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The Influence of Parents' Mutual Support on the Socialization of Children with Special Needs in Rehabilitation Centres: Neuropsychological Aspects

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Abstract: The article presents theoretical and methodological aspects of social support for families with adolescents with musculoskeletal disorders (MSDs) in rehabilitation centres. In particular, it describes the process and results from the implementation of the author's work with mutual support groups of parents of adolescents with MSDs. The article aims to determine and quasi-experimentally verify the methods of rehabilitation of individuals with MSDs and prove their effectiveness in rehabilitation centres with the involvement of parents. During the implementation of the programme, social work with families in centres for social rehabilitation of children with MSDs consists of the following main areas: family therapy, family psychoprophylaxis, providing social assistance to families, mediation in resolving family conflicts, family counselling, social and pedagogical work with families. The content and forms of social and pedagogical work with the family are determined by a group of the following factors: a family type, problems in the family; areas of professional training of the specialist providing services to the family. The quasi-experimental group (EG) consists of 40 leavers from the Vinnytsia Centre for Social Rehabilitation of Children with Special Needs "Promin", who are diagnosed with cerebral palsy, and six leavers with mild mental disorders. The control group (CG) consists of 40 individuals diagnosed with cerebral palsy and seven individuals with mild mental disorders. The age requirement for EG is 14-19 years old. The formative experiment also involves 27 parents of children with MSDs. The measures taken during the experiment have contributed to developing the skills of conscious psychological separation from constant parental care, taking responsibility for their lives, setting real-life goals and destroying the position of helplessness in individuals with MSDs. The article shows that a set of causes and factors affecting families' well-being positively or negatively determines the interpersonal relationships and the traditions of family education. The international relevance of the article lies in the effective combination of social support for families with adolescents with MSDs in rehabilitation centres and parents' involvement. The author's methodology forms the basis for the new aspects of synergistic family and institutional rehabilitation and support.

Keywords: The patronage of families; mutual support groups for parents; parenting sessions; individual work; group sessions.

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Introduction

The quality of relationships between parents and their children with musculoskeletal disorders (MSDs) is undoubtedly one of the main factors determining the development of a child's personality, his or her emotional and social development. This component is especially important for determining the possibility of further social integration of a child, his or her psychological comfort.

Some destructive psychological characteristics are inherent in children with cerebral palsy and, therefore, their prevention should start as soon as possible by both parents and teachers. They include a low level of self-criticism; inflated or, more frequently, deflated self-esteem; lack of communication skills; a peculiar and selective acceptance of social norms of behaviour and denial of many of them; vague social orientations and leading motives, general social infantilism; a narrow circle of interests, complexity of the formation of the motivational sphere. Children with cerebral palsy at preschool and school age are usually even more silent, and their responses are less varied.

One can agree with Shevtsov (2009) that the content of rehabilitation and social adaptation of people with MSDs depends on the goals and objectives of rehabilitation; the balance between interests of such individuals and social needs; nosology and structures of physical or/and mental disorder; their age differentiation; the level of scientific and methodological development of theory and practice of rehabilitation; facilities, economic and socio-legal conditions of rehabilitation; the development of branches of the national rehabilitation system, namely, healthcare, education, psychological assistance, social security and legal support, rehabilitation equipment. Understanding the essence of rehabilitation allows specialists in rehabilitation centres to perceive adults with MSDs through their abilities rather than as objects of pity, which results in a defectological model of activities in rehabilitation centres (Shevtsov, 2009).

Such observations indicate the importance of the basic nosology factor, as well as of psychophysiological and neurophysiological factors (Bakhmat et al., 2019; Behas et al., 2019; Bezliudnyi et al., 2019; Dobryakova, & Shchedrina, 2004; Gerasymova et al., 2019; Halaidiuk et al., 2018; Maksymchuk et al., 2018; Melnyk et al., 2019; Sheremet et al., 2019; Sitovskyi et al., 2019). However, a detailed analysis of these authors' works proves that existing methodologies do not practically consider neurophysiological indicators when developing individual programmes of social support of families with adolescents with MSDs in rehabilitation centres.

The most common contradictions in children and adolescents with MSDs may be psychophysiological subjective differences and difficulties with outlining the self-concept, including between the need for communication and the difficulty in its implementation, the inadequate desire to have a friend, girlfriend, play with peers, study in an ordinary school. However, these and other contradictions occurring in children with life-limiting conditions can be more painful and acute than in "normal" children. Moreover, many of them are unable to solve their problems and need adult help. Upon the successful resolution of internal contradictions, the child's personality develops without complications. In case of failure, the child's conflicts with the environment may aggravate.

Thus, the driving force behind the child's mental development is the constant resolution of contradictions between the emerging need in new forms of communication, relationships with people and previous ways of solving them.

