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## Psychological peculiarities of the children with the authistic spectrum disorder

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The Journal of Education, Culture and Society nr 2, 162-171

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2013

Artykuł został opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej [bazhum.muzhp.pl](http://bazhum.muzhp.pl), gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

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## PSYCHOLOGICAL PECULIARITIES IN CHILDREN WITH THE AUTISTIC SPECTRUM DISORDER

### ABSTRACT

The psychological peculiarities of symptom occurrence in children with autistic spectrum disorder are outlined in this article. The views of different authors on this topic were analyzed and the direct correlation connections between the separate symptom occurrences were described in the article. A qualitative analysis of autistic disorder appearance in children with different levels of autism was conducted.

**Key words:** autistic spectrum disorder, symptom, syndrome, social interaction, imitation, verbal communication, non-verbal communication.

Autism is among those psycho-social disorders in child development that generates interest in the representatives of various spheres: medicine, psychology, pedagogics, sociology. Since the American clinical physician Leo Kanner introduced the term "early infantile autism", a whole lot of researchers have attempted to work out what symptoms identify this syndrome. Even to today this problem is not ascertained. In recent years a number of works have appeared. Some of them are interdisciplinary and attempt to find out the clinical picture of autism, to explain the reasons for its appearance and to introduce different child and family therapies. The triad of autism is well-known and has become very common. Yet the symptoms of autistic spectrum disorders are various and vague. Some of the autistic symptoms may accompany other disorders.

The problem is underlain in the fact that it is the simplest task to reveal autism, and the hardest one – to determine it (Winczura, 2008).

We analyzed the works of Polish scholars, who had taken into consideration the modern conclusions on the subject relating etiology and some specific needs of the autistic children, and made an attempt to see autism in a three-dimensional aspect:

- As a state derived from psychological needs deprivation. The main symptoms of this dimension are: reticence and the demand to preserve the stability of things. The supporters of such a concept are Leo Kanner, Jirina Prekop, Peter Hobson;
- As an inborn cerebral cortex disorder. The main symptoms of this dimension are: disability of thinking and creativity, disability to consider other person's spirit, and the limited ability to use and create non-verbal schemes. The supporters of such a concept are Sacha Noam Baron – Cohen, Uta Frith and Amy Leslie;
- As a disorder in the subcortical structure (cerebrum). The main symptoms of this dimension are: different oddities in perception, emotions and social

behaviour, that function as a protection from excessive stimulus in sensor integration disorders. The supporters of such a concept are Anna Jean, Ayres, Carl Delacato, Mirjam Van Soesta (Winczura 2008).

In Russian literature two types of autism are depicted: the classical Kanner autism and autistic states of different genesis.

Vladimir Kovalev (1985) outlines two main forms of early infantile autism (EIA) – procedural (schizophrenic) and non-procedural (Mamaychuk, 2001).

Clara Lebedynska defines five types of autism on the basis of an etiopathogenic approach: autism in different CNS disorders (organic autism), psychogenic autism, schizophrenic etiology autism, in metabolic diseases, in chromosomal pathology (Mamaychuk, 2001). Based on the data gathered by different researchers and combining them with his experimental experience, Vladimir Lebedynskyy V. Lebedynskyy with the other authors suggested a hypothesis, which enables us to have a closer look into psychological disorders in children with autism that prevents them from normal development. Among those disorders authors identify: the lack of psychic child activity; the instinctive sphere disorder, sensor-motor functions disorder, motion and speaking spheres disorder (Mamaychuk, 2001).

As it was abovementioned, in 1943 Leo Kanner described the first group of disorders. He defined it as early infantile autism. The main described criterion of this disorder are the following: the absence of the deep emotional contacts with other people, anxiety, obsessive desire to keep stability, objects obsession, because of the child's ability to use them due to the movement accuracy; mutism or language created without the contact with others; clever behaviour and thinking facial expression, as well as great cognitive potential evident in great memory productivity.

