GOOD PRACTICES
IN THE THERAPEUTIC
WORK WITH CHILDREN
WITH AUTISM

Contents

THE OPENING

OSTO, or School and Therapy and Care Center for Children and Youth from the Autism Spectrum (earlier it was called the School - Therapeutic and Care Center for Children and Youth with Autism Features) was established on September 1, 1998. Its founder was the National Autism Society Branch in Bialystok.

Our facility was created thanks to the determination of families affected by the problem of autism, help and support of professionals and cooperation with the Białystok City Hall. OSTO has become a forerunner of implementing widely understood therapy and diagnosis of children and adolescents affected by autism spectrum disorders in the north-east region. For a long time we were the first and the only institution of this type in our region and one of the few in Poland.

The beginning of the center was associated with the intense emerging knowledge and gaining experience concerning autism spectrum disorderin our country and abroad, among others at Association for Assistance of Autistic People in Gdańsk and the Synapsis Foundation in Warsaw. From the beginning, people working in OSTO have been involved in the creating a modern, optimal holistic therapetica model, differential and functional diagnosis, conducted therapeutic classes, completed many trainings and courses to provide therapy at the possible highest level. The first headquarter of our facility was located at Nowowarszawska street 32b in Białystok. It was a low, not very cosy building, that needed renovation as well as equipment. Thanks to a great involvement of parents and employees, we quickly dealt with renovations and attained furniture. The building consisted of 8 rooms designed to work with children. The largest four rooms were designated for therapeutic rooms. The rest rooms were:teaching room, speech therapy office, individual cabinet and administration room. Educational and physical games classes were held in the corridor. Despite unfavorable housing conditions, the facility operated and developed dynamically. That was a period of intensive training and gaining experience. At that time 12 children aged 6-8 attended the Center. Some of them started learning in integration classes after only 2 years of therapy.

In 2000, thanks to the support of the city authorities, we moved to a new building at 96 Pułaskiego Street in Białystok that was adapted to our needs. Spacious rooms made the optimal conditions for the work with children. We have at our disposal 14 rooms, in which there are 7 treatment rooms, a diagnostic room, a speech therapy room, a gym, an art room, a Sensory Integration room, a didactic office with a library and individual work rooms.

Currently, as part of OSTO, exist Nursery School no 4, Primary School no 10, School Adapting to Work. During the 20 years of activity, several dozens of children with different levels of functioning and of different ages have been attending our center. Many of our youngest pupils continued their education in the integration and therapeutic classes. Some of them are already students and have started adult life.

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Chapter I

Now what? Next steps after diagnosis

Justyna Grochowska, Nina Zawadzka

Hearing information: "Your child has autism / Asperger Syndrome" is one of the most difficult messages that a parent can hear. Due to the high level of tension during the meeting, many parents are unable to focus on other information provided by the diagnosticians. In addition, the meeting triggers a lot of different emotions and the parent is not always aware of what questions he or she could ask therapists. Apart from the decision about starting a specific therapy for a child, it is worth trying to obtain the following documents:

1. Certificate of disability
2. *Special Education Decisions* (in case the child started education in kindergarten or school)
3. Early development support decision (in case of a pre-school child)

Certificate of disability

Many parents of children with ASD try to obtain a disability certificate because of the different opportunities that the family can obtain in this way. It is necessary in case of applying for material support or the access to various allowances, e.g. an additional benefitto family allowance for education and rehabilitation, tax breaks and reduced fares for trains and buses, co-funding rehabilitation stays, possibility of the extended by 3 years parental leave.

An application for a certificate can be submitted by:
– an adult person or its statutory representative (e.g. a child's parent)
- Social Welfare Center (with the consent of the person or its representative)

When applying for a disability certificate, the following documents must be submitted
in the Municipal or County*Disability Adjudication*Services (suitable for the address of permanent residence):
- application for issuing a certificate (forms are available on the websites of the adjudication services and in their stationary headquarters)
- a medical certificate issued by a specialist doctor (this certificate should be issued no earlier than 30 days before the day of submitting the application)
- documents collected so far that can be used in the process ofruling disability (e.g. medical opinions, test results).

After submitting the application, the team reviews it and calls the parent with the child for the adjudication meeting.

In case when the applicationconcerns persons with the autism spectrum disorder, a psychiatrist must be the chairman of the meeting. The certificate should include the date of issue and the date of submitting the application, information about the adjudication team that issued the certificate, and who was the chairman of the team, the legal basis for the decision, the child's personal data, the disability symbol, the period for which the decision is issued, indications (e.g. therapy), justification of the issuing the document and information about the possibility of appeal against this decision. If the certificate is not received, the parent has the right to appeal against this decision in the Voivodship Teams on Disability.

Special educational needs decision

The Special educational needs decision is issued for children with disability at the request of the legal guardians of the child. It contains recommendations concerning forms of the support that a kindergarten or school is required to provide to the child. This decision is issued by the Psychological and Pedagogical Center and states the recommended forms of education (special school, mainstream, integration, revalidation and educational center). Although the Center recommends the type of school, the parent decides which type of recommended education to choose. The application should be submitted to the appropriate Psychological and Pedagogical Center according to the school's address. If your child is not attending school or kindergarten yet, you should visit your local Psychological and Pedagogical Center. The team issuing the decision gives recommendations in it (e.g. types of the therapy, help required, and conditions of education) that the school / kindergarten is obliged to fulfill.

It happens that in a given province there is designated by the Board of Educationthe Psychological and Pedagogical Center for issuing decisions for persons with the autism spectrum.

Along with the application for issuing a decisoin, the following documents should be provided:

- a certificate from a specialist doctor that confirms the disorder

- opinions on the child's functioning from teachers from kindergarten or school (if the child attends an educational institution)

- the opinion of a speech therapist or other specialists working with the child (if the child attends the therapy).

Detailed information on documents can be found on the website of the centre. The decision for special educational needs is made and issued by a adjudication team. The parent is informed about the date of the the adjudication team meeting. He or she has the right to be present at the meeting and submit his own expectations regarding his or her child's forms of education.

The decison is issued for a year, a period of education at school or for the educational stage (e.g. pre-school education, integrated education in 1-3 form, etc.). The decision includes: diagnosis, recommended forms of education, recommended forms of therapy, rehabilitation, psychological and pedagogical help and ways to implement special educational needs.

It is worth knowing that the parent has the right to appeal against the decision. The appeal is filed in the Psychological and Pedagogical Center which issued the decision.

Early development support – WWR

Early development support is a form of free therapeutic activities for children with developmental disorders. WWR activities are conducted by public and private Psychological and Pedagogical Centres as well as public schools and kindergartens. If you want to obtain Early Development Support classes (WWR), you should go to the Psychological and Pedagogical Center, which is closest to your place of residence. In case of children with ASD, it is usually a center specializing in autism spectrum disorders. The opinion of the need for early developmental supportis issued

when the developmental disorder and/or disability traits emerge. The child is entitled to 4-8 hours of classes per month with various specialists (psychologist, speech therapist, physiotherapist, pedagogue). WWR continues until the child starts education

at school. There are various forms of therapy: an individual with a child (and a parent) or a group with other children.

Similarly, as in the case of the above-mentioned documents, anadjudication team is appointed that appoints the date of the meeting during which the child is examined. An opinion is issued after examination. The website of the Psychological and Pedagogical Center contains exemplary application forms and information on documents that should be attached to the application.

Material support for families

The condition for receiving financial benefits such as: a care allowance (the amount of PLN 184.42 per month) or a nursing benefit (the amount of PLN 1477 per month) is to hold a disability certificate. Applications for the above-mentioned services should be submitted to Social Welfare Centers. The parent of a child with disability can apply for financial support from the "500 Plus" programme. Any family is entitled to receive this payment, if the income does not exceed PLN 1200 per person, and any of the children in the family is disabled.

Bibliografia:

E.Pisula, Autyzm. Od badań mózgu do praktyki psychologicznej, GWP, 2015.
M. Suchowierska, P. Ostaszewski, P. Bąbel, Terapia dzieci z dzieci z autyzmem. Teoria, badania i praktyka stsowanej analizy zachowania, GWP, 2015

Chapter II

Developing the language expression in people with ASD based on alternative and supporting communication methods.

Andrzej Cwaliński

The term "autism" was used for the first time in 1911 by psychiatrist EugenBleuler. Originally, he referred to one of the symptoms of schizophrenia, which was characterized by a narrowing of relationships with people and the outside world (Frith 2008: 25). It meant a state of isolation. In the 40's of the last century, for the first time, it was used in relation to the developmental disorder. This was done by two independent psychiatrists - Leo Kanner in 1943 and Hans Asperger in 1944. Kanner's diagnostic criteria for autism were based on the identification of five axial behavioral symptoms which, as it turned out, left off a large group of people who did not have the typical repertoire of autistic behaviors, and yet they exhibited similar characteristics and had the same specific needs. For these reasons, in the 80's LornaWing and Judith Gould extended these criteria, recognizing that for autism is

characteristic of the occurrence of so-called. **the autistic triad**, including (McKernan, Mortlock 2004: 2):

- disturbing the development of social interactions,

- disturbing social communication,

- impaired development of imagination and understanding of social situations.

The introduction of new diagnostic criteria was also associated with the introduction of another new concept: **autistic spectrum disorder** (ASD), which refers to the continuum of various cases of autism, at one end of which are low-functioning people, and on the other, high-functioning people. The differentiation between individuals in the autism spectrum is all the more significant because autism is a combination of disorders from three areas of the autistic triad, and disorders within each of them may differ in qualitative and quantitative characteristics. In addition, every person with autism has its own unique personality traits.

To distinguish various "cases" of autism, new diagnostic units were introduced in 1994, such as Asperger's disorder, child disintegration disorder, a pervasive developmental disorder as not otherwise specified.

In recent years, further changes are observed, such as in the DSM -V classification from 2013, the triad of autistic disorders was replaced by an autistic diade, as it was found that the disturbances in the development of communication and social interactions in autism result from the same deficit (Kaczmarek 2015: 144). In the above classification, previously eliminated diagnostic units were removed, combining them into one category called: autistic spectrum disorder (ASD). The change was made as earlier criteria for identifying individual "varieties" of autism did not have clearly outlined frames, which made it difficult to differentiate them. Each diagnostic team could make a different description of the same disorder, which in turn often led to the so-called double diagnosis (Kaczmarek 2015: 144).

Regardless of the ongoing changes related to the understanding of the issue of autism, a permanent element, characterizing people with ASD and unchangeable for years are communication and language deficits. They concern all people with ASD, regardless of the level of their cognitive functioning or deficits related to speech. Awareness of what communication, language and speech are is what determines our therapeutic intervention. It ensures that the intervention is focused on the essence of communication barriers, eg in the case of communication competence deficits, communication skills will be shaped in a natural situational context, and before we expect the child to use speech or graphic symbols in expressive communication, we will first take care of child's motivation and need to communicate. On the other hand, knowledge about communication, language and speech avoids the implementation of many pointless activities, for example in the case of

a communication intention deficit, we will not concentrate on developing the phonological component of language competence. As, that inducing speech and using it is not equal with acquiring communication skills, as evidenced by persons with autism. The first chapter of this work is devoted to the issue of communication, language and speech. It is a kind of methodological framework for the issues discussed.

Communication deficits of people with ASD have their specificity. Contrary to appearances, it is not the lack of speech that implies the communication difficulties of people with autism. There is, after all, a large group of people with ASD who can speak, often also people who are able to form sentences according to the rules of a specific language, yet their statements are not communicative. Their speech is not functional. Why is this happening? What is the essence of the communication difficulties of people with ASD? The answer to the above questions was given in the second chapter of this work.