As for relationships in families, the most common are the categories of stability or instability, friendliness or alienation, over- or under-protection, efficiency (parental irritation, dissatisfaction), authoritarian education, oversociality (an attempt to raise a child under a particular scheme).

Thus, the set of causes and factors affecting families' well-being positively or negatively determines the interpersonal relationships and the traditions of family education.

Neurophysiological Aspects of Social Support for Children with MSDs

This article adheres to two aspects of neurophysiology that may apply to adolescents with MSDs. The first aspect is the common subjectivity concept as one of the main biosocial functions, while the second aspect is specific to people with MSDs. Therefore, before presenting the author's model of socio-pedagogical work with families with children suffering from MSDs, one should consider and analyze the main theoretical aspects of this problem. The article follows the assumption that children with MSDs can still be full-fledged subjects of self-creation and social interaction.

Della Sala, & Anderson (2012) prove that educational, social and neurophysiological factors are equally important in the development of the child's subjectivity, regardless of his or her natural capabilities. It is clear life intentions of children with special needs are even less defined than those of healthy children. At the same time, the adaptation to the multimodal world should still take place in a normal life mode, which has only some limitations. This can be done due to a new culture of inclusiveness and a "revision of classical approaches to adjust them to the requirements of the postcolonial society" (Ha et al., 2020).

Nowadays, all participants in educational and social processes are encouraged to boost motivation and personal activity to develop and enable personal subjectivity in a rapidly changing and devalued world (Lourens et al., 2019, p. 1893). The concept of relational ethics seems to be particularly applicable since, within its framework, empathy and interaction can be developed taking into account the peculiarities of one's own and another's subjectivity.

Back in the late 20th century, neuropsychological tests proved that nervous system disorders are directly related to behavioural dysfunction. Symptom complexes such as passivity and aggression, stability and instability of mental activity manifestation especially need at least pedagogical supervision. Most important is to compare constructive and destructive manifestations with the corresponding control variables (Dietz, 1997; Moffitt, 1993). Regarding the research problem, such observations and their consideration when planning psychocorrection of children with MSDs will hypothetically help not so much in improving their physical condition as their adaptation and socialization.

In this regard, psycho-pedagogical observation over children with special needs seems essential, even if they are conducted by specialists untrained in terms of neurophysiology. The key is the appropriate management of client behaviour and its correction, whose first markers are stress assessment, the nature of reactions to social stimuli, reflection on one's disorders and (as a result) modification of social support (Knight, & Godfrey, 1996).

Even if the child is temporarily isolated within the rehabilitation centre due to clinical indications, the heuristic approach to developing social competence can be implemented through neurophysiological mechanisms of socio-affective and cognitive-executive processes of activity and behaviour (Yeates et al., 2007).

Children with MSDs often demonstrate negativity towards society or rejection of their individuality because of socialization problems. As noted by Eslinger, & Tranel (2005), such negative manifestations can be overcome only in the natural environment. Therefore, it is vital to maintain maximum contact of children staying in special rehabilitation institutions with their parents and possible social aspects, which will enable integrative mental and neurological processes. Labour and creative activity, even in a deviant form, is one of the ways of developing such integrativeness. Besides, there is a possibility to develop adaptive and predictable mechanisms of regulation concerning oneself and the environment (micro-society) (Dishion, 2016).

Eisenberger (2013), using the data of affective and social neurosciences, proved that the subjective feeling of health and well-being in people with various special needs largely depends on the presence and maturity of social ties. The scholar explains this fact by reflecting on threats to survival and physiological responses to its markers. The neural network is extremely sensitive to social threats to survival, and consequently to the opposite incentives of support and confidence. Eisenberger (2013) identifies the following important aspects that can be considered in social support of families with children suffering from MSDs in rehabilitation centres: a) social ties are directly related to the subjective feeling of health and well-being; b) the neural zones responsible for personal protection react differently to threats and social protection; c) violation of social welfare causes stress similar to the threat to survival; d) the presence of social support inhibits the physiological response to stress in the relevant subzones. Thus, all this confirms, in terms of neurophysiology, valeology and rehabilitation, the vital role of social ties for children with MSDs even in temporarily limited conditions.

The level of empathy between the participants in the process acts as one of the main characteristics of effective social, psycho- and neurophysiological rehabilitation. This is important even in clinical practice, even though the main risk is the vulnerability of the child with some nervous disorders. Recent studies, however, have shown that data based on social neurosciences indicate the need for empathy in rehabilitation specialists, physicians and parents. This improves the clinical effect and reduces the level of "burnout" in all participants in the process (Decety et al., 2014). At the same time, there is still a need for special studies to help develop such a synergistic rehabilitation system.