Leo Kanner outlined some additional criteria that characterize autism: the non-verbal aspects of communication and social responsiveness disorders; frequent movement stereotypes; the aptitude for unusual forms of physical activity, such as roof walking and furniture climbing; the out-of-the-ordinary reaction to some sensor stimuli, such as light excitement or over sensitivity to some sounds; problems with food; frequent turns of anger or aggression.

L. Kanner's observations are very deep and till today have been the starting point of diagnostic criteria (Markiewicz, 2007).

The studies that are the continuations of L. Kanner's works prove the fact, that autism can be easily identified. It is due to its variegated character and due to the lack of its source identifications.

The studies of Lirny Wing I Judith Gould (1979) played a special role in the description of the position of the variegated character of autism. The authors introduced the notion of the peculiarities continuum, taking into consideration the symptom unsteadiness in the form of diagnostic triad: the peculiarities of the social interaction, verbal and non-verbal communication; imagination (Markiewicz, 2007).

In the English literature we often come across the term Autistic Spectrum Disorders – ASD. This means that the power of some spheres disorders that are core to the autism diagnosis can vary – from very light to the severe ones. Thus, the course of the disease in some people is variable and the effectiveness of therapeutic processes varies (Markiewicz, 2007).

This term is becoming more and more used by the Ukrainian scholars. The same notion we find in the works of Russian researcher Valentina Bashyna. She outlines the variation of autistic syndromes from the light to the severe, that can be observed as with the Kanner syndrome and as with the autism of the procedural schizophrenic origin (Mamaychuk, 2001).

We mentioned symptoms of autistic disorders above. It is not necessary that the symptoms that are key factors to one model would be the same to the other. Thus, all mentioned symptoms constitute the triad of the symptoms of autistic spectrum disorder. They are: social interaction disorders, communicative sphere disorders and behaviour disorders that become apparent in stereotypic forms. Even though "in the centre" of it - is autism as a disability of emotional relationship creation, as difficulties with communication and socialization, the disorders of all psychic function development are no less common. That is the reason that child autism is among penetrating disorders, that are developed in the disorders of all psychic spheres: intellectual, emotional, sensor, motor spheres, memory, speech. The only regularity of dysontogenesis can be observed here. It covers the whole child psychic development. In that case, the development is not only broken or slowed down, but deformed "goes into the wrong direction" (Nikolskaya, Baenskaya, Liebling, 2012).

Valentina Bashyna revealed that the main peculiarity of Kanner autism was the asynchronous type of development detention. It was apparent in the hierarchy disorder of psychic, lingual, motor, emotional maturity of autistic child (Mamaychuk, 2001).

Let us have a closer look and analyze the generally excepted triad.

## THE DISORDERS IN THE SPHERE OF SOCIAL INTERACTION IN CHILDREN WITH THE AUTISTIC SPECTRUM DISORDER

Social sphere disorders, being the core factor of autistic syndrome, are the group of the specific and various quantitative as well as qualitative symptoms.

Contact intrusion for children with autism is rather instrumental than emotional. If a child strives for a relationship, it is because it wants something. Under "want" here we can mean food or the access to the place which it cannot reach by itself. Due to such an instrumental intrusion it may appear that the child is more concerned with what it wants, rather than who gives this. It is very rarely that we can observe in such a child's behaviour elements suggesting the interest in the needs and feelings of others (Winczura, 2008). Autistic children are closely connected to their parents, but treat their love inadequately. According to the parents, such children are not eager to respond to hugs. It appears that they misinterpret emotional people's behaviour and do not understand their feelings, such as lack of empathy is the reason for the inappropriate social behaviour (Ostrowska, 2008).

### *The absence of pointing gesture, adult's hand use.*

Often such instrumental way of contact establishment may acquire a form that is described by the means of a leading hand: the child takes the hand of an adult and drags it to the required object, seeing it as a tool. When the child is capable of using somebody else's hand, it means that in its mind it is capable of seeing the fol-

lowing events. The main difference between the child with autism and normally developed child is that the normal child before starting to talk points with the finger to the desired object. Such natural pointing appears between 8 and 10 months of age and suggests the child's understanding of the other person's identification of the desired object. Such ability in autistic child appears quite late and is connected with the disorders in the cognitive sphere (Winczura, 2008).