Due to the fact that communication difficulties are irresistibly accompanied by autism, constituting its core, they are the subject of our therapeutic intervention. This intervention is often based on an alternative one and supporting communication methods (AAC). AAC as a structured system and visual communication precisely blends into the methodology of work of people with ASD, which is largely based on the use of various forms of structuring and visualization of information. The optimally effective therapeutic process of people with ASD can not do without AAC. The third chapter of this work is devoted to the use of AAC in the treatment of people with autism. The last, fourth chapter, ending this work, is a case study of people with autism who used AAC during the course of therapy.

2.1 COMMUNICATION, LANGUAGE AND SPEECH

In the world around us we deal with the constant flow of information, and a man embedded in him has a natural inclination to seek and obtain it. We get access to information through the senses and thanks to the overlap in brain brain operations. However, the human role is not limited only to the reception of information and its processing, we ourselves are also **a source** of information for others, and when we have the will to communicate it, we become **information broadcasters** (Rakowska 2003: 7). The process of information exchange between the sender and the recipient, as well as between groups and human communities is called **communication**. Latin equivalent of the term communication - cominicare means "To be in a relationship, to participate, to be in

connection with." (Dictionary of the Polish language 1998) In order for this communication act to exist, certain conditions must be met.

Communicating is an interpersonal process, requires presence at least 2 people remaining in a relationship - in a relationship Therefore, it is necessary to establish contact, for example by approaching, arousing interest in one's own person, entering in the area of attention of the other person and creating a common field of attention with it. In everyday situations, we meet a number of people with whom we enter into relationships, some of them last longer, others shorter, in some we communicate more often, in others less frequently, and still in others in general. There are people we want to interact with, there are also those we can avoid. With people who will satisfy our needs (understood in the broad sense of the word), which are the source of our inspirations with which we share common passions and interests, goals, ideas, activities, we enter into relationships much more often. Staying in relation, with a man in the presence of whom we feel, among others safe, accepted, valuable, needed and efficient, there is a greater likelihood of a communication act than in a relationship with a person who does not give us a sense of security, is unpredictable and treats us in a directive way.

Communication has its source in human needs. The needs are the driving force of information and communication activities undertaken by the sender and recipient. These needs activate people to behave in a certain way, including communication. When we want to have something, to avoid something or to get to know a certain element of the surrounding reality, we become active and if necessary, we modify the behavior accordingly, until it has an effect. We speak louder and more clearly, we approach it closer, analyze information from the situational context, please repeat.

The exchange of information between the sender and the recipient is also associated with having **motivation** for such exchange. Despite real needs, we can remain passive without doing anything to satisfy them. This happens when communication behaviors do not meet with reception, because nobody pays attention to them, because they are unusual and incomprehensible - generally, when they do not bring the intended results. The lack of efficient, effective forms of expression and reception of information, results in a decrease in the motivation to engage in this type of behavior. If we signal our needs, and no one in the environment reacts to it, or reacts to it, but does not satisfy our needs, then at some point we will lose our motivation and we stop repeating ineffective forms of behavior. The above situation may manifest itself in a withdrawal from social interaction, passivity or the adoption of an external steady attitude towards others. The more this will happen quickly, when the

repertoire of behaviors possible to be presented by a given person will be limited, for example, because of disability.

Another important element of the communication process is the presence of the sender's knowledge about what information to convey, how to organize it, and how to communicate it. Before it is transmitted, the information is personal in nature and only the sender is known. It is the internal mental representation of the sender, who strives to make an identical mental representation in the mind of the recipient. To make it possible, it is necessary to externalize it. For this purpose, the sender at the mental level develops a program of external means that will externalize the inner state of his mind. The measures in question are emitted by the sender of the behavior.

We can treat every behavior as a carrier of information about its author, because it is subject to interpretation and given to it a certain meaning. This happens regardless of whether the person presenting it wants to provide information or not. A view of a child, walking in a place with knees attached to him, with an outstretched hand in the direction of the mug with water or whether it is staring at the window of the shop window, it is behavior whose interpretation provides us with information about its needs. The above behaviors, despite the fact that they are the source of information that they are also intentional behaviors, can not be treated as communication behaviors. **The ability of a person to interpret behavior does not make them conduct communication** (Frost, Bondy 2013: 23).

Communication behavior is behavior that is the source of information that is directed to the other person, but above all, the behavior whose author has the **intention to transform information**.

Information in the communication process is transmitted in a non-language and / or linguistic form. In connection with the above, we can talk about non-linguistic communication behaviors and language communication behaviors. Non-language behavior and linguistic behaviors can co-exist with each other.

Non-language behavior is a set of activities performed by a human being, which is the carrier of information, in which the meaning is transmitted by means of movements, sounds, signs that do not meet the characteristics of a natural language. Due to the non-linguistic character of communication behaviors, we can talk about **non-verbal communication or non-verbal communication**. Examples of non-linguistic behaviors of a communicative nature are, for example, hand movements (lifting, waving, reaching), moving the direction of the eyes, facial expressions, crying, nodding. It also includes strength, timbre and the height of the voice, pauses in the course of speaking, pantomimika, posture of the body, the use of space (Kurcz 2005: 219).

Language behavior is a concept synonymous with the concept of speech, which is a team, "Activities that a human participates in using language to learn about reality and transmitting its interpretation to other participants in social life "(Grabias 2002: 11). Language behavior can be implemented so-called in **external speech**, called l**inguistic communication or verbal communication**, whose "result is a text organized into sound form (secondary to graphic or gestational form), enabling communication in a social group." (Grabias 2002: 11). Language communication is closely related to language, it refers to the system of signs and the rules of their use. It is implemented as a result of the actions of speaking, writing and gesticulating (sign language).

Linguistic behavior is also an act of using language in the so-called **inner speech**, called **cerebration**, the result of which is the text devoid of the phonic layer. Inner speech is connected with cognitive processes organizing in the human mind knowledge and experience about reality and with quasi-communication processes, organizing knowledge and experience with the intention of transmitting them (Grabias 2002: 11).

The communication behaviors mentioned above, like any behavior, have specific consequences. The sender, by issuing a behavior that carries information, is interested in his **causative effect**. It expects the recipient to confirm the receipt of information by the behavior. This one can do it on the condition that the sender, while directing the message, gained his attention, was able to maintain it, and by issuing communication behaviors, he used forms understandable to the recipient. The recipient will direct his attention to the sender when he has the opportunity, need and motivation, and in his mind there will be an image of the internal representation of the sender's mind when he understands the repertoire of communication means used by the sender. The communication process involves a continuous translation of information from the sender from its internal to external form and from the recipient's side from its external to internal form.

The moment of waiting for the sender to confirm the receipt of information is the moment in which the role exchange between the sender and the recipient should take place. Each participant in the communication process **alternates** both roles. The information that takes place requires time and has a certain continuity, and the alternation of the activities of the communication partners participating in it makes the communication act becomes **a dialogue**. Dialogue in ontogenesis of human development begins in the first interactions of an infant with his mother. It is thanks to the mother that the child discovers the alternating rhythm of communication interaction that takes place during everyday activities, including during feeding, rewinding, beauty treatments and playing. The child's activity in dialogue is initially a non-verbal activity, but as a result of social interactions in which communication

behavior is modeled, it receives the language material necessary to learn the language, as a result of which its participation in dialogue it becomes a verbal dialogue.

As the communication process takes place not only in the non-linguistic dimension, but also in the linguistic dimension, it is impossible not to refer to the issues related to with language and speech.

The scope of concepts, communication and language overlaps in a partial way, namely, when speaking about linguistic or verbal communication (Kurcz 2005: 11). However, they do not overlap in the area of non-verbal or non-verbal communication and when speaking about language in its representative (presentation) function, because language is not only a communication tool, but also a way of interpreting reality in the human mind (Kurcz 2005: 12 , Grabias 2003: 16).

However, when it comes to communication and speech relations, these concepts coincide with each other when we talk about language communication, but do not coincide when we talk about internal speech.

Language is a system of signs and rules for their use, whereas **speech** is a specific act of language use (Kurcz 2005: 16). To complete the definition of speech, I will also refer to definitions

L. Kaczmarek (1982), who treats speech as an audio-based, language-based way of communicating with people, within which one can distinguish the activity of speech broadcasting, the activity of speech reception and the product of speaking and understanding called **text** (after Minczakiewicz, 1997: 13-14) . Speaking (speaking) is a set of activities related to transforming perceptions, ideas and thought processes in appropriate phonical symbols (characters) (Styczek 1979). In turn, speech reception is a set of activities related to the analysis and synthesis of heard speech sounds and their binding with a specific content (Minczakiewicz 1997: 27-28).

By juxtaposing the above definitions of language and speech, we can easily see the primary - the priority role of language, language without speech can exist, while the existence of speech without language is impossible.

The concept of sign occupies the central place in the definition of language. **A sign** is an object or phenomenon perceived sensually, which informs about something and replaces a specific element of reality (Rakowska 2003: 11). In the subject literature, the notion of a symbol also functions in addition to the notion of a sign. **The symbol** is defined as a model of things, actions or phenomena (Kaczmarek 1998: 19). In this work, the above terms will be treated as identical and language characters meeting the criteria of natural languages and artificial languages will be referred to. They will be used interchangeably.

Signs have their form and meaning, i.e. they relate to something excluding themselves. They are symbols of the elements of reality to which they refer, as well completely independent of the situation, so they can refer to a reality that is not subject to direct perception. They are characterized by a specific duration and perception. They can create a **system**, i.e. a system of characters in which each element remains in a specific relation to other elements of this system and has a strictly defined function. The set of characters that makes up the system used to transmit information is called **code** (Rakowska 2003: 12). Language is a code, however, it should be noted that code is a superior concept in relation to language, because the code is not only language characters, but also other character systems functioning in the world of people, animals and machines (Rakowska 2003: 9). The condition for effective communication is the use of communication, sender and recipient by the same system of characters.

Due to the functions, the characters are divided into **symptoms**: symptoms, **indicators** and manifestations of a phenomenon and signals that may be: linguistic, sign language and non-linguistic (Markiewicz 2004: 64). Symptoms are signs only for the recipient, while the signals are for both the recipient and the sender. Symptoms can transform into signals as a result of the learning process. An example of transposing a unilateral sign, received only from the recipient, into a two-sided sign, which is made aware both by the sender and the recipient, are the child's early interaction with the mother, in which the child becomes aware of the effects of his behavior and then deliberately and deliberately tries to exert influence on her impact.

Language is not only a system of characters, but also rules for their use. The rules above are. min. syntax, grammatical and inflection rules.

Efficient and effective communication in a language requires the partners to have specific knowledge and skills that will implement it,
namely: language competence, communication competence and cultural competence.

Linguistic competence is a term introduced by Noam Chomsky (1965/1982), which means mental knowledge related to the use of the language system (for Kurcz 2005: 16). It has its latent component, biologically conditioned: the universal grammar (UG) and the explicit component, socially conditioned: meta-language knowledge (Kurcz 2005: 16). Universal grammar is treated as a form of latent knowledge, because its features can be inferred only on the basis of perceived language behaviors (speech, sign language gestures). The latent component allows us to construct sentences in an unconscious way with the rules of a given language, while the explicit component allows us to understand the rules that we

use when constructing sentences, thanks to which we know, for example why it is grammatically correct.

There are three components of language competence (Kurcz 2005: 16):

-    syntactic - related to syntax rules,
  - semantic - related to the meaning of a sentence,
  - phonological - associated with the sonic form of the sentence, whose phonological unit is a phoneme - the smallest identifiable sound of speech.