Relevant studies on the psychological status of parents whose children suffer from nervous disorders (up to a mental deficiency) present encouraging results. It turns out that such parents do not differ from those whose children are completely healthy. The similarity is observed only in the nature of stress that can be caused by non-nosological life circumstances (Dyson, 1997). Higher levels of stress in parents of children with special needs are related to family functioning aspects but can be reduced if such functioning improves. This once again confirms the need for family therapy and parents' involvement in the rehabilitation process. Quite relevant for this research are stress factors for members of families with children with MSDs. It is important to understand how a person with MSDs (and the corresponding maladaptive symptoms) perceives social support. There are also similar studies on mental lability and variability of people with special needs. Such variability is viewed as a protective mechanism. In 2018, Halstead, Griffith, & Hastings (2018) proved that there is a direct link between social support, the child's reaction to it and the emotional state of the child's mother on the example of 138 mothers and their children with developmental disorders. These three factors are ultimately interdependent. This indicates that the construction of a trilateral rehabilitation scheme (social support – the child's reaction – parents' reaction) is extremely important and can have a positive effect in synergy. Importantly, all three parties will be satisfied.

The above-mentioned patterns allow one to build the author's model of working with groups of mutual support for parents of children with MSDs.

Working with Support Groups of Parents of Children with MSDs

The main goals of socio-pedagogical work with families with children with MSDs during the formative experiment are to mobilize their innate potential for sociopsychological adaptation to the problems of children with special needs and make parents more aware of further social opportunities for such children (shaping the subjectivity and mutual empathy). Correctional social work with families with children with MSDs includes **the following methods**: 1) **the peer-to-peer method**, when parents with relatively high levels of sociopsychological skills take parents with relatively low levels of such skills "under patronage" (family visits, phone calls, counselling, child care assistance); 2) **self-help groups for parents**; 3) **the patronage of families** by social workers and educators from social rehabilitation centres and local centres of social services for the population.

Individual thematic sessions of self-help groups for parents, held monthly, have helped parents to understand and systematize the necessary psycho-pedagogical knowledge about the development of adolescents and adults with MSDs. Various specialists, including methodologists, psychologists, social educators, speech therapists and rehabilitologists, planned such sessions together. Parents also suggested some questions for discussions. During the formative experiment at the Vinnytsia Centre for Social Rehabilitation of Children with Special Needs "Promin" (Ukraine), the following topics were covered: the features of mental disorders in adolescents and adults with cerebral palsy and ways of correcting them; the influence of impaired motor functions on the mental development of the adolescent; impaired sensory functions as a result of cerebral palsy and their impact on the mental development of the adolescent; methods of developing speech in adolescents with cerebral palsy; over-protection and its negative impact on the mental development of the adolescent; communication as an essential factor in the mental development of the adolescent; developing self-care skills as a necessary condition for psychosocial rehabilitation of the adolescent; the basic principles of conscious parenting; the role of mother and father in family education; sex education of adolescents, their preparation for a future independent life and creation of their own family.

Each session of support groups of parents with children with MSDs consists of **the following components**: 1) greetings; 2) a mini-lecture; 3) educational games; 3. auto-training; 4) relaxing music; summaries.

In the course of the programme's implementation, it is also important to **develop contacts between the families** with the aim to 1) facilitate the creation of a network of baby-sitting and exchange of experience between them, hold meetings of the parents in the comfort of homes, involve parents (men) in repairing, especially the equipment for children and adults with MSDs; 2) assist in the establishment of a public organization of parents; 3) encourage parents to protect their rights, work in public organizations, participate in the decision-making of the medical psycho-pedagogical commission regarding further education and employment of adults with MSDs; 4) establish different types of interest clubs for parents and children.

Thematic sessions of self-help groups for parents with children with MSDs were held every last Saturday of the month. Below is an example of a group session with families with children with MSDs. Part 1: Getting to know. Specifying participants' expectations. 2. The game "Catch, throw, do not fall!". Goals: involvement and release of tension. Rules of the game. Standing in a circle, participants quickly throw each other the ball. Then, the presenter adds a few more balls. 3. The game "Rhythmic Applause". Goals: involvement, the release of tension, development of teamwork skills. 4. The game "Let's Whisper Together". 5. The mini-lecture on the topic "Child's behaviour. Negative behavioural phenomena and conditions for overcoming them". Addressing the fundamental behavioural problems of children of all ages (stubbornness, negativism, protest-rebellion, devaluation, despotism, hyperactivity, aggressiveness, anxiety), their manifestations, causes, ways of

overcoming. 6. Exercises for developing communication skills for the adultchild interaction.

It is essential to analyze a complex of such exercises more in a detail.

1. Parents are offered the situation and ready options for parental behaviour. They need to choose the most probable reaction and discuss and identify the best ways to respond to the situation.

One of the situations: "You need to do some work at home that needs attention and focus. To prevent your child from disturbing you, you have asked one of the family members to sit with the child in another room for an hour. It has been 10 minutes, and suddenly the door opens, and your child comes into the room."