***The disorders of healthy contact establishment.*** Some researchers are of the mind that instrumental form of contact establishment of autistic children correlates with the deficiency in the sphere of healthy contact establishment. After a thorough observation it has become apparent that approximately at the age of two children with autistic disorders have some deviation in maintaining healthy contact. This may be seen in a quick glance, eyeing somebody askance, a look at those who are not looking at them, seeing through the person, staring at other facial parts other than the eyes, sometimes a regular short glance appears at the moment when a child wants something or is interested in something, and the establishment of eye contact with familiar people from the closest environment (Siegel, 1996; Kruk-Lasocka, 1994) (Winczura, 2008).

***The disorder of physical contact establishment.*** The preoccupation of autistic children by the stereotype behaviour leaves the impression that they are indifferent to other people's presence. At attempts of physical contact establishment they react with disgust. Even when they come into contact, it is only when they want it. Of course, they come into contact with familiar people more (Winczura, 2008).

***The lack of ability to identify and react adequately to the emotions of others.*** *Autistic people are not capable of empathy.* The ability to sympathize with others becomes more important because of its identification of future social interaction. Children capable of empathy are able to include into their reactions and behaviour the needs, motives and desires of others and to stick to the demands and to be ruled by mutual relationship. The reason for direct troubles in the development of a child's empathy, irrespective of etiology and the stage of disorders, is known as egocentrism. Due to this they are not able to understand the point of view of other people, motives for their actions, psychological state, and outer situational behaviour. The feelings and attitudes of other people are considered to be one of the aspects of the situation. And only much later, with the accumulation of the experience, are they able to understand the feelings subjectivity and their dependence on the situation (Pilecka, Pilecki, 1993, 1995) (Barbara Winczura, 2008).

***The ability to imitate disorder.*** Another very important problem on the way to the creation of social contacts autistic children is the disorder of ability to imitate, as one of the earliest ways to acquire information about the world (Lovaas, 1993; Pisula, 2000). Such a simple skill, a farewell hand wave doesn't appear at all or disappears during the first year of life. None of the parents' social praises can strengthen this. There exists an assumption, that this happens due to the concentration on the human model disorder (Winczura, 2008).

***Imagination disorder.*** Together with growing up, the processes of imitation are closely interrelated with the child's development. The imagination very often consists of the imitation of something natural and adding to this some new com-

binations. Autistic children have some disorder on this level as well. The imitation ability disorder depends on the level of the psychic child's development and to great extent influences the limited playing skills, that are one of the main characteristics of disorder in this group of children (Winczura, 2008).

*Limited playing skills.* Children with natural development develop their game accordingly. It evolves from the simple repetitive actions, concentrated on the specific object to more complicated examples. Playing on your own with time is substituted by playing with others. Playing increases and it gains a more and more symbolic character. The game of autistic children is different (Winczura, 2008). The following are distinctive features, that are identified in the process of autistic child development at the four stages of "development of a game" are outlined: the simple manipulation – the child with the normal development a game is varied, the game of an autistic child – simple and unvaried; combinational game – a healthy child can combine objects, understanding the relations between the them. The autistic child has to repeat numerous times the same unperceived combination that lies on the inadequate world reception. Functional game – a 2-year old healthy child understands the purpose of the objects and shows that in the game: it plays that eats, drinks, brushes. The most autistic children would do, for example, put tables and chairs in one row or build a tower with them. Some more capable children acquire the skills of functional game, but their games are mainly the imitation of the scenes from everyday life. Symbolic game – healthy children do not have problem with playing with somebody or something else. They play being an animal or a means of transport. In symbolic games the skills that go far beyond the horizons of perception are needed, beyond the literal world. An autistic child, on one hand, may relate some function to the objects without a fixed usage and the main problem is that it may not agree to use the object differently. On the other hand, an autistic child often uses objects and toys not due to their function, but due to their logic (Ostrowska, 2008).