Communication competence is a term introduced by Dell Hymes (1972), which means the ability to use language according to the social situation and to the relationship with other participants in the communication interaction (Kurcz 2005: 17).

"The unit of this competence is the statement and underlying **act of speech**, i.e. the **intention of the speaker.** The concept, which combines at least two statements (eg Question - Answer) is **a discourse**, ... "(Kurcz 2005: 17). It has its latent component, biologically conditioned: the theory of the mind (TU), and the explicit component, socially conditioned of the **meta pragmatic** knowledge(Kurcz 2005: 17). Communication competence is conditioned by the knowledge of characters used in the communication process, as well as understanding of the situation in which a given sign can be used (Markiewicz 2004: 64).

Cultural competence is a term promoted, among others Ernest Cassirer, Theodosia Rittel, Stanisław Grabias, who means knowledge about the phenomena of reality arising with the participation of language (for Dołęga 2003: 12). Its development makes it possible to learn new terms, symbols and signs of modern civilization and culture, as well as rules and ways of their application (Dołęga 2003: 12).

Each of the abovementioned competences performs a different function, which complements each other, enabling effective development of language skills and abilities, each of them can also undergo various disorders. "The impairment of linguistic competence is called a specific language development disorder, and the disorder of communicative competence - autism" (Kurcz 2005: 9).

2.2 COMMUNICATION OF PERSONS WITH AUTISM

Part of the population of people with autism are non-speakers. However, a non-talking person with autism is not just a non-speaking person. It is not the lack of sound communication that is a key feature of this developmental disorder. The common denominator, both speakers and non-autistic people, are communication difficulties,

regardless of whether the process of information exchange between the sender and the recipient runs at the language level or at a non-language level. They concern both the expressive side and the imposing side (Winczura 2008: 36).

The communication difficulties of people with autism can **take on a variety of forms** and depend on many factors, among them you can mention development period, in which the first symptoms of autism appeared, the severity and type of autistic features, the level of intellectual development, co-occurring disabilities, age, type, quality and time in which therapeutic intervention was initiated.

The genesis of communication difficulties of people with autism has its origin in the deficit of mind theory. The term above was introduced into the trend of psychology by David Premac and Guy Woodruff in 1978 as the name of the human cognitive ability, through which we can conclude and put forward hypotheses about the mental state of others. This ability allows us to understand our own intentions, and through the analogy of references made, also the intentions of others. What happens in the mind of another person is not subject to our direct observation. The knowledge we gain, and then we skillfully use it, it comes from observing behaviors, appearance (facial expressions and attitudes), linguistic and non-linguistic forms of information transfer as well as experiences concerning our own states of mind and the quantity and quality of interaction with other people (Winczura 2008: 51). Thanks to having the theory of mind, the infants share their attention with their mothers, move the gaze from the object of interest to the mother and observe the direction of her gaze (thus adopt its perspective), and engage in interactions with an alternate structure of roles. The above skills form the foundation for the communication skills that are to emerge in the future in the linguistic form, and their deficit may be a harbinger of the occurrence of autism. Persons with autism are deprived of the ability to read in the minds of other people, including their own, therefore they do not understand the desires, beliefs and motives of others (Kurcz 2005: 35). The above state of affairs affects the essence of communication difficulties of people with autism, because there is a close relationship between the cognitive structure which is the theory of the mind and communication competence (Winczura 2008: 71). With deficits in the theory of mind, there will always be deficits in communication competence, because the theory of the mind is the biological basis for its development (Kurcz 2005: 35). The quote from the book Psychology of Language and Communication, authored by Ida Kurcz (2005), cited at the end of the previous chapter, in which the author called the communication disorder autism, indicates the essence of communication difficulties of all people with autism. Observing language communication behavior of people with autism, we often see that the statements they form are inadequate to the situational context and are not

adapted to other participants of the interaction. The above state is a common phenomenon in autism, and because mind theory is an ability that we can possess to varying degrees and make use of it variously, we can talk about a deficit in communicative competence as a continuum on which at one end there are people with serious deficits (spectacular), and on the other with light (less spectacular). This explains the qualitative diversity of symptoms of communication competence deficits in people with autism.

The wide range of communication abnormalities observed in this group of people is connected not only with communicative competence. Irregularities may also be associated with the semantic, syntactic and phonological system of language competence. Nonsense (in the sense of inability to speak), a small repertoire of active vocabulary, statements in which syntactic rules are not observed, exchange of meanings of words, are often observed communication deficits in people with autism. Worth noticing, that abnormalities are also observed in people who are not diagnosed as autistic. They can not be considered as characteristic only for autism. Authentic disorders are characteristic of communication disorders. In my opinion, disorders in the area of language competence in autism have a co-occurring character, similarly to intellectual disability, coexist with autism and are not its essence. Disorders related to language competence can often mask the nature of autistic communication problems, and the more spectacular they are, the more they divert our attention from the less spectacular deficits in communicative competence. Similarly to intellectual disability, it can hide for an untrained diagnostician a child's autism or quasi-autism described in literature (Zaorska 2000: 62), the nature of a blind child's dysfunction, whose unusual behavior can be translated through the prism of autistic behavior, not through deprivation sense of sight.

Many researchers (Bruner, 1986, Tomasello, 1999) emphasize the primacy of communicative competence in relation to language competence (Markiewicz 2004: 67). Therefore, deficits in communication competence may affect the development of language competence. Which may explain the presence of deficits in language competence that are important for the autistic disorder of communicative competence and not being the essence of this disorder.

Disorders of language communication in people with autism related to speech can take, among others the following forms:

I**n the scope of the producing speech**:

- lack of speech caused by impossibility of producing speech,
- formulating statements that are not adequate to the situational context

• and not taking into account the communication partner, his statements, convictions, emotions, feelings, age, interest (subject, object or phenomenon),

• persistent repetition of statements, the presence of so-called stereotypical, compulsive statements, functional echolalia, speaking on one subject and reluctant acceptance of its changes,

• lack or inadequate use of personal pronouns, pronouns can be replaced with proper names,

• the presence of agramaticisms in the utterance and the creation of neologisms, for example, ashambola, szeleszczuszek, wydumka,
not sticking to the discourse, which may be limited to a single act of exchanging information, lack of ability to participate in the alternate structure of dialogue,

• lack of spontaneous, self-initiated communication interactions, speaking only in response to the other person's verbal behavior,

• exchange of the word signs,

• unnatural attention grabbing the way of speaking due to the vocabulary used, eg the use of terminology drawn from mathematical sciences to explain interpersonal relations or cognitive processes, speaking in a literal, pedantic way, not using figurative, phrases: really, really, just, of course (the deficit of so-called autocracy),

• unnatural attention to the way of speaking due to the sound parameters of the voice, e.g. related to accent, intonation, articulation, loudness and the rhythm of speech,

• limited repertoire of the functions of formulated statements, eg concerning only an instrumental function,
improper formulations of the statements,

• using single words or equivalent sentences,

• formulating statements referring only to directly perceived reality, no use of speech in the context of the past or the future
and the present, which is beyond the field of view,

• difficulty in acquiring and maintaining attention to the communication partner
and sending a message to him, talking to yourself,

• using speech not for communication purposes - verbal self-stimulation, talking to yourself, direct and deferred echolymic,

• in the course of stages of speech development: delay, inhibition, withdrawal or lack of speech development,

• other irregularities appearing in the course of speaking: too close contact with a communication partner, no eye contact, additional activities during speech, self-stimulation, movement stereotypes.

In the recipient range:

• lack of interest in a voice, or voice with a specific frequency, volume, color, a person may give the impression that he / she does not hear the statements of others,

 creating protective barriers against the perception of sounds, manifesting, among others covering, clogging ears,

• interest in speech with the lack of ability to maintain auditory attention on it,

• difficulties in distinguishing speech sounds from other acoustic stimuli accompanying the situation,

• total lack of understanding of other people's statements,

• responding to speech sounds as signal stimuli announcing specific phenomena,

• limitations in the scope of understanding the content of statements, related to: extended information latency period, manifested by delayed hearing,

• degree of consistency in the message,

• ignorance of the meaning of words or treating them in a literal way,

• presence of disturbance and pragmatism,

• not taking into account the factual context,

• disturbed hearing impairment,

• the situational context in which the process takes place and / or the scope of the subject's statements,

• understanding of speech, accompanied by inadequate reactions in connection with disturbances of motor traffic planning, masking the ability to understand speech,

• other accompanying speech irregularities: engaging in other activities, leaving the communication partner, self-stimulation, movement stereotypes.

Disorders of non-linguistic communication in people with autism can take, among others the following forms:

In the scope of information:

Noticing the other person as a source of meeting the needs,

• lack of awareness of own legal capacity,

• lack of communication needs or needs, stereotypical and not very differentiated, focus on the sensations of one's own body,

• inability to participate in activities that have an alternation structure,

• lack of motivation to undertake communication interactions,

• lack of spontaneous communication interactions, giving initiative to an adult,

• interacting with only selected people, e.g. adults,

• inadequate use of non-linguistic forms of communication with the context,

• presenting atypical forms of communication behavior, eg in the form of aggressive behaviors or others inappropriate from the social point of view.

In the scope of information collection:

lack of attention to the person, not entering into the field of attention with 2 person,

• no interest in the activity of 2 people,

• lack of interest in being in a relationship with 2 people,

• no observation of the direction of other people's eyes,

• incomprehension of non-linguistic forms of information,

• difficulty in understanding cause and effect relationships.

2.3 AAC IN AUTISM

This chapter will be an attempt to answer selected questions that I often encounter in my everyday pedagogical practice. The questions in question are as follows:

• my child is speaking, so why would he need AAC?

• why graphic signs, not gestures?

• I understand my non-speaking child, so why do we need symbols?

• if I allow a child to communicate with symbols, will it be motivated to communicate with speech?

However, before addressing the above issues, I will first define the basic concepts.

Alternative and supportive methods of communication (Augmentative and AlternativeCommunication, AAC) is a term that means "all activities aimed at helping people who speak or not speak to a limited extent. Instead of spoken words and sentences, they can use graphic signs (pictograms, pictures, symbols), manual characters (gestures) or spatio-tactile signs (eg objects). As a result, they can make choices, make decisions, ask questions, tell stories, express thoughts and feelings - overcome barriers in communicating and becoming independent (http://www.aac.org.pl/).

In the sonic way of communication, carried out with speech, the information carrier is a string of phonetic characters. Then we have a situation of **speaking**, in which "the sender, wanting to convey information to the recipient, chooses from the language code appropriate vocabulary and grammatical structures, activates the vocal organs to realize the form of

selected language units, and as a result sends acoustic waves to the recipient's ear, in which the receiving organs make sound reception and its mental interpretation (for Michalik 2015: 27, Grzegorczykowa 2007: 14). The aforementioned acoustic wave performed by human speech organs is a string of phonic characters.

In a situation where the transmission of information can not be realized via audio signs, it is possible to replace them with alternative signs in the form of graphical, manual or spatio-tactical signs, and the process of information exchange through them is called **alternative communication**. However if in the transmission of information, audio signs are supplemented or amplified by the presence of graphical, manual or spatial-touch marks, then we are dealing with **support communication**.

There are three groups of alternative users and supporting communication methods (AAC). The first is a group of linguistic expression, which brings together people with speech deficits in the area of its transmission, while maintaining the ability to receive. The second group of AAC users are people from the so-called alternative language groups, with reception and speech deficits. The third group, people who require linguistic support, eg due to the delay of speech development, or a narrow vocabulary that limits their communication capabilities to specific topics or situational context.

People with autism are heterogeneous and diverse in terms of communication skills, among them are representatives of the language expression group, alternative language and language support.