Optional responses to this situation: Serhii, do you miss me yet? Go to another room! I asked not to disturb me, didn't I? Did you come to help your mommy? Do not bother me. Did something happen? Can I work in this house without disturbing? My sweetie's here. Are you feeling bad without me? I am working. I'm so glad you came! Serhii, sweetie. I am begging you to go to another room. Come in, just be quiet. Can't you be without me for 40 minutes? If you open the door again, I'll put you to sleep. I'll have to work at night. My sweetie. Sit down on mom's lap and be quiet. Leave the room immediately. I will be fired because of you. My darling. Why are you so sad? Oh God! I'll go to work at the neighbours' house.

2. The presenter alternately approaches each participant and talks about the extreme situation in which the child is. The one addressed must immediately respond and stop the child. (The list of situations. Your child: 1) almost touching the hot iron; 2) attempting to switch on the gas stove; 3) almost dropping a crystal vase on the floor; 4) leaning over the railing on the sixth floor; 5) almost drinking vodka; 6) almost standing on the motorway; 7) almost beating a dog with a shovel; 8) almost putting a needle into the mouth; 9) pushing a pencil into a socket; 10) stuffing the button in the ear. After the exercise, parents discuss and share parenting experiences in similar situations).

Part 2 (Children join parents):

The exercise "Forming a circle". Participants close their eyes and begin to move erratically around the room, buzzing like bees. According to the conditioned signal of the presenter (clapping, whistling), they all stop and try to form a circle without opening their eyes and talking. They can touch each other only with their hands. 2. Games aimed at developing the parent-child interaction.

The Exercise "Bridge Over the Ravine". Equipment: a bench height of 20 cm, length of 2 m. Objectives: "You are a group of tourists, and

you need to overcome this obstacle, cross this bridge hanging over the ravine. Your success depends on the unity of your actions."

"Sticker". Participants run around the room to some merry music. Two of them, holding hands, try to catch the others, singing: "I am a sticker and I want to catch you". The so-called stickers take each caught participant by hand, joining them to their "sticky" group. After that, they all catch other participants together. When everyone in the group becomes "a sticker", they start dancing and singing together: "We are stickers. Let's dance together".

"Planes". Participants stand in a circle. The presenter stands in front of them and shows the movements, namely circles with his arms and hands in front of his chest (planes are about to take off), spreads his arms to the sides and gives a signal "Let's fly away". Participants start running (flying) around the room, making sounds that mimic the buzz of a plane. After the signal of the presenter "Prepare for landing!", all participants should stop and sit down.

"Merry-go-rounds". Participants join the circle and join hands. The presenter says, "We will ride the merry-go-round now. Repeat the words after me and move in a circle". All participants repeat such words, "Little by little, the merry-go-round is spinning. Move faster or you won't reach it." After the words "Slowly, slowly, don't run, stop the merry-go-round", the movements gradually slow down. After the words "One two, one two, the game is up", everyone stops.

"Paper balls". Before the start of the game, each participant should roll a piece of paper into a ball. The group is then split into two teams that line up opposite each other at a distance of approximately 4 meters. After the signal of the presenter, teams begin to throw the balls towards the opponent. Players try to throw the balls that are on their side to the opposite side as soon as possible. After the stop signal, participants stop throwing balls. The team with fewer balls wins.

Blanket swinging.

The exercise "Gentle Paws". One put a few small items of different textures in front of a child. The child should bare his or her arm up to the elbow and close eyes to tell which animal touches him or her with its gentle paws.

The Exercise "Writing on One's Back". Results (reflection).

The Methodology of Organizing Support Groups for Parents of Children with MSDs

During the formative experiment, it was crucial to implement longterm and short-term models of working with parents of children with MSDs. The short-term ones include the crisis-intervention and problemoriented models of interaction.

The crisis-intervention model involves assisting in a crisis, which is usually the first step in the interaction between a social educator or practical psychologist and a family with children with MSDs.

The next step is *the problem-oriented model*, which covers no more than four months and involves approximately 10-12 contacts with family members. This model aims to solve practical issues, that is, to focus only on the problem that the family is ready to work on.

Long-term models require long-term communication with family members (four months and more) and are mainly based on a psychological and social approach. Their basic ideas are to understand the person's situation, connect his or her feelings, concerns, actions with the influence of the environment, reveal the causes of this situation and solve it. Their main tasks are as follows: to change the client, that is the family system, and encourage him or her to reinforce the rehabilitation of the person with MSDs.

The use of different models, methods and forms in the work of a social educator and a practical psychologist has shown that their participation in the comprehensive rehabilitation of families with children with MSDs can produce significant results to enhance their social adaptation.

Models of working with families:

The first model (working with a specific family directly) includes visits of a social worker (or an educator) to families, meetings with all family members, observations of how they interact with people with MSDs, demonstration of behaviour strategies, training, problem-solving; parents visit the specialist and observe how he or she communicates with people with MSDs, treats patients and provides counselling; joint participation in meetings of the Rehabilitation Commission of the Centre when discussing their child's problems.