## COMMUNICATION DISORDER WITH CHILDREN WITH AUTISTIC SPECTRUM DISORDER

Children with early autism development may have problems with communication very early. A child is interested neither in spoken language, nor in the acoustic signals. It may appear as if the child has hearing problems. The cry of such a child appears with lack of expression. The child starts talking far later than its peers. The speech is very poor, without any expression, with very little aim at communication, the child doesn't use its voice to attract attention, doesn't make any attempts at non-verbal communication (Jaklewicz, 1993; Wiekiera, 1995). According to Ewa Pisuli (1993) and Jacek Bleszynski (1995) one part of such children will never talk, and approximately half of them will never develop semantic language. Those who do learn to talk will use very odd language.

For children with late autistic features development the physiological stage of speaking development is outlined. The words or simple sentences are used. The language is used for social interaction. All gestures, mimics and intonation are adequate to the child's language. The appearance of the first autistic symptoms

automatically causes language retrogression. The child stops using utterances, verbal expression is reduced to the message consisting of separate words, mainly those aiming at the satisfying of a pressing problem. Echolalias appear. The disappearance of non-verbal communication forms can be observed simultaneously (Jaklewicz,1993; Galkowski, 1994; Pawlowska,1997).

The distinct features of language disorders are seen after three years. In contrast to healthy children the tendencies to repeat the same phrases and no construction of original utterances may be observed. Delayed and immediate echolalias are typical. Personal pronouns are repeated by autistic children in the same form they are heard. For a long period of time they do not produce answers like "yes" or "no" (Shopler, Reichler, Parents, 1971, pp. 87 – 102). Children with autism also have some restrictions upon abilities of language understanding. At the age of one year when the healthy children are eager to listen to the language spoken to them, autistic children pay attention to speaking in the same way as they pay attention to the other sounds. For a long period of time such a child is not capable of obeying some simple instructions and doesn't react to its name (Ostrowska, 2008).

To the most typical deficiencies in autistic children's communication belong symptoms of echolalias, language stereotypes and the tendencies to reflexive pronoun usage (Galkowski,1980; Olechnowicz,1983; Konstantareas et. al, Siegel, 1996; Bleszynski1994; Milkowska,1990, 1991). Irrespective of language development level from the autistic child most suffers from the inability of language use for communication (Ostrowska, 2008).

## THE RESULTS OF EMPIRICAL RESEARCH

The aim of our research is to study psychological peculiarities of children with autistic spectrum disorders.

26 children aged from 3 to 6 took part in the psychological research under the Charity fund *The Open Heart*.

The research was conducted in three stages: contact establishment, observation and the last stage techniques applications.

In the present research the following techniques were used:

- Childhood Autism Rating Scale (CARS)
- Luria's diagnostic principles in the neuropsychological assessment of children
- Observation chart

**Childhood Autism Rating Scale (CARS)** - the scale is used to observe and subjectively rate fifteen items in autistic children, that differentiate them from children with development defects, but without the autistics syndrome. CARS is a diagnostic assessment method that rates children on a scale from one to four for various criteria, ranging from normal to severe, and yields a composite score ranging from non-autistic to mildly autistic, moderately autistic, or severely autistic. This technique involves the evaluation of the following spheres: relationship to people, imitation, emotional response, body, object use, adaptation to change, visual response, listening response, taste-smell-touch response and use, fear and nervousness, verbal communication, non-verbal communication, activity level, level and consistency of intellectual response, general impressions.

**Luria's diagnostic principles in the neuropsychological assessment of children** – is not limited only by weak sides in child development, but identifies the closest development area that allows the individual correction and development child teaching program creation. With the aid of the abovementioned technique, the following spheres were assessed: the general characteristics of the child, movements and action study, gnosis study, language functions study, memory study, intelligence study.

## CORRELATIVE ANALYSIS

### **According to the correlative analysis results (with $r < 0,05$ )**

The direct correlative link between the people interaction and imitation was found ( $r = 0,78$ ). In the interaction with others a child adopts new behaviour forms thanks to the ability to imitate that promotes development. The discovered direct correlative link between the sphere of interrelation with people and body operating ( $r = 0,72$ ). It is known, that the development of child's motor functions in closely related to verbal and non-verbal communication, which for its part is an indicator of the interrelations with other. The direct correlative link is monitored between the sphere of interrelation with people and gnosis ( $r = 0,66$ ); memory ( $r = 0,73$ ), especially visual ( $r = 0,73$ ) and intelligence ( $r = 0,88$ ). This suggests that with the improvement of intellectual and cognitive functions, as well as memory, especially visual memory, which means that you would better remember faces and improve the interaction with others.