Alternative and supporting methods of communication (AAC), contrary to popular opinions, are not only associated with non-speakers. Therapeutic intervention, in which AAC is used, can be successfully used, also at work with talking people with ASD. First of all, the ability to speak, in their case, does not always translate into the skill of functional communication. Secondly, the role of AAC is not limited to compensating for the deficits of language expression. AAC can be used and it is also in the information reception area. In the case of people with ASD, the regulation of deficits related to the reception of information has a special character, because autism is a distortion of the reception and processing of sensory information. Including AAC in the therapeutic areas:

• we create favorable conditions for the development of communication and language skills,

including the expression and reception of speech,

• we stimulate production,

• we can effectively reduce contextually inappropriate behaviors, replacing them with functionally equivalent alternative behaviors,

we help the AAC user understand the situation and ensure their predictability,

  • we provide tips and information related to the operation, including for what to eat in a given dish.

When referring to the different possibilities of using AAC, it is worth asking whether the autistic person covered by the therapy, despite the fact that he does not show serious deficits in the field of language expression:

  • they understand what is being said to her?

  • is understood by every person?

  • formulate a sentence?

formactions. messages, which also relate to objects

and phenomena from the past and the future?

  • its linguistic expression is initiated spontaneously?

  • flexibly moves from one activity to another?

  • is able to independently perform self-service activities and activities of everyday life?

If this is an answer to the beginning of the crisis, I am sorry.

The methodology of the AAC is based on the structuring and visualization of information. Structuralization is a permanent form in time. These processes are always present in our everyday life. We need to understand something or remember something.

We give the information a permanent form by storing it, taking photographs or drawings, ordering, for example, by pointing, emphasizing, grouping in individual cells of the table, presenting the data on the chart, we draw mind maps. We are also happy to reach for textbooks when we see that they are summarized, summaries, when there are illustrations in them, and key words explained in the margin or written in a different color. These are just some examples of structuring and visualization of information that we deal with every day. We appreciate their role and we treat it as something natural.

Autistic people also need structuring and visualization. Due to the autism-related impaired reception and processing of sensory information, the surrounding world from the perspective of an autistic person appears to be disordered and unpredictable. In fact, perceived as information chaos, it is difficult to learn, develop, have a sense of security. The above situation means that the activity of people with ASD often focuses on eliminating unpleasant experiences rather than on the play we are currently proposing or activities related to learning. Persons with autism constantly strive to restore the harmony of the world around them, which is often burdensome and incomprehensible. On the one hand, they try to manage the information noise, which manifests itself in a strong need to maintain the permanence of

things, and on the other hand, show escape behavior, which manifests itself in cutting off from experiencing flows from the external environment to the sensations of the internal environment. Sensory information flowing from the body as they submit to control are predictable, give a sense of security and restore balance. I believe that the strong need to maintain the permanence of things that we often see in people with autism is also our need. In contrast to people with autism, the functioning of our nervous system allows us to perceive in the surrounding reality, the information order prevailing in it, we realize from the chronology of time, we notice cause and effect relationships, other people's behaviors are understandable and coherent for us, everything is arranged in a logical whole. In this experienced reality, our need to maintain the permanence of things is constantly satisfied, so we have no opportunity to become aware of its existence.

Structuring for people with autism can affect space, time, activities, people and language. The visualization, on the other hand, is made on the basis of graphical signs or spatial and tactile signs. Manual characters due to the short duration and perception do not meet the visualization criteria.

When reviewing therapeutic programs: TEACCH and PECS, programs dedicated to people with autism, in which AAC is treated as a system element, it can be noticed that characters in graphic form are preferred.

The graphic sign in comparison to others has its advantages, namely, its graphic form makes:

• has a relatively long duration and perception, durability of the sign's exposure, allows the autistic person to return to information, analyze it at his own pace, remember it better,

• is a unit of thinking processes with images, a characteristic feature of people's thinking with autism,

• it can be displayed simultaneously with many other signs referring to the same situational context, which makes that the choice of any of them is devoid of the possibility of making a mistake related to the ignorance of the situational context in which the mark can be used and the category to which it belongs, while making choice is possible due to the lack of knowledge of the meaning of signs and the sequence of their indication when formulating sentence messages, consisting of several characters; minimizing errors is fast and easily achieved successes, is a form of teaching without failures,

• they can be signed and thus correctly read and understood by the communication partner, which increases the potential number of AAC communication partners,

• Once prepared, they become permanently present in the communication aid, you do not have to remember them and recall them for replaying.

When choosing the characters for the candidate for the AAC user, however, we should be guided not by the nosological diagnosis, but rather by a functional diagnosis, including his needs, skills from the sphere of the nearest development, sensory profile, possessed motivation, that is why the values of graphic signs I have indicated should not be considered as obligatory in the AAC intervention towards people with ASD.

The communication process can be considered as a single communication act for a description which we use, among others terms: sender, recipient, communication behavior, code, sign, language and communication competence, which was done in the first chapter, but can also be analyzed in the context of human development ontogeny. This development distinguishes among others the following sequences of expressive communication development (Books 2003: 78):

Levels:

Level 1

Pre-intentional behavior

Pre-intentional or reflexive behaviors that express the state of the subject. The condition (eg hunger, wet) is interpreted by the viewer

Level 2

Intentional behaviour

Intentional behavior, but communicated in an unintentional manner. They cause specific actions on the part of the observer, who himself asserts, what is their intention

Level 3

Unconventional pre-symbolic communication

Unconventional gestures are used intentionally to influence the observer's behavior

Level 4

Conventional pre-symbolic communication

Conventional gestures used intentionally to influence the behavior of an observer

Level 5

Specific symbolic communication

Limited use of specific (iconic) symbols that reflect different elements of the environment. The connection between the symbol and the designatum is like one to one (the symbol corresponds to this and only this action to this and only to the object)

Level 6

Abstract symbolic communication

Limited use of abstract (arbitrary) symbols to represent environmental elements. The symbols are used individually

Level 7

Formal logic communication (language)

Combinations of two or more abstract symbols in the order corresponding to the syntax rules of the given language

Source: Ch. Rowalndi K. Stremel-Campbell, "Share and Share Alike. Conventional Gestures is Emergent Language for Learners with Sensory Impairments ", in: L.Goetz, D.Gusee, K / Stremel -Campbell K., Innovative Design Program for Individuals with Dual Sensory Impairments, Paul.H. Brookes, Baltimore, 1997 and at: Summer Institute. Augmentative Communication for Persons with Multiple Disabilities and Deaf-Blindness, Materials for Training from the Perkins Institute, 1992.

The diagram of the development of expressive communication presented in the table, despite the fact that it was based on the observation of behaviors of neurotypic children, also applies in relation to autistic people. However, the above stages of communication development may take place at a different pace, not only slower but also faster, going from one level to another, does not have to be done in a natural way, it may be connected with the necessity of therapeutic intervention, not every person will achieve skills from higher communication levels (Books 2003: 77).

The development of communication expression is initially not symbiotic - levels from 1 to 4, then it begins to be implemented also at the symbolic level - level 5. The emergence of the possibility of communicating with symbols is related with the cognitive development of a child within the framework of which the notion of constancy of the object is shaped and develops, so-called **symbolic function**. At first, the symbols are iconic and later also abstract.

Communication at the un-symbolic level remains close with the situational context. The sender of information, not having the means of expression in the form of symbols, can refer only to elements of reality in the present, present situational context with his communication behavior, in which he personally is present. He can only communicate what is his field of vision

and within his reach. This form of communication is often insufficient because the needs of the sender often go beyond the situational context in which he is himself. It causes many problems, the consequence of which are the difficult behaviors observed, and for a reason they are also called contra-correct behaviors (Frost, Bondy 2013: 10). On the other hand, the

recipient of non-symbolic messages to understand them is also completely dependent on the situational context in which they appear. The same behavior of the sender, in the changing situational context, will take on a different meaning. Understanding of non-symbolic forms of expression depends entirely on the situational context.

Communication at the symbolic level also remains in the relationship with situational context, however, the above relationship is not as tight as in the case of non-symbolic communication. The situational context becomes even less important at the moment when the sender, by providing information, combines several characters - he formulates sentence messages, because in this way he precisely clarifies what he would like to convey.

The sender of information, having the means of expression in the form of symbols, can refer to objects and phenomena that are in a situational context in which he personally is not present. Thanks to the symbols, the information he broadcasts may concern elements of reality from the past, as well as those that concern future time.

The recipient of symbolic messages, communication behavior of the sender in a changing situational context, he will rather always understand the same way. This meaning that the symbol brings with it will be the content of the message. It is worth noting that the situational context for a full understanding of the message in which it appears is always important. It is often more important than the content of the message itself. It is he who can change the way of understanding the content, makes us not treat it to words, know that someone jokes, uses metaphors, figuratively, fantasizes or lies. In symbolic communication, the center of gravity of interpretation of communication behaviors is transferred from the situational context to the symbol.

Out of concern for the well-being of the child, despite the objective benefits of the AAC, each of us asked the following questions:

• whether by deciding to AAC we will not stop the child's speech development?

• will the AAC demotivate for communication by means of speech?

Like many things in life, AAC has its two sides - strengths and weaknesses.

Due to the strengths I mentioned earlier, and also about which I mention in the fourth chapter of this work, AAC should not be treated as a choice of last chance. The sooner you see a therapeutic intervention, the better for your child.

Because of its weaknesses, the limitations associated with this form of communication, which I will mention in a moment, AAC can not be a threat to speech development. AAC will not replace, it will not dominate the ability to communicate using speech. I will cite several arguments:

Each person strives to communicate with others as quickly as possible and an effective way. By communicating with speech, we say 150 to 250 words per minute, while choosing graphic symbols we use 2 to 8 words per minute (Kaczmarek 2015: 150).

A few things to think about? Why do we talk to each other in most everyday situations, and do not write? Whether placing an order in a restaurant with the possibility of verbal expression, we would prefer to show letters on the plate, make gestures meaningless for the waiter, look through the cards in search of pictures in the communication book? Why, as adults, do not use forms of communication that were ubiquitous during our infancy or early childhood?

As social beings, we identify with a specific group of people. We want to be part of the human community, and in this community the main communication medium is talked about, which is why it is doubtful that someone would give it a deliberate resignation to AAC. We adjust our communication modality, style and content of the messages adequately to the situational context and the communication partner with whom we interact. When we do it differently, we may cease to be members of a given community or group, at the same time exposing ourselves to ridicule, isolation and rejection.

One of my former students with a quadriplegic cerebral palsy, which quite efficiently operated dynamic communication boards with the switch on / switch activated by the head movement, after some time, when the computer fascination period passed, he wished to place the switch next to the desk top, on which the monitor stood. to handle it with your hand. He wanted to change despite the fact that with the help of the head-operated switch he had access to the symbols within 1 or 2 seconds, while using the switch / switch actuated with his hand it took him about 10 seconds. The student preferred a slower way of access, and thus a slower rate of communication. Why? Because choosing symbols with your hand reminded you of the way you use it from the mouse by other people. He strived to make it as little as possible in his disability from his peers and adults, with whom he identified himself. Therefore, no one who has the opportunity to speak will give up on speech, on behalf of another, unnatural communication system.

AAC users treat AAC as a necessary evil. For many, AAC is not a reason for pride and boasting. As one of the AAC users once told me to use with communication help in a public place other than school, it's embarrassing, and other times that he is ashamed to use it. I will mention that she is a student from a group requiring language support, and her communication assistance is highly technologically advanced. He uses a tablet with screen reader software, on which he writes words and sentences using the on-screen keyboard. It is

worth noting that it is not the kind of help that is shameful to her, but rather the fact that it is necessary to use it.

Can the AAC therefore be a more preferred form of communication than speech?