The second model (working with a specific family indirectly) involves keeping detailed records of the child by parents and the supervising specialist, providing parents with the information about the course of rehabilitation; providing parents with methodological literature, creating

maps of the child's development, lending games and guides for the child's development. In this regard, the Vinnytsia Centre for Social Rehabilitation of Disabled Children "Promin" has created "A Collection of Games for Children with MSDs", as well as a library for parents of children and adults with MSDs.

The third model (working with a group of parents directly) involves meetings of specialists with parents at the Center to discuss joint plans, methods, the behaviour of parents; holding seminars for parents, roleplaying games, discussions, watching relevant video programmes (for one, the experimenters have held a seminar on the topic "What do I know about the development of my special child"), involving parents in joint events, vacations, holidays, actions (the experimenters have also organized a family sporting holiday "Cossack Fun").

The fourth model (working with a group of parents indirectly) includes informing parents about the latest technologies for working with the children, preparing written proposals and homework, copying the materials needed for parents, conducting surveys through written questionnaires, preparing stands, exhibitions for parents (for one, the creativity exhibition "Believe in Yourself"), preparing educational manuals or recommendations for parents. The experimenters have prepared the guidelines "Working with Parents in the Context of Social Rehabilitation of Children with Special Needs". The primary purpose of socio-pedagogical work with families with children with MSDs is to mobilize the family's innate potential for its psycho-pedagogical adaptation to the problems of children and adults with MSDs.

The fifth model (establishing contacts between families) aims to facilitate the creation of a network of baby-sitting and exchange of experience between them, hold meetings of the parents in the comfort of homes, involve parents (men) in repairing, especially the equipment for children and adults with MSDs; to assist in the establishment of a public organization of parents; to encourage parents to protect their rights, work in public organizations, participate in the decision-making of the medical psycho-pedagogical commission regarding further education and employment of adults with MSDs; to establish different types of interest clubs for parents and children (e.g., the club "Skilled Hands", the integrated theatre "Buratino").

Recently, psychotherapy and psychocorrection groups have become increasingly popular in Ukraine. The goals and objectives of establishing such groups are diverse. In most cases, they are determined by the problems existing in our society. The authors have considered the creation of a favourable psychoemotional climate in families with children with MSDs and the development of positive attitudes in the minds of others close to them as the goals of the proposed **psycho-correction**.

In this regard, psycho-correction aims to do the following tasks: to modify parent-child relationships; optimize marital and family relationships; harmonize interpersonal relations between "a mother with a sick child" and family members, as well as family members and others (outsiders); correct inadequate reactions in the behaviour and emotions of parents of children and adults with MSDs; develop communicative forms of behaviour promoting self-actualization and self-affirmation; develop skills of adequate communication with the outside world. The content of psycho-correction can be realized through individual and group work.

Individual work involves a conversation (or several conversations) or a partially structured interview, as well as further individual sessions of the psychologist with parents of children and adults with MSDs. This stage helps to establish direct personal contact between the psychologist and parents, familiarize them with the problems discussed in the group, and determine their need for attending group classes. At the same time, such work involves conducting a diagnostic of the psychological characteristics of children with MSDs with the help of specialized methods.

Individual classes allow the psychologist to know the life history of parents, identify some traits of their characters with the help of observations, study the history of the child's illness, as perceived by parents, identify the problems existing in this family, offer help (teaching them some forms of behaviour that can help in difficult life situations related to the child's problems).

Group work includes the influence of the psychologist on each member, as well as the influence of psychocorrection on the interaction between the participants. It can be organized in three ways: by harmonizing the relationship between mothers and children, fathers and children through psycho-corrective exercises and discussing their conclusions after completing the exercise by the participants of the group; by harmonizing family relationships; by optimizing the social contacts of families with children with MSDs. It can be implemented through 1) role-playing; 2) selftraining; 3) musical relaxation; 4) music therapy and bibliotherapy; 5) dance therapy; 6) vocal therapy.

The Effectiveness of the Author's Methodology

The quasi-experimental study on the effectiveness of the implemented programme involved 40 leavers (18 males and 22 females) from the Vinnytsia Centre for Social Rehabilitation of Children with Special Needs "Promin", who are diagnosed with cerebral palsy, and six leavers with mild mental disorders. *The control group* (CG) consists of 40 individuals diagnosed with cerebral palsy and seven individuals with mild mental disorders. The age requirement for EG is 14-19 years old. The implementation stage involved 27 parents of children with MSDs.

The main research methods are as follows: an observation; a study of pedagogical documentation, a conversation; a questionnaire, an interview, an analysis of educational information, a psycho-pedagogical (ascertaining and formative) experiment to specify the methods of rehabilitation of individuals with MSDs and verify their effectiveness; methods of processing statistical data to study experimental data and establish quantitative relationships between the phenomena and the processes under study.