The direct correlative link between the imitation and communication is revealed ( $r = 0,71$ ), movements and child's actions ( $r = 0,79$ ). This means that imitation is the main form of child's information acquisition about the surrounding world. With the improvement of speaking and movement imitation the ability to communicate and special practical child's actions acquisition improve. We can also observe the direct correlative link between the imitation and gnostic sphere ( $r = 0,81$ ), memory ( $r = 0,74$ ), especially motor memory ( $r = 0,77$ ), visual memory ( $r = 0,76$ ) and aural memory ( $r = 0,73$ ) and the level and degree of intellectual development of a child ( $r = 0,90$ ). As to speak about the memory – it plays the key role in the imitation, because in order to repeat any action you need to keep it in mind. Imitation also assists information perception, thus its memorizing. As to speak about the gnostic functions and the level and degree of intellectual development of a child, the development of imitation aids better recognition, which in its turn helps to raise the level and degree of intellectual development of a child.

The interesting direct correlative link between the imitation and emotions identification are also found ( $r = 0,80$ ), and the understanding ( $r = 0,67$ ). With the development of imitation the understanding of surrounding, as well as understanding of emotional states of others improve.

As it was abovementioned, the direct correlative links between the verbal communication and the imitation are revealed ( $r = 0,71$ ), as well as with communication and objects usage, with the development of verbal communication the adequacy of object usage increases.



The direct correlative links are observed between the verbal communication and orientation ( $r = 0,80$ ), adequacy ( $r = 0,85$ ) and criticality ( $r = 0,83$ ). So, with the development of verbal communication the orientation, adequacy and criticality of a child of the surrounding and itself rise that eases its social adaptation.

The direct correlative links are also revealed between the communication and emotion identification ( $r = 81$ ), gnosis ( $r = 0,80$ ), memory ( $r = 0,83$ ), and intelligence ( $r = 0,64$ ). With the development of verbal communication the emotions understanding, comprehension improve, the level of memory and intelligence go up. Apparently, with the voicing of the information it is better understood and remembered, so perceived. All these factors stimulate intelligence.

### THE DISTINCTION OF PSYCHOLOGICAL PECULIARITIES IN CHILDREN BY THE AUTISTIC LEVEL

According to the Childhood Autism Rating Scale (CARS) 15% of children have a severe form of autism, 54% - moderate or mild autistic form, and 31% of children that were under the suspicion of suffering from Autistic Spectrum Disorder none were revealed.

All children with the severe level of autism moderate and significant disorders were revealed in the sphere of human interaction. It is seen in the fact that such children almost all the time are indifferent to the adults' behaviour. Only extremely persistent attempts to attract a child's attention may be successful. All children with the severe autistic level also have moderate or severe disorders in imitation. They imitate very rarely and with the great help of an adult. In most cases imitation was either delayed or not produced even with the aid of an adult. All children of that level also have sufficient disorders in the sphere of verbal and non-verbal communication. As to speak about verbal communication – there is no language as it is. When it is, verbal communication may be mixed with sensible or odd language; small-scale echolalia. With severe disorders in verbal communication sensible language is not used; a child can reproduce squeaks, quaint or animal sounds, some more complicated noise that resembles language or may display persistent, odd usage of some phrases or words that it recognizes. As to the non-verbal communication, there some moderate or severe disorders as well. In general with some moderate disorders a child is able to express its needs and wishes non-verbally, but may not be able to comprehend the non-verbal addressing manner of others. With severe disorders in non-verbal communication a child uses only quaint and peculiar gestures, which do not possess evident meaning, and it doesn't understand the meaning of gestures and facial expressions of the others.

54% of children are with mild or moderate autistic form.