Scientific research clearly indicates that AAC does not inhibit speech development, on the contrary, they prove that it correlates with its development. "AAC does not inhibit speech, but always provides (simultaneously with gestures and / or graphic symbols) for her a verbal model, coming either from a communication partner or voice communication support (SGD / VOCA)" (Kaczmarek 2015: 153, for Millar , Light, Schlosser, 2006). In addition: "Manual and / or graphic signs in combination with speech contribute to the increase (where possible) of the receptive and expressive language to a greater extent than the speech training itself. The system of visual symbols has been and is being used effectively in the therapy of people with ASD for increased communication and reduced dependence on verbal prompts" (Kaczmarek 2015: 153).

On the other hand, there are no studies that indicated that AAC hinders the development of speech, or would have caused withdrawal of anyone from speaking activities (Kaczmarek 2015: 153).

2.4 CASE STUDY

General information

• The student, at the time of the AAC intervention, was 13 years old and attended the first level of education at the primary school.

• Clinical diagnosis: children's autism with moderate mental retardation.

• Speech with anomalies in terms of content and form: often inadequate with the situational context, with syntax and inflection irregularities, little differentiated and stereotypical, with numerous articulation abnormalities.

• Presents a lot of vocal stimulus behavior. Do not accept loud and high sounds. The presence of the echolalia - direct and postoperative.

• A person with little vision with nystagmus.

Changes in the pattern of activities carried out usually meet with his opposition, as a result of which aggressive behaviors directed at other people and / or objects may appear. Accepts changes that occur and flexibly moves from one activity to another, provided that they have been previously included in the visual plan of the day.

• Understands and follows visual information from the daily schedule. He arranges PCS symbols in accordance with the teacher's instruction and can choose them according to his own preferences, deciding in this way, for example what he will do in specific classes, or what he wants the prize.

• Performs many different activities of everyday life, using activity albums for this purpose. With their help, he can prepare the dough and fry potato pancakes, bake ginger and cinnamon cakes, prepare and bake pizza, make jelly, sandwiches and dessert based on jelly, fruit and whipped cream.

• He complies with the instructions and instructions of the therapist and cooperates during proposed tasks. He understands the conditionality of some of the prizes he accesses after collecting the right amount of chips
Interested in the collection of financial-related artefacts in the implemented field economy.

• It independently performs a sequence of tasks included in the so-called a basket structure, in which, for example, it fills the work sheet with a pen, consists of parts of pens, segregates objects, creates spatial structures of blocks in accordance with the pictorial instructions, prepares visual works.

Diagnosis of communication skills

Verbal expression

Students' communication skills have reached the symbolic level. The boy communicates verbally, using mostly single words or 2-3 expressions (in an ungrammatical form). The glossaries of messages are not rich. He verbally expresses:

• protest - they use of the negative: no;

• willingness to receive something - communicates most often by saying the name of the subject, also pronounces the names of places or things related to the activity it expects;

• courtesy - good morning, proving, sorry (adequate to the situation - sometimes it needs a reminder);

• names of people, objects and some of their features and activities - not describing objects, illustrations and social situations;

• simple answers to questions - answers closed questions most often using phrases yes or no, echologically repeats some questions;

• questions - asks about absent persons from the closest ones (where is Mr. Andrzej ?, - where is Emil?), Asks also where are the objects he needs.
There are situations in which the student:

• comments on events, e.g. using expressions - Mr. Andrzej Kicha, Tomek screams, Przemek has a cold; imitates the sound of heard words and sentences (verbal imitation) - these are single words and simple sentences.

The above verbal diagnosis of the boy's verbal expression was made as a result of observing his behavior during everyday routine activities. However, its results should be supplemented with data from the situations arranged by the therapist, in which the student:

• asked for action - unable to cope with removing the cake from the jar (the jar is curled), communicates: Mr. Andrzej unscrew the jar; finds no sandwich in a backpack, then communicates: please, a sandwich;

• he asked for items - asking for a thing that is out of reach, communicates, among others, Mr. Andrzej, take a sandwich; he demanded information - in the absence of a card, which is marked by the presence said: card, card, where the card ?; in the gym he finds no basketball, and then he communicates: where is the orange ball ?;

• commented on the subject - he asks for a card to mark the presence, however, he receives a card, which does not serve to mark the presence, he communicates: card list of attendance; after receiving a cup that does not serve to brush your teeth, communicates: where the toothpaste, the cup of pasta ?;

• made a choice - it isolates the object from the environment by pointing with the palm of the hand or by taking the chosen thing to hand, it also makes a choice using the following messages: yes and no;

• he refused verbally using the word no - reaction to the offer of activity in your spare time;

• commented on the person - using the phrase: you have fallen.

The student most often spontaneously communicates the need to receive: kitchen tools in the cafeteria, rewards after classes, the need to participate in activities at the pool; about the need to play on the slide; demands the permission to open the door; exit from the room; reports the need to use the toilet; the need for relaxation; he asks for help in spreading a slice of bread; reports the lack of a beverage in a jug; reports the need to change the symbol in the daily schedule; the need to remove the sweater and mark the presence. commented on the subject - he asks for a card to mark the presence, however, he receives a card, which does not serve to mark the presence, he communicates: card list of attendance; after receiving a cup that does not serve to brush your teeth, communicates: where the toothpaste, the cup of pasta ?;

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Understanding speech

During one of the diagnostic tests the boy correctly performed all of them
from the following commands:

• Bring your shoes from the locker room.

• An inflamed block.

• Show the sound of the head.

• Take it out of the backpack.

• Give a copy.

• Bring a cup and place it on the table.

• Light up the lights and sit on a chair.

• Show where the blocks are in the classroom.

• Go to the kitchen and bring a mug.

• Take the shoes to the locker room and put them in the bag.

The implementation of the above commands was not covered by the educational and therapeutic program so far.

The diagnosis of the boy's passive voice dictionary was carried out by a speech therapist, and its results were attached to the Individual Educational and Therapeutic Program.

Dialogue

He is interested in participating in mutual interaction. Shows the willingness to cooperate and participate in activities with alternating structure. He is able to comply with the rules of table games, in which the principle of alternation applies ("once you - me I"): dominoes, Chinese games, memory games like: memo. He answers questions from other

people and also creates simple questions. In the course of jointly implemented activities there are many echolalia and vocal autostimulation.

In the boy's life environment, there are dialogue partners: parents, siblings, therapists in the Center, there is also a chance that in the future they will be also other students. He prefers contact with adults. The boy's strength is a strong need to participate in interaction with another person, which motivates him to participate in the proposed forms of activity.

Nonverbal communication

He clearly expresses his comfort and discomfort. Discomfort - turns out through unwanted behaviors: pinching, pushing other people, screaming, compulsive messages, including for the pool, your prize, take off your sweater.

Comfort - turns out through laughter, provokes others to tickle him, verbal wants to be with another person (with Mr. Andrzej).

Facial expression - usually a cheerful face (smiling), in the moments of nervousness facial expression inadequate to the reaction of the so-called forced, unnatural smile.

He shows feeling, interest - hugs, kisses, smiles.

He draws attention - laughing, making physical contact with another person (he provokes to tickle him, tries to kiss other people's feet), makes eye contact.

Proksemika - sometimes initiates too close physical contact with another person, this applies to both people known to him and strangers, tries to cuddle up in another person, which makes others in embarrassment.

Vocalizing - the student is self-stimulated, vocalizing inarticulate sounds, most often during routine activities (when performing which he does not engage his attention) and during free time.

Misunderstood, when the need for it is not realized - in a persistent and obtrusive manner, stereotypically or echolallically communicates his need, he does so until the communication partner takes up the topic he raises or repeats his speech after him (the above situations are accompanied by anxiety and increased physical activity).

Making a choice

He can choose from presented objects and symbols representing specific activities. It easily focuses on objects and PCS symbols, identifying them properly. The choice is made by pointing (with the index finger after demonstrating the behavior, but most often it makes a choice by pointing with the whole hand or taking the chosen symbol or object in hand), and

verbally communicating the name of the chosen symbol, or confirms or denies using phrases yes and no.

Perceptual possibilities

At work with a child symbols of 5 cm / 5 cm are preferred, this enlarged format is dictated by the boy's myopia. It easily distinguishes symbols regardless of whether they are on a light or dark background. The student can identify the PCS symbol with dimensions of 5 cm / 5 cm from a distance of 1.5 meters. There is no trouble with identifying symbols from closer distances (identifies symbols during table classes from a distance of 20-30 cm).

The boy's mobility, vision defect, which he has or the level of cognitive functioning, does not constitute an obstacle that would hinder or prevent him from using the supportive methods of communication. Picture material in the form of PCS symbols is legible and attractive to him. The first tests showed that the dynamics of the process of memorizing individual symbols is satisfactory. The student, after several times demonstrating the symbol and hearing his name, can identify him and name it. When creating communication boards, however, it should be noted that the individual symbols do not contain too many graphic elements, and that they are not too close to each other, because the boy's observation revealed that he has problems with identifying individual graphic elements on large, rich in detail illustrations. The issue of compaction of the communication table with symbols and mutual spaces between them will be determined when the first communication board is introduced.

Contextually inappropriate behavior

The order of actions taken was as follows:
I selected the activities of the day, significant from the student's point of view, which seemed to be strongly motivating him to make attempts to communicate. The selected activities were:
- table game (an important situation because the student often interacted with other people, but did not do it properly);
- shopping in the store (a situation in which the student has the opportunity to choose the food products he ate during breakfast).

I set the scope of the vocabulary to allow the child to participate actively
in the above-mentioned activities. I have taken into account the following criteria:
- does the student have the opportunity to answer questions?
- does the student have the opportunity to ask questions?
- does the student have the opportunity to make choices?

- Can he direct and demand action?
- Does the student have the opportunity to express requests?
- lecture can be available?
- does the student have the possibility to use colloquial and polite phrases?
- can the student build sentence sentences?

I prepared the first communication board. Due to the student's perceptual abilities, the PCS symbols on the A4 communication board were of a size 5 cm / 5 cm, and the distance between them, both vertically and horizontally was not less than 1.5 cm. As the symbols were quite large, which was related to the limitation of their numbers, they were arranged on both sides of the board.

I organized an activity within the framework of which I used to speak to the student using the supported message, i.e. I was speaking at the same time indicating the PCS symbols on the communication board. In this way, I created a situation in which the student observing me learned how to use the communication board, learn about the meaning of PCS symbols on it, get to know the situational context in which particular symbols are used and learn to formulate sentence statements.

The first classes with the use of the communication board concerned the table game. The boy was able to play various games, however, he never made functional statements. Pointing to the PCS symbols on the board, I asked the boy: what do you want to play ?, after waiting for spontaneous activity on his part, when it did not appear, I helped him physically to indicate the first few symbols starting the statement: I want to play ..., then I withdrew the physical hint, and the student spontaneously and independently pointed the symbol representing the domino game and said: domino. During the joint game, I continued to "illustrate" my own statements by pointing out symbols on the communication board and encouraging the student to do the same. After several attempts, the effects appeared. The student began more and more often spontaneously and without manual hints: to set the pace of action, saying: now me; Now you; break; end, I want to play again; use colloactive phrases, saying: good; comment: I like it; good, it failed, I succeeded.

The messages formulated by the student were filled with activity, in which there was no room for echolalysis and vocal self-stimulation. The symbols present on the communications board created space for speaking activities. Grouped adequately with the situational context, they made the student know what and how to say at a given moment. Each indication of the symbol was associated with the wording of its name and set the rhythm of the spoken words, thanks to which his statements became clearer. The words did not merge

with each other, and the statements contained all the necessary elements, thanks to which they were syntactically correct. The student started using phrases for the first time: i, w, z.