First, parents gave their consent on the quasi-experimental verification of the results. Second, it was approved by the ethics committee of the city administration for the rights of people with special needs.

The basic data were collected through the author's survey of the target group, psycho-pedagogical talks and supervision, analysis of individual rehabilitation programmes and educational activities of children in rehabilitation centres.

The preface to the survey explains how it works and emphasizes the confidentiality of information obtained during the research. All the respondents were provided with the following instructions: to circle only those answers they agree with; to indicate their own answer options in the section "other"; to cross out the answers circled by mistake.

The survey contains questions that form several important groups.

The first group relates to self-care and solutions to household problems (1.2 - 1.5), whose success depends on relevant skills, infrastructure, social environment (1.6), as well as social competence levels (1.7). The share of affirmative answers will determine how self-sufficient the respondents are, while the rest of the answers – how much they depend on the environment. Motivation levels (1.1) are also significant.

The next group of questions (1.8 - 1.10) describes the family as a centre of the microsocial environment and the leading institution of

socialization of people with MSDs, as well as their place of these people in the parental family.

The respondents' relationships with the immediate (peers, friends) and macrosocial (healthy people) environment are also important (1.11, 1.12 and 1.16).

Another group of questions (1.13 - 1.15) highlights the personal orientations of people with MSDs in the public sphere, their motivation levels, as well as the localization of their public life in the system of social dimensions that exist in society.

Questions 1.17 and 1.18 identify the main sources of information and means of communication for the respondents.

Questions 2.1 - 2.3 characterize respondents' motivation towards further learning and suitability of knowledge acquired at school (centre) for this.

Questions 2.4 - 2.7 determine respondents' motivation to obtain employment, attitude towards it and ability to assess their professional qualities in comparison with a healthy environment.

Questions 2.8 and 2.9 show whether respondents can use certain computer programmes and devices. Also, they demonstrate the extent of computers' accessibility for people with special needs.

The last block of questions (3.1 - 3.3) studies respondents' motivation to start their own family and have children, as well as its autonomy levels. The real ability to do so determines their prospects for personal growth and social integration levels. The diagnostics of social adaptability levels in people with MSDs should consider the social status and influence of the family, as well as psychophysical disorders caused by socio-economic and medical-biological factors.

Thus, the proposed system of studying socialization levels in people with MSDs implies compliance with certain conditions:

1) the survey should be conducted in conditions psychologically typical for respondents;

2) the survey should be conducted only if respondents are in a positive emotional state;

3) it is necessary to give respondents some time to adapt to the situation;

4) it is advisable to avoid positive and negative evaluation comments.

Conclusions

The measures taken when implementing the author's methodology of working with mutual support groups of parents with children with MSDs have contributed to developing the skills of conscious psychological separation from constant parental care, taking responsibility for their lives, setting the real-life goals and destroying the position of helplessness in individuals with MSDs (see Table 1).

	EG		CG	
	Before	After	Before	After
Need	experiment	experiment	experiment	experiment
	%	%	%	%
Constant parental care	65	57.5	62.5	62.5
Place of residence	55	55	52.5	52,5
Services of a social worker	27.5	30	25	27.5
Expressing one's opinion	55	67.5	52.5	57.5
Achieving one's goal	52.5	72.5	52.5	55
Making one's decisions	47.5	57.5	50	52.5
Striving to know others	25	42.5	22.5	27.5
views				
Abandoning stereotypes	17.5	27.5	15	17.5
Striving for conscious independence	25	37.5	27.5	32.5

Tab. 1. The needs of people with MSDs

* The total score in all tables exceeds 100% as respondents made several choices. Source: Authors' own conception

The research proves that the leading institute of socialization of children and adults with MSDs was and remains a family. However, the awareness of these people of their dignity, values and ability to fulfil their needs leads to some changes in family relationships. The results of the experiment are presented in Table 2.

Tab. 2. Relationships in families with people with MSDs

	EG		CG	
Family	Before	After	Before	After
relationships	experiment	experiment	experiment	experiment
	%	%	%	%
Warmth	77.5	95	75	80
Trust	62.5	82.5	65	67.5

Sincerity	57.5	75	55	62.5
Peace	47.5	72.5	50	55
Love	40	67.6	42.5	50
Indifference	10	2.5	7.5	7.5
Anxiety	10	5	10	12.5
Hostility	2.5	2.5	2.5	2.5

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Source: Authors' own conception

Creating conditions for establishing friendly relationships with people with MSDs in the rehabilitation centre has helped them to create their psychological comfort zone, which is manifested in the conscious choice of friends as significant people along with family members and understanding of the importance of each family member for a harmonious life. The results of the experiment are presented in Table 3.