Children with mild or moderate autistic form also have the disorders in all these spheres, notably people interrelation, imitation, verbal and non-verbal communication.

39% of children with mild autistic form have insignificant disorders in interrelations with others. The child may avoid visual contact, avoid adults or show irritation if somebody wanted to attract its attention, it may be very shy, not an-

swer while being addressed, as it is always done by children, be more tied to the parents than to peers.

39% of children in this category also have some disorders in the sphere of imitation – the child imitates the simplest behaviour, for instance, clapping hands or individual sounds in most of the cases. Sometimes it may imitate after the stimulation or with some delay.

15 % of children with mild or moderate autistic levels have moderate or sufficient disorders in the spheres of people interrelation and imitation.

All children (54%) with mild or moderate autistic level have either moderate or severe disorders in verbal communication.

31% of children with mild or moderate autistic level have moderate disorders in the sphere of non-verbal communication. In general the child is able to express its needs and wishes non-verbally, but is not capable of comprehending the non-verbal addressing to her.

23% of the children with mild or moderate autistic level have insufficient disorders in the sphere of non-verbal communication – immature usage of non-verbal communication. The child can only indefinitely show or reach the thing it needs, in the situation when its peers easily shows and explains using gestures what it exactly wants.

## CONCLUSION

As we can see the expression of autism is various and vague. Analyzing the literature on the subject, we can conclude that the social interaction disorder includes such symptoms as the absence of pointing gesture, the usage of the adult's hand, the disorder in the sphere of the health contact establishment; the disorder of the ability of physical contact establishment, the lack of recognition ability and to react adequately to the emotions of others, the disorder of the imitation ability, imagination disorder, game ability restriction.

The understanding of the peculiarity of the symptomatology of the autistic syndrome is a key factor in the diagnosis of this disorder. Considering the asynchronous development type in autistic spectrum disorders the discovered correlative links may be used in the correctional work. Relying on the strong child's sides with the help of correctional work we can influence the interdependent weaker sides.

Thus, according to the aim of our research we can come up with the following conclusions: after the correlation analyses we can see that:

- The most of the researched parameters are interdependent with the spheres of people interaction, imitation and verbal communication, which we can use in corrective work. The revealed direct correlative connections between the sphere of the interaction with people and imitation, body control, gnosis, memory, especially visual and intellect, show that influencing these spheres, we can improve the sphere of interaction with people. The improvement of this sphere will promote the raise of parameters
- Working on the imitation spheres we improve verbal communication, movements and actions of a child, Gnostic sphere, memory (visual and

auditory), intellectual development of a child, emotions identification, and understanding of the environment

- Verbal communication improvement will promote the adequate usage of object by the child, its orientation, adequacy, criticality, and understanding of the emotions.

Addressing to the quality analyses according to the estimation scale of children autism display CARS, we can see the following:

- in autistic children we can observe serious disorders in the spheres of social interaction, imitation, verbal and non verbal communication, which we can find in the theoretical literature as well. We can come across the same tendency with higher level of autism, where the moderate and severe disorders in the abovementioned spheres are observed.

In light and moderate autistic forms we can observe slight deviations in the sphere of interaction with people and imitation sphere in 39% of children, who belong to this category, and moderate and severe display of disorders in these spheres in 15% of children. As to speak about the display of disorders in the sphere of verbal communication, in all children with light or moderate form of autism moderate or severe disorders are observed. In the sphere of non verbal communication, in 31% of children moderate disorders were revealed, in 23% - insignificant disorders. Judging from these facts, we can conclude, that even with light and moderate autistic forms, the disorders of some spheres are also severe. In the others spheres the disorders can be insignificant, the fact that can be explained by the asynchronic type of development. Besides, we can see that as well as in light and moderate autistic forms, in severe form of verbal communication disorders are moderate and severe, thus we can conclude that this sphere is strongly damaged in all autistic children.

The study of individual psychological peculiarities of a child with autistic spectrum disorder is essential in the development of psychological escort. The aim of our further research is to create the interrelation between the level of autism and the peculiarities of psychological child's escort.

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