The situation was different when shopping. The boy, going to the store for the first time, knew that pointing symbols should help him formulate statements. Being several times in the store he learned the meaning of newly introduced symbols and based on them he learned to form sentence sentences. Pointing to the symbols, he says what he wants to buy and applies polite phrases to welcome and say goodbye. However, due to numerous deficits, it does not make purchases on its own. Among other things, he does not know where the end of the queue is and where he is supposed to stand, he does not know that the money should be taken away from the given salesperson, also needs to be reminded that purchases should be put into the bag and messages instead of directed to the saleswoman, He directs to the therapist.

Using the previous experience connected with supporting the learner's language expression with the help of AAC, I started to expand their scope to new situations and tried to involve other people in joint activities.

Among other things, I introduced another communication board regarding the celebration of the greeting. With her help, the student learned the whole day to determine the current day of the week, weather conditions in the yard, and in connection with them, tell what clothes to wear when going to the yard, he also learned to inform which therapist the particular students are working on on a given day and who is present in class, and who is not there.

I also started learning to read. For this purpose, I created a book, paying attention to its content being known and predictable to the student and as simple as possible and adapted to his age. The text of the book was written using PCS symbols, and the illustrations were pictures of the activities performed by the student on each page. The boy learned to read in a short time, and the skills of formulating sentence sentences gained during reading began to appear also during everyday activities. The student more and more often commented on his actions, eg, frying pancakes, he said: I turn the browned cakes to the other side. Functional verbal messages gradually supplanted the previous behavior of self-stimulation and echolalia.

The introduction of AAC for therapeutic intervention, the aim of which was to develop expressive communication, brought many benefits, including

• the amount of frustrating student's situation related to being misunderstood has decreased;

• the student's self-esteem increased, as after related incidents with difficult behaviors he often felt discomfort, in connection with which he apologized to the aggrieved persons, ensuring that he would no longer be aggressive towards them;

• the student became an active participant in many social situations in which he had previously remained a passive observer;

• more and more often formulated sentence sentences;

• sentence-like statements, allowed the student to express his / her intentions accurately;

• the number of communication partners with which the student could enter into relationships increased;

• the student has learned in a socially accepted way to initiate and participate in interaction with another person;

• the acoustic parameters of the pupil's statements improved, their pace slowed down, and the words uttered cease to overlap;

• statements have become relevant to the situational context;
the number of echolalia, stereotypical expressions and vocal autostimations has decreased;

• the diversity of classes with the student has increased in many ways to develop his communicative and linguistic competence, eg participatory reading and classes with dynamic communication boards have been introduced;

• the number of situations in which the student spoke increased - the presence of symbols created an opportunity to speak;

• having a communication board in front of him, the student decided himself what would be the content of his messages and what would be their function, earlier when he imitated the adult-modeled propositional utterances he was deprived of this possibility, he repeated what he had heard.

The vision of the next therapeutic actions is as follows:

• the student should be equipped with communication boards in which the vocabulary selection criterion, as it was done so far, is the participatory model (Smyczek 2002: 164).

a visual form of supporting linguistic expression in the form of communication boards should appear in every social situation of which the student is a participant; consideration should be given to the possibility of making a communication book from already existing communication boards;

• as the student progresses, the communication boards should be gradually phased out; they are a kind of prosthesis whose presence is of a temporary character.

Bibliography

Dołęga Z., 2003, *Promowanie rozwoju mowy w okresie dzieciństwa – prawidłowości rozwoju, diagnozowania i profilaktyka*, Katowice: Wydawnictwo Uniwersytetu Śląskiego.

Frith U., 2008, *Autyzm. Wyjaśnienie tajemnicy*, Gdańsk: GWP.

Frost L., Bondy A., 2013, *The Picture Exchange Communication System. Podręcznik*, Wydawca: The PyramidEducationalConsultants of Poland.

Gottesleben E., 2002, *Strukturalizacja i wizualizacja – możliwości wsparcia osoby z autyzmem*, [w:] *Żyć z autyzmem. Wybrane zagadnienia dotyczące problematyki osób dorosłych z autyzmem*, red. A. Perzanowska, A. Wolińska-Chlebosz, A. Dąbek-Malczyk, Kraków: Fundacja WSPÓLNOTA NADZIEI.

Grabias S.,2002, *Perspektywy* opisu zaburzeń mowy, [w:] *Zaburzenia mowy*, red. S. Grabias, Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Grabias S., 2003, *Język w zachowaniu społecznym*, Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Kaczmarek B.B., 2015, *Obraz narzędziem komunikacji – znaki i strategie wizualne w usprawnianiu społecznego zrozumienia i komunikacji osób z ASD*, [w:] *Alternatywne i wspomagające sposoby porozumiewania się w edukacji osób z autyzmem*, red. B.B. Kaczmarek, Kraków: Oficyna Wydawnicza Impuls.

Kaczmarek B.L.J., 1998, *Mózg. Język. Zachowanie*, Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Kurcz I., 2005, *Psychologia języka i komunikacji*, Warszawa: Wydawnictwo Naukowe Scholar.

Książek M., 2003, *Dziecko głuchoniewidome od urodzenia. Rozwijanie umiejętności komunikowania się. Wykorzystanie metod komunikacji wspomagającej i alternatywnej*, Warszawa: Towarzystwo Pomocy Głuchoniewidomym.

Markiewicz K., 2004, *Możliwości komunikacyjne dzieci autystycznych*, Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Martinsen H., von Tetzchner S., 2002, *Wprowadzenie do wspomagających i alternatywnych sposobów porozumiewania się*, Warszawa: Stowarzyszenie „MÓWIĆ BEZ SŁÓW".

McKernan T., Mortlock J., 2004, *Autyzm w centrum uwagi. Podręcznik z ćwiczeniami dla profesjonalistów,* Kraków: Fundacja WSPÓLNOTA NADZIEI.

Michalik M., 2015, *Mózgowe porażenie dziecięce w teorii i praktyce logopedycznej*, Gdańsk: Harmonia Universalis.

Minczakiewicz E. M., 1997, *Mowa. Rozwój, zaburzenia, terapia*, Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej.

Rakowska A., 2003, *Język, komunikacja, niepełnosprawność. Wybrane zagadnienia*, Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej.

Smyczek A., 2002, *Model Uczestnictwa jako podstawa organizowania zajęć edukacyjnych dla dzieci przedszkolnych nieposługujących się mową*, [w:] *Metody wspomagające rozwój w różnych jego opóźnieniach*, red. M. Przybysz-Piwkowa, Warszawa: Wydawnictwo DIG.

Tomasello M., 1999, *Kulturowe źródła ludzkiego poznawania*, Warszawa: Państwowy Instytut Wydawniczy.

Winczura B., 2008, *Dziecko z autyzmem. Terapia deficytów poznawczych a teoria umysłu*, Kraków: Oficyna Wydawnicza Impuls.

Zaorska M., 2000, *Blindyzmy a zachowania przypominające zachowania autystyczne u dzieci z równoczesnym uszkodzeniem słuchu i wzroku*, [w:] *Autyzm wzywaniem naszych czasów*, red. T.Gałkowski, J. Kossewska, Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej.
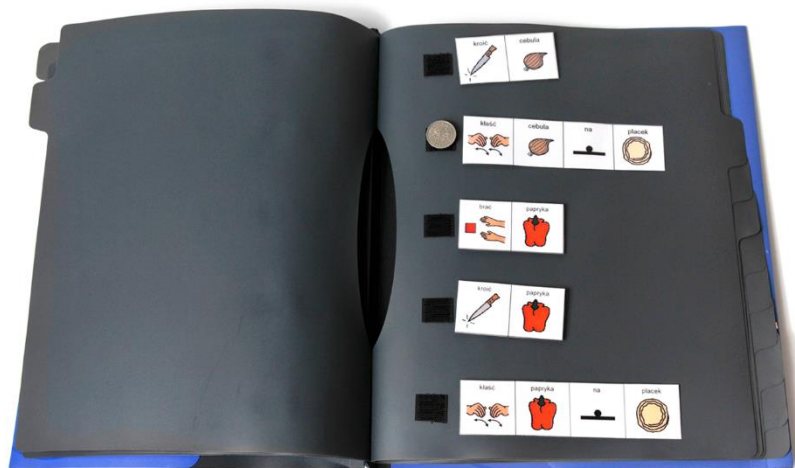
CHAPTER III

METHODS BASED ON EVIDENCE IN THE THERAPY OF PERSONS WITH AUTISM

Rafał Skotnicki

A diagnosis of a child's disability, genetic defects, serious diseases or autism is oftentimes a very difficult situation for the child's parents and it brings with itself difficult emotions and challenges. After the initial shock and disbelief in the accuracy of the diagnosis, parents start asking questions: What now? How to help my child? What is the best way to support his or her development?

A multitude of therapeutic treatments offered to parents of children with autism

Already in 2006, a team led by Vanessa A. Green from the University of Texas found 111 different therapeutic treatments offered to parents of children with autism. One can assume

that nowadays the number is even greater. The research carried out by the team of Vanessa A. Green indicates that children with autism are on average subjected to seven different therapeutic treatments and their number varies depending on the age and severity of the disorder.

Parents of children with autism face a serious dilemma: which of the available therapeutic interactions should be chosen? To focus on one method or can you use several types of therapies at the same time? What criterion should they follow choosing therapeutic treatments? Popularity? Efficiency? Positive feedback from other parents? Price? Therapists' suggestions?

In recent times, in various fields of education, including teaching people with autism, it is applied the evidence-based method as a so-called golden standard.

What are evidence-based methods?

Ignaz Semmelweis is widely recognized as an ancestor of the evidence-based trend. This physician who lived in the 19th century correlated the mortality of women in the maternity ward with the earlier work of doctors in the dissecting room. Despite the fact that Semmelweis could not explain the mechanism by which the infection occurred, he came to the conclusion that it must be caused by some infectious agent transmitted by doctors. Introduced procedure of hand disinfection by physicians who were leaving the mortuary reduced mortality during childbirth from 12% to 2%.

Therefore, given the above-mentioned historical facts, evidence-based methods can be simply described as good and effective practices leading to positive effects. Today, evidence-based methods are most often defined as methods based on clinical practice on reliable scientific evidence regarding both safety and efficacy of the therapy.

The evidence-based approach is currently a rapidly growing trend in many areas of life. Practices based on facts and scientific research are currently used, among others, in medicine (evidence-based medicine), design (evidece-based design), nursing care (evidence-based nursing practice), and management (evidence -based management), social policy (evidence-based policy), training (evidence-based training), law making (evidence-based legislation) or education (evidence-based education).

What can be the proof?

If methods are to be based on evidence, one should now ask the question what can be the proof? In fact almost everything can be the proof. The words of the parent suggesting that some therapeutic effect helped his child may be proof of the effectiveness of this interaction. A photo of a smiling boy taken during therapeutic activities may be the evidence of his satisfaction with the treatment. The therapist's account on the effectiveness of the therapeutic approach applied for years can be also the proof of the method efficiency. If the proof can be practically everything, we must realize that when we talk about evidence-based methods, we do not mean any evidence, but we mean the best possible evidence available at the moment. To set in order the importance of the evidence starting with the least objective, least reliable and containing the highest risk of error, and ending with the most objective, the most reliable and with the least risk of error, the hierarchy may look as follows:

- Subjective experience – the most frequent evidence, based on the observation of things or events by one person and the person's own experiences;

- Case descriptions (case studies) - are still a subjective description, nevertheless they provide more information about a particular case, e.g. a description of the history or circumstances of the intervention applied. They can be carried out using a variety of methods;

- Systematic observations - conducted over longer periods of time and recorded using appropriate sheets, carried out by several observers. The results should be further analyzed and compared;

- Experiments - a method that protects the researcher from self-deception. It consists in deliberate triggering the course of the phenomenon, and its aftermath examination. The experiment is carried out in conditions that allow the control of all relevant variables, in order to confirm or falsify a given hypothesis;

- Meta-analyses / systematic reviews of scientific research - reviews of various authors on a specific topic along with statistical analysis of previously obtained results. They allow to summarize the conclusions from the whole research data on a specific topic. That method gives a broader and more accurate knowledge on the topic than analyzing individual experiments.