	EG		CG	
Significant	Before	After	Before	After
people	experiment	experiment	experiment	experiment
	%	%	%	%
Mother	90	92.5	87.5	87.5
Father	45	47.5	45	47.5
Grandmother	35	45	37.5	40
Grandfather	15	15	12.5	12.5
Sister	22.7	27.5	25	27.5
Brother	12.5	12.5	15	15
Friend	12.5	42.5	15	20

Tab. 3. Significant people for people with MSDs

Source: Authors' own conception

The attitude towards the possibility of starting a family by people with MSDs and their responsibility for both birth and education of their children has changed due to sociopsychological work aimed at developing the skills required for the interaction between a man and a woman and the skills of independent living both in adults with MSDs and their immediate environment. They have become more conscious and responsible for planning their independent lives from the standpoint of their responsibility. The results of the experiment are presented in Table 4.

	EG		CG	
View	Before	After	Before	After
	experiment	experiment	experiment	experiment
	%	%	%	%
Willing to start a	62.5	85	65	67.5
family				
Did not think	17.5	5	15	7,5
about it				
Unwilling to start	20	10	20	25
a family				
Willing to have	65	77.5	65	67.5
children				
Willing to live	50	62.5	50	55
independently				

Tab. 4. Views of people with MSDs on the possibility of starting a family and giving birth

Source: Authors' own conception

References

- Bakhmat, N., Maksymchuk, B., Voloshyna, O., Kuzmenko, V., Matviichuk, T., Kovalchuk, A., Martynets, L., Uchytel, I., Solovyov, V., Manzhos, E., Sheian, M., Alieksieiev, O., Slyusarenko, N., Zhorova, I., & Maksymchuk, I. (2019). Designing cloud-oriented university environment in teacher training of future physical education teachers. *Journal of Physical Education* and Sport, 19(4), 1323–1332. <u>https://doi.org/10.7752/jpes.2019.s4192</u>
- Behas, L., Maksymchuk, B., Babii, I., Tsymbal-Slatvinska, S., Golub, N., Golub, V., Chepka, O., Lemeshchuk, M., Dychok, M., Nikitenko, A., Sarancha, I., & Maksymchuk, I. (2019). The influence of tempo rhythmic organization of speech during gaming and theatrical activities on correction of stammering in children. *Journal of Physical Education and Sport*, 19(4), 1333–1340. https://doi.org/10.7752/jpes.2019.s4193
- Bezliudnyi, O., Kravchenko, O., Maksymchuk, B., Mishchenko, M., & Maksymchuk, I. (2019). Psycho-correction of burnout syndrome in sports educators. *Journal of Physical Education and Sport*, 19(3), 1585–1590. https://doi.org/10.7752/jpes.2019.03230
- Decety, J., Smith, K. E., Norman, G. J., & Halpern, J. (2014). A social neuroscience perspective on clinical empathy. *World Psychiatry*, *13*(3), 233–237. https://doi.org/10.1002/wps.20146
- Della Sala, S., & Anderson, M. (2012). Neuroscience in education: the good, the bad, and the *ugly*. Oxford University Press.

- Dietz, V. (1997). Neurophysiology of gait disorders: present and future applications. *Electroencephalography and Clinical Neurophysiology*, *103*(3), 333–355. <u>https://doi.org/10.1016/S0013-4694(97)00047-7</u>
- Dishion, T. J. (2016). Social influences on executive functions development in children and adolescents: steps toward a social neuroscience of predictive adaptive responses. *Journal of Abnormal Child Psychology*, 44, 57–61. https://doi.org/10.1007/s10802-015-0117-5
- Dobryakova, I., & Shchedrina, T. (2004). Vosstanovitelnoye lecheniye detey s porazheniyami tsentralnoy nervnoy sistemy i oporno-dvigatelnogo apparata [A reconstructive treatment of children with neurotic and musculoskeletal disorders]. MAPO.
- Dyson, L. L. (1997). Fathers and mothers of school-age children with developmental disabilities: parental stress, family functioning, and social support. *American Journal on Mental Retardation*, *102*(3), 267–279. https://doi.org/10.1352/0895-8017(1997)102<0267:FAMOSC>2.0.CO;2
- Eisenberger, N. I. (2013). Social ties and health: a social neuroscience perspective. *Current Opinion in Neurobiology*, 23(3), 407–413. <u>https://doi.org/10.1016/j.conb.2013.01.006</u>
- Eslinger, P. J., & Tranel, D. (2005). Integrative study of cognitive, social, and emotional processes in clinical neuroscience. *Cognitive and Behavioral Neurology*, 18(1), 1–4. https://doi.org/10.1097/01.wnn.0000152206.73195.1e
- Gerasymova, I., Maksymchuk, B., Bilozerova, M., Chernetska, Yu., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2019). Forming professional mobility in future agricultural specialists: the sociohistorical context. *Revista Romaneasca pentru Educatie Multidimensionala*, 11(4), 345–361. <u>https://doi.org/10.18662/rrem/195</u>
- Ha, N., Nhan, N., & Quang, B. (2020). Developing educational institution culture for the education of ethical and humanistic values, and of lifelong-learning spirits in Binh Duong province. Science & Technology Development Journal – Social Sciences & Humanities, 4(3), 582–593. <u>https://doi.org/10.32508/stdjssh.v4i3.576</u>
- Halaidiuk, M., Maksymchuk, B., Khurtenko, O., Zuma, I., Korytko, Z., Andrieieva, R., Strykalenko, Y., Zhosan, I., Syvokhop, Y., Shkola, O., Fomenko, O., & Maksymchuk, I. (2018). Teaching approaches in extracurricular physical activities for 12-14-year-old pupils under environmentally unfavourable conditions. *Journal of Physical Education and Sport*, 18(4), 2284–2291. https://doi.org/10.7752/jpes.2018.04344
- Halstead, E. J., Griffith, G. M., & Hastings, R. P. (2018). Social support, coping, and positive perceptions as potential protective factors for the well-being

