). Sotsial na intebratsiya ta reabilitatsiya nepovnospravnykh shkolyariv iz tserebral nym paralichem zasobamy fizychnoho vykhovannya [Social integration and rehabilitation of disabled students with cerebral palsy through physical education]. NVF «Ukrayins'ki tekhnolohiyi».
- Gille, R. (1960). Le test-film. Revue Philosophique de la France Et de l'Etranger, 150, 402-402.
- Globa, O. (2010). Sotsializatsiya ditey ta molodi z obmezhenymy mozhlyvostyamy v umovakh rehional'noho reabilitatsiynoho prostoru [Socialization of children and youth with disabilities in the regional rehabilitation space]. Naukovyy chasopys NPU imeni M.P. Drahomanova [Scientific journal of the NPU named after M.P. Drahomanova], 19(10), 7-12. https://scholar.google.com.ua/citations?user=uV3CIqEAAAAJ&hl=uk
- Havrylkevych, V., Podkorytova, L., Danylchuk, L., Romanovska, L., Kravchyna, T., & Chovgan, O. (2021). Psychological Correction of Parents' Attitude to Their Children with Special Educational Needs by Means of Art Therapy. BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12(1), 154-171. https://doi.org/10.18662/brain/12.1/176
- Hoover, J., & Patton, J. (2004). Differentiating standards-based education for students with diverse needs. *Remedial and Special Education*, 25(2), 74-78. https://doi.org/10.1177%2F07419325040250020101
- Illyashenko, T., Obukhivska, A., Romanenko, O., & Skrypka N. (2003). *Korektsiya psykhosotsial'noho rozvytku ditey z tserebral'nym paralichem u reabilitatsiynomu tsentri* [Correction of psychosocial development of children with cerebral palsy in the rehabilitation center]. Vydavnytstvo «Dukhovna vis».
- Lemak, M., & Petryshche, V. (2012). Psykholohu dlya roboty. Diahnostychni metodyky [Psychologist for work. Diagnostic methods]. Vydavnytstvo Oleksandry Harkushi.
- Loreman, T., Deppeler, J., & Harvey, D. (2010). *Inclusive education: Supporting diversity in the classroom*. Routledge.
- Lyashenko, V. (2005). Formuvannya zhyttyevoyi kompetentsiyi ditey-invalidiv u tsentrakh rann'oyi sotsial'noyi reabilitatsiyi [Formation of life competence of children with disabilities in early social rehabilitation centers] [Unpublished doctoral dissertation]. Luhansk National University named after Taras Shevchenka.
- Maksymenko, S., Maksymenko, K., & Hlavnyk, O. (2003). *Hotovnist' dytyny do navchannya: psykholohichnyy instrumentariy* [The child's readiness to learn: psychological tools]. Mikros SVS.

- Maranchak, R., & Vasylenko, O. (2013). Inklyuzyvna osvita yak odna z umov sotsial'noyi adaptatsiyi ditey z osoblyvymy potrebamy [Inclusive education as one of the conditions for social adaptation of children with special needs]. Zbirnyk naukovykh prats' Khmel'nyts'koho instytutu sotsial'nykh tekhnolohiy Universytetu «Ukrayina», [Collection of scientific works of Khmelnytsky Institute of Social Technologies of the University "Ukraine"], 2(8), 128-132. http://nbuv.gov.ua/UJRN/Znpkhist 2013 2 26
- McGuire, J., Scott, S., & Shaw, S. (2006). Universal design and its applications in educational environments. *Remedial & Special Education*. 27(3), 166-175. https://doi.org/10.1177/07419325060270030501
- Ministry of Social Policy of Ukraine. (2018). *Pytannya kompleksnoyi reabilitatsiyi osib z invalidnistyu* [Issues of comprehensive rehabilitation of persons with disabilities], 355, 1. Ministry of Social Policy of Ukraine. https://zakon.rada.gov.ua/laws/show/z0401-18#n10
- Olyfyrovych, N., Zynkevych-Kuzemkyna, T., & Velenta, T. (2006). *Psykholohyya semeynykh kryzysov* [Psychology of family crises]. Rech.
- Poroshenko, M. (2019). *Inklyuzyvna osvita*. [Inclusive education]. TOV «Ahent stvo «Ukravina».
- Romanovska, D., & Mintyanska, R. (2019). *Tekhnolohiyi psykholohichnoho zabezpechennya osvitn'oho protsesu v inklyuzyvniy shkoli* [Technologies of psychological support of the educational process in an inclusive school]. Tekhnodruk.
- Shepetivka Center for Social Rehabilitation of Disabled Children. (2007). *Upravlinnya pratsi ta sotsial'noho zakhystu naselennya Shepetivs'koyi mis'koyi rady Khmel'nyts'koyi oblasti* [. Department of Labour and Social Protection of Population of Shepetivka City Council of Khmelnytskyi Region].

 Shepetivka Center for Social Rehabilitation of Disabled Children.

 http://soczach.shepetivka-rada.gov.ua/crdi/
- Shevtsov, A. (2004). *Metodychni osnovy orhanizatsiyi sotsial'noyi reabilitatsiyi ditey z vadamy zdorov"ya* [Methodical bases of the organization of social rehabilitation of children with health defects]. NTI «Instytut sotsial'noyi polityky».
- Yerasek, J. (1978). Diagnostics of a school maturity. In *Diagnostics of mental development* (pp. 251-264). Avitsenum.
- Vasylenko, O. (2010). Sotsial'no-pedahohichni umovy adaptatsiyi molodshykh shkolyariv z osoblyvymy potrebamy do navchannya v zahal'noosvitniy shkoli: [Socio-pedagogical conditions of adaptation of junior schoolchildren with special needs to study in secondary school] [Unpublished doctoral dissertation]. Luhansk National University named after Taras Shevchenka.
- Volchelyuk, Yu. (2009). Komp"yuterni tekhnolohiyi yak chynnyk sotsializatsiyi student·s'koyi molodi z osoblyvymy potrebamy [Computer technology as a

factor in the socialization of students with special needs]. Zbirnyk naukovykh prats' Khmel'nyts'koho instytutu sotsial'nykh tekhnolohiy Universytetu «Ukrayina», [Collection of scientific works of Khmelnytsky Institute of Social Technologies of the University "Ukraine"], 1, 38-42. http://nbuv.gov.ua/UJRN/Znpkhist_2009_1_11