Hierarchy of evidence and autism therapy

As expected, the greatest amount of evidence of the therapeutic treatment aimed at improving the functioning of children with autism consist of subjective experience

accounts. We all know therapists who boast about the method he or she chose, with statements such as: "I've been using this method for so many years and I clearly see that it brings results"? We can also hear the parents' opinions who recommend some kind of therapy, saying, for example: "We have tried this one and we see positive changes in our child". Considering fact, that children with autism very often undergo several different therapeutic treatments at the same time, it can be plainly deceptive to base one's choice on such evidences.

The case studies of persons with autism present also a significant number of evidence. These descriptions are easily available on various websites, and often are part of the preparation works for the bachelor's and master's theses. They are made in the special clinical centers. Some of them promote certain therapeutic treatments. Case studies are therefore created for various purposes and are created by multifarious people, and subsequently their substantive value and relevance of the description can vary.

A relatively small number of publications on the functioning of children with autism are systematic observations. In practice, they do not have a significant impact on the development of knowledge about autism and related to it therapeutic treatment in Poland.

At the moment there are many studies and experiments on methods of working with people with autism. Considering that the number of research is large and its quality varies, we should cautiously consider the best possible research and experiments available at the moment. Usually, top-quality research and experiments are published in peer-reviewed journals. The scientific review procedure leads to the fact that the published research is carried out correctly methodologically, the conclusions arise properly from the collected data, the observed errors or inaccuracies are eliminated or corrected. Scientific review also results in elimination of publications based on faulty experiments, detection of counterfeits or plagiarism. To find the best publications in the field of medicine and biological sciences, the easiest way is to use the PubMed search engine. Using that search engine we can find mainly abstracts of scientific articles and pages of magazines publishing articles (in some cases there is a free, full version of the publication on them). Some full, free versions of articles in the field of natural and biomedical sciences can also be found in the PubMed Central database. Unfortunately, the vast majority of high-quality publications on autism and therapeutic interactions related to it are available only in English.

Currently, several publications are available that compare the effectiveness of various therapeutic interventions offered to children with autism.We will look a bit closer at the two

of these publications and will try to decidewhich methods can be considered as evidence-based. In addition, there are also meta-analyzes regarding the effectiveness of individual therapies. Moreover, on some websites you can find information on the effectiveness of individual therapeutic interactions based on available scientific research. There are also non-profit organizations presented on their websites (e.g. Association for Science in Autism Treatment) that promote evidence-based methods that try to present current knowledge about the effectiveness of specific methods used in the treatment of autism.

Reports of the National Autism Center

The National Autism Center is a non-profit organization dedicated to the promotion and dissemination of evidence-based information on therapeutic interactions offered to people with autism spectrum disorders. In 2009, this organization completed the first part of a long-term project - National Standards Project. The main goal of the project was to provide critical information on which methods of working with people with autism spectrum disorders proved to be effective. The first phase of the project (published in 2009) consisted in examining and determining the level of scientific research supporting therapeutic interactions used in work with children, adolescents and young adults with autism spectrum disorders. The second part of the project (published in 2015) is an update of the literature on therapeutic interventions offered to people with autism spectrum disorders from the same age of participants that were in the first phase of the project. In addition, in the second part, it was specified the level of support for scientific research in methods that were used in therapetic work with adults (aged over 22 years old) with autism spectrum disorders.

Both reports are based on research on therapeutic treatments published in peer-reviewed scientific journals. The report from the first phase of the project includes research from 1957-2007 and was developed after analyzing 775 publications. The report from the second part of the project includes research from 2007-2012 and is based on 389 scientific articles.

The interventions described are divided into four groups:

Established activities (established treatments): influence of the treatment is considered to be effective. There is a sufficient number of scientific evidence of the positive effect of a given method on people with autism spectrum disorder;

Emerging effects: there is some evidence that these therapies can have a positive effect on people with autism spectrum disorders, but there are too few of them to be considered effective;

Unestablished therapies: there is no evidence that these methods have any positive effect on people with autism spectrum disorder;

Ineffective / harmful treatments: there is a sufficient number of scientific evidence demonstrating the negative impact of a given therapeutic impact on people with autism spectrum disorders.

Below we will present therapeutic interactions that have been considered effective (impacts established) in both reports of the National Center for Autism together with their brief description.

Behavioral interventions

(Behavioral Interventions)

This is the widest category of established interventions, which includes proactive policy packages and behavioral packages. Proactive strategies are different techniques related to manipulation of stimuli preceding behavior. The most frequently used among them are: adapting the program to the child's capabilities, interleaving difficult and easy tasks, presenting tasks at the right pace, allowing the child to make a choice, adjusting the environment to be an optimal place to study and using different types of hints. This category also includes interventions related to the consequences of behaviour, and reinforcement is of particular importance here. Strengthening can be positive or negative. Positive reinforcement occurs when after a child's involvement in a given behavior, it receives the desired stimulus. It is important to take care of the variety of reinforcements and individualize them so as not to lead to saturation with them. These can be favourite child's treats, therapist's attention, attractive toys or pleasant activity with a therapist. The second type of reinforcement - negative reinforcement, occurs when the child's involvement in a given behavior causes withdrawal of an undesirable stimulus. A special type of amplification is differential strengthening, when desirable behaviors are amplified and those undesirable extinguished. This results in reducing many undesirable behaviors of the child and teaching functional and desired reactions in a given situation.

A package of cognitive-behavioral interventions

(Cognitive Behavioral Intervention Package)

Cognitive-behavioral interventions assume that dysfunctional behaviors and emotions can be explained using the theory of learning and the mediating role of cognitive processes. People subjected to these influences are taught to study their own thoughts and emotions, to recognize when negative thoughts and emotions escalate and use different strategies to change them. In the case of people with autism spectrum disorders, these interventions may take a different form (e.g. the use of visual cues) and address the specific difficulties that these people face in their daily functioning.

Comprehensive behavioral intervention for young children

(Comprehensive Behavioral Treatment for Young Children)

This is an intensive intervention based on the assumptions of the behavioral analysis applied, delivered 25-40 hours per week over a period of 2-3 years. In this therapeutic interaction, the basic methods of behavioral analysis are used, such as the method of separated samples, situational learning, learning without errors, the rush of behavior, shading, and modeling. Comprehensive behavioral intervention for young children focuses on developing, among others, the following skills: paying attention to events in the environment and correct reaction to them, imitating, communicating, developing fun and social skills, developing pre-school or school skills.

Language competence training (production)

(Language Training (Production))

This method assumes the use of different strategies for verbal communication, and in particular the functional use of spoken words. This training starts with stimulating vocalization and strengthening them so that the child starts to make as many sounds as possible. Then the therapist uses the modeling to teach the mentee to imitate specific sounds, syllables and words. At the same time, there are various types of hints, singing, music and strengthening.

Modeling

(Modeling)

Modeling is an effective way to teach your child how to do something by showing him this. Children can learn a lot by observing and imitating behaviors presented by parents, siblings, peers or teachers. We distinguish two types of modeling: "live" and video-modeling. The first type consists in the fact that the therapist (model) presents specific behavior to follow and the child repeats it. It is important that the behavior to follow is well described and that each modeling person presents them to the child in an identical manner. During modeling, the child should be focused to be able to observe the behavior of the model well. In the final stage, a method of withdrawing modeling should be developed so that the learned behavior appears spontaneously and in appropriate situations without the participation of the model. The second type, video-modeling, consists in the fact that specific behavior is pre-recorded and the child imitates the behavior observed on the recording. The use of this form is particularly beneficial for children who enjoy watching movies, cartoons and other TV programs.

Strategies for learning in the natural environment

(Naturalistic Teaching Strategies)

It is a set of strategies used to teach a child in his natural environment: home, school and society. This learning is pleasant for a child because it is based on his current motivation and interests. In this method, objects and activities that occur in the child's natural environment are used to develop new skills. In this learning there is a higher probability of generalizing the learned skills and less probability of difficult behaviors. These strategies are used to develop social skills, play, learning and communication skills, and are particularly effective in shaping spontaneous requests and comments.

Intervention package implemented by parents

(Parent Training Package)

This therapeutic effect assumes that parents and other caregivers of a child with autism spectrum disorders play an integral role in creating a therapeutic environment. Parents are trained to work by professionals during individual or group training, by participating in support groups or using training manuals.

During the training, parents are taught, among other things, to develop their children's imitation skills, comment on their child's behavior, apply a pensive look to evoke a child's message, develop skills to focus attention, play and develop proper routines leading to falling asleep.

Intervention package implemented by peers

(Peer Training Package)

This package provides training for typically developing peers in participating in social interactions with people with autism spectrum disorders. When making this kind of intervention, it is very important that children with autism and their peers are of similar age and level of functioning. Peers typically developing should have a good level of social skills and a willingness to participate in the program. To ensure adequate motivation to actively participate in classes, the interesting things for both groups are used. Peers are taught by professionals to give attention to colleagues with autism spectrum disorders, help them, model the right play skills, and help organize fun. It is also important to practice these skills in a child-friendly environment, in different settings and with different peers. The aim focuses on developing behaviors that significantly affect the development of other areas of child's functioning. These are: motivation, paying attention to events in the environment and responding appropriately to them, spontaneity and self-control. The child's motivation to work is greater when the therapist gives the child the opportunity to make choices, applies appropriate reinforcements, mixes tasks with new ones, strengthens attempts by the child to perform new or difficult tasks. It is also important to shape the child's spontaneity, because it increases his independence. Self-control allows children to control their behavior by tracking progress and delivering reinforcements. Developing the ability to pay attention to events in the environment allows children with autism spectrum disorders to notice stimuli that are important (that is mainly other people and their messages), to shift attention from one stimulus to another stimulus, focus on the given stimulus and create a field of mutual attention.

Activity plans

(Schedules)

An activity plan is a set of photos or words that are an indication of a specific sequence of actions. Such a plan can take many forms, but most often it is a file folder,

in which on each page there is a photo, an inscription or a symbol which is an indication for a specific task, involvement in some activity or selection of a prize. It can also take the form of a bar in which subsequent tasks to be performed are sequentially or from the left to the right. The length of the activity plan is adapted to the current needs and abilities of the child. The therapist, through the use of physical prompts, teaches the child to follow the activity plan, as a result of which the child becomes more independent in performing daily activities. Thanks to the activity plans, a person with autism spectrum disorders tolerates changes better because they are aware of what activities have already taken place and which ones will take place. Activity plans can be used in different environments; at home, school, while using public institutions or public communication. They may refer to various activities, such as doing homework, playing, the timetable of classes at school or kindergarten, or doing housework.

Scripting

The script method is used to teach a person with autism to independently start a conversation or to continue the conversation without using word suggestions from the therapist. The use of verbal prompts often leads to dependence on hints, as a result of which the child, instead of spontaneously initiating a conversation, waits for the therapist to tell him or begin the conversation himself. The script is a recorded or written word, phrase or sentence, which allows the child to start a conversation or continue it. It is important that the scripts are individually matched to the capabilities, needs, age or interests of the child. Once the child has learned to repeat the selected script, the therapist gradually withdraws it until the entire script disappears and the child spontaneously engages in the conversation. Pupils who have been taught a lot of scripts do not repeat them in a schematic way after withdrawing them. They only combine one of the scripts with others and add quite new comments that were not previously taught.

Techniques teaching self-control
(Self-management)

Techniques for self-control allow a child with autism spectrum disorders to become more aware and self-control their behavior, and as a result, become independent of an adult control. These programs teach you to observe and evaluate your behavior, monitor the progress of a given task, monitor socially desirable behaviors and adverse behaviors, and

provide yourself with reinforcements after a job well done. Occasionally, modeling is also used with this method.

Intervention package of social skills

(Social Skills Package)

Social skills is a wide group of skills that allow people with autism spectrum disorders to participate in social life more widely in their home environment, school or in society. People are taught to make proper eye contact, recognize face expression, use gestures, start, participate and end conversations, respond to greetings and goodbye, and provide feedback. The social skills intervention package takes many forms. These skills can be developed during a one-on-one session, in a pair with a second peer or in small groups. During the development of social skills, reinforcement, prompting and modeling are used, among others.

Story-based Interventions

In this therapeutic interaction, written instructions are used and possible situations with specific behavior in stories to learn that behavior. The person receives all the information about the given situation and people participating in it, taking into account the perspective of other people, and the discussion, testing questions and attached illustrations help to understand the situation. This method is used in work with people with autism spectrum disorders who have mastered the ability to read with understanding, but it can also be helpful when working with people who do not have this ability but are able to listen with understanding.

Intervention based on shaping the common field of attention

(Joint Attention Intervention)

This method includes building basic skills related to monitoring the behavior of other people. The point is for the child to be able to respond to non-verbal cues from other people and to be able to initiate interactions related to creating a common field of attention. During work, skills such as following others' eyes, pointing objects or showing objects and activities to another person are developed.

Evidence-based methods and clinical practice

Among other things, thanks to the reports of the National Center for Autism, we already know the effectiveness of which methods has been confirmed in scientific research. However, one should ask a question: are these therapeutic interactions used in clinical practice? In the aforementioned research conducted by a team of scientists led by Vanessa A. Green, the most frequently reported methods of working with people with autism were: speech therapy classes, visual plans, sensory integration and applied behavior analysis.

In addition, 52% of parents reported the use of at least one drug, 43% of parents used vitamin supplements and 27% of parents introduced special diets to their children. As it can be seen among the therapies used by parents of people with autism, those whose effectiveness has not yet been confirmed in research definitely dominate, and only visual plans and applied behavioral analysis (in Poland, often referred to as behavioral therapy) can be considered as evidence-based methods.

In 2008, a team of scientists led by Kristen L. Hess from Georia State University conducted research on therapeutic interactions used in working with people with autism by teachers. The five most popular methods used by teachers (sensory integration, cognitive-behavioral modification, gentle teaching, assistive technology, social stories) are not considered evidence-based methods. Also in a study conducted under the direction of Aubyn C. Stahmer in 2005, it was pointed out that few people working with people with autism understand evidence-based practices, they are often modified and combined with methods that have no proven efficacy. As we can see, there is still a lot to do in the promotion of evidence-based methods. It is hoped that, inter alia, after the publication of the National Center for Autism reports (the aforementioned research was carried out before 2009), the awareness of both teachers and parents of people with autism spectrum disorders will change as to the effectiveness of some of their therapeutic interactions. In our opinion, future research should also focus on understanding the decision-making processes of both teachers and parents, which underlie the selection of specific methods used to work with people with autism.

Bibliography

1. Bąbel Przemysław, Suchowierska Monika, Ostaszewski Paweł, Analiza zachowania od A do Z, Gdańsk 2010.
2. Findings and Conclusions: National Standards Project, Phase 2. Addressing the Need for Evidence-Based Practice Guidelines for Autism Spectrum Disorders, 2015.
3. Green Vanessa A., Pituch Keenan A., Itchon Jonathan, Choi Aram, O'Reilly Mark, Sigafoos Jeff, Internet survey of treatments used by parents of children with autism, *Research in Developmental Disabilities*, 27 (1), 2006, s. 70-84.
4. Hess Kristen L., Morrier Michael J., Heflin Juane, Ivey Michelle L., Autism Treatment Survey: Services Received by Children with Autism Spectrum Disorders in Public School Classrooms, *Journal of Autism and Developmental Disorders*, 38 (5), 2008, s. 961-971.
5. Kliniczne studia przypadków, red. Szostak Maria, Warszawa 1981.
6. Kościelska Małgorzata, Oblicza upośledzenia, Warszawa 2000.
7. McClannahanLynn E., Krantz Patricia J., Plany aktywności dla dzieci a autyzmem, Gdańsk 2002.
8. McClannahanLynn E., Krantz Patricia J., Uczenie dzieci z autyzmem prowadzenia konwersacji, Gdańsk 2016.
9. National Standards Report. The National Standards Project – Addressing the Need for Evidence – Based Practice Guidelines for Autism Spectrum Disorders, 2009.
10. Petrisor B. A., Bhandari M., The hierarchy of evidence: Levels and grades of recommendation, *Indian Journal of Orthophedic*, 41(1), 2007, s. 11–15.
11. Popiel Agnieszka, Pragłowska Ewa, Psychoterapia poznawczo-behawioralna – praktyka oparta na badaniach empirycznych, *Psychiatria w Praktyce Klinicznej*, 2 (3), 2009, s. 146-155.
12. Psychoterapia dzieci i młodzieży. Metody oparte na dowodach, red. Kazdin Alan E., Weisz John R., Kraków 2006.
13. Reichow Brian, Overview of Meta-Analyses on Early Intensive Behavioral Intervention for Young Children with Autism Spectrum Disorders, *Journal of Autism and Developmental Disorders*, 42 (4), 2012, s. 512-520.
14. Sackett David L., Rosenberg William M. C., Gray Muir J. A., Haynes Brian R., Richardson Scott W., Evidence based medicine: what it is and what it isn't, *BMJ*, 312 (7023), 1996, s. 71-72.
15. Smith Anthony, Ciało, Warszawa 1976.
16. Stahmer Aubyn C., Collings Nicole M., Palinkas Lawrence A., Early Intervention Practices for Children With Autism: Descriptions From Community Providers, *Focus on Autism and Other Developmental Disabilities*, 20 (2), 2005, s. 66-79.
17. Suchowierska Monika, Ostaszewski Paweł, Bąbel Przemysław, Terapia behawioralna dzieci z autyzmem, Sopot 2012.
18. Witkowski Tomasz, Zakazana psychologia, tom II, Stare Groszki 2013.
19. Wong Connie, Odom Samuel L., Hume Kara, Cox Ann W., Fetting Angel, Kucharczyk Suzanne, Brock Matthew E., Playnick Joshua B., Fleury Veronica P., Schultz Tia R., Evidence-Based Practices for Children, Youth, and Young Adults with Autism Disorder, 2014

CHAPTER IV
Sensory Integration

Jolanta Bursa, Monika Korotkiewicz

„Nie ma nic w umyśle, czego by przedtem nie było w zmysłach"
Arystoteles (384-322 p.n.e.)

The sensory integration method (SI) is a diagnostic and therapeutic concept created in the 1960s by Dr. Jean A. Ayres, originally for children with learning difficulties.

According to Dr. Ayres, sensory integration is a process in which the organization of information entering the body through particular sensory organs, in such a way that it can be used in a targeted activity, adequate to the requirements of the environment (1). It is a neurophysiological process that takes place in our body. Every child coming into the world is helpless and dependent. It requires long-term care. The proper and harmonious psychomotor development of the child is the result of the physiological maturation of the central nervous system and sensory organs and their mutual stimulation and integration (2).

A diagnosis of sensory integration dysfunction is an element of functional diagnosis. A therapist diagnosing a child should take a broad perspective on the child's assessment in

various areas of its functioning. In case of children with atypical development, the difficulties during the diagnosis are greater. They are intensified, among others, by the lack of willingness to cooperate, misunderstanding and, as a consequence, failure to follow instructions.

The problem with the processing of sensory stimuli in children with developmental disorders significantly affects their daily functioning, limiting learning opportunities and gaining social competences (3).

The chart below, which shows different types of sensory processing disorders, shows many ways that they can be manifested in children. The subtypes of sensory processing disorders can occur in different combinations, causing a wide range of symptoms.
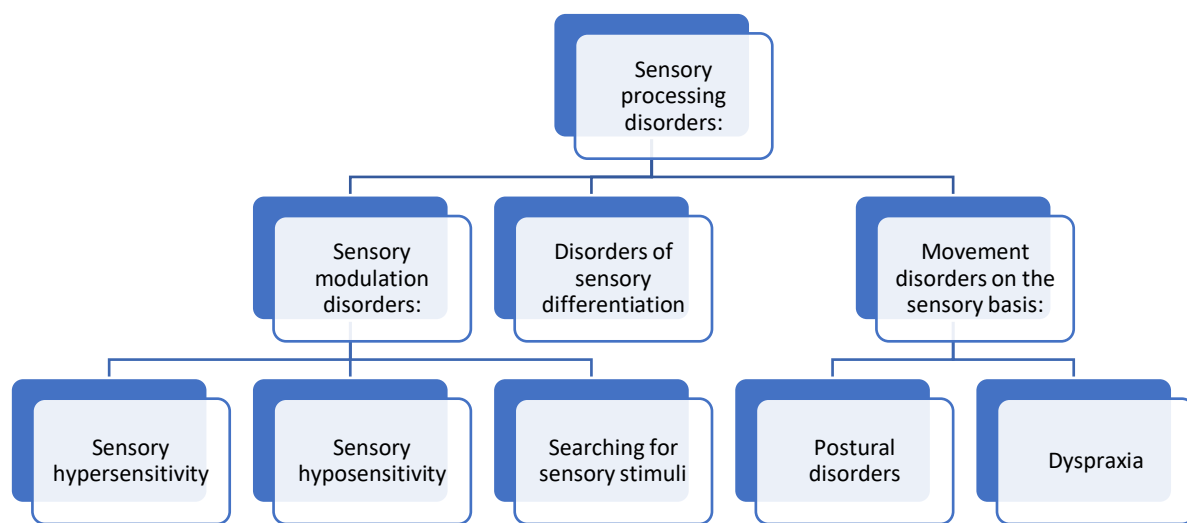
Table 1 on the basis of the charts in Rozpoczynanie terapii Integracji Sensorycznej, Arnwine Bonnie, Harmonia Universalis, Gdańsk 2016

In order to understand what sensory processing disorders are, we need to understand what our senses are for. They allow us to experience the environment and react to it. The five senses that most of us know are: vision (visual perception), hearing (auditory perception), touch (touch perception), smell (perception of smell) and taste (gustatory perception). Two senses that we may not know are: the sense of balance (sensory information that we receive from the middle ear, associated with movement and balance) and the sense of proprioception / kinesthetic (sensory information that comes from our muscles, joints and limbs). These seven senses work together to help us understand our surroundings and move around in it.

In 1974 Ayers wrote that the function of the brain is learning, and the learning disorder is a neuronal abnormality in the central nervous system. She wrote herselfabout their theory - "this theory assumes that sensory integration disorders involve certain aspects of learning disability, and improving sensory integration makes school learning easier for children with

sensory integration dysfunctions. Sensory integration or the ability of the brain to organize sensory information can be improved by a certain dose of stimuli that activate brain (J.Ayers 1974). (5) SI therapy is additional therapy, a kind of supplement therapy supplement that accompanies basic school techniques, such as reading or writing.

Sensory processing disorders have