of mothers of children with intellectual and developmental disabilities. *International Journal of Developmental Disabilities*, *64*(4-5), 288–296. https://doi.org/10.1080/20473869.2017.1329192

- Knight, R. G., & Godfrey, H. P. (1996). Psychosocial aspects of neurological disorders: Implications for research in neuropsychology. *Australian Psychologist*, 31(1), 48–51. <u>https://doi.org/10.1080/00050069608260176</u>
- Lourens, H., Watermeyer, B., & Swartz, L. (2019) Ties that bind, and double-bind: visual impairment, help, and the shaping of relationships. *Disability and Rehabilitation*, 41(16), 1890–1897. https://doi.org/10.1080/09638288.2018.1450454
- Maksymchuk, I., Maksymchuk, B., Frytsiuk, V., Matviichuk, T., Demchenko, I., Babii, I., Tsymbal-Slatvinska, S., Nikitenko, A., Bilan, V., Sitovskyi, A., & Savchuk, I. (2018). Developing pedagogical mastery of future physical education teachers in higher education institutions. *Journal of Physical Education and Sport*, 18(2), 810–815. https://doi.org/10.7752/jpes.2018.02119
- Melnyk, N., Bidyuk, N., Kalenskyi, A., Maksymchuk. B., Bakhmat, N., Matviienko, O., Matviichuk, T., Solovyov, V., Golub, N., & Maksymchuk, I. (2019).
 Modely y orhanyzatsyone osobyne profesyonalne obuke vaspytacha u pojedynym zemљama Evropske Unyje y u Ukrajyny [Models and organizational characteristics of preschool teachers' professional training in some EU countries and Ukraine]. *Zbornik Instituta za pedagoska istrazivanja*, 51(1), 46–93. <u>https://doi.org/10.2298/ZIPI1901046M</u>
- Moffitt, T. (1993). The neuropsychology of conduct disorder. *Development and Psychopathology*, *5*(1-2), 135–151. <u>https://doi.org/10.1017/S0954579400004302</u>
- Sheremet, M., Leniv, Z., Loboda, V., & Maksymchuk, B. (2019). Stan sformovanosti smart-informatsiynoho kryteriyu hotovnosti fakhivtsiv do realizatsiyi inklyuziyi v osviti [The development level of smart information criterion for specialists' readiness for inclusion implementation in education]. *Informatsiyni tekhnolohiyi i zasoby navchannya* [Information Technologies and Learning Tools], *72*, 273–285. <u>https://journal.iitta.gov.ua/index.php/itlt/article/view/2561</u>
- Shevtsov, A. (2009). *Osvitni osnony reabilitolohiyi* [Educational fundamentals of rehabilitation]. Lesya.
- Sitovskyi, A., Maksymchuk, B., Kuzmenko, V., Nosko, Y., Korytko, Z., Bahinska, O., Marchenko, O., Nikolaienko, V., Matviichuk, T., Solovyov, V., Khurtenko, O., Slyusarenko, N., Zhorova, I., & Maksymchuk, I. (2019). Differentiated approach to physical education of adolescents with different speed of biological development. *Journal of Physical Education and Sport*, 19(3), 1532–1543. <u>http://repository.ldufk.edu.ua/handle/34606048/23502</u>

Yeates, K. O., Bigler, E. D., Dennis, M., Gerhardt, C. A., Rubin, K. H., Stancin, T., Taylor, H. G., & Vannatta, K. (2007). Social outcomes in childhood brain disorder: a heuristic integration of social neuroscience and developmental psychology. *Psychological Bulletin*, 133(3), 535–556. <u>https://psycnet.apa.org/buy/2007-06095-009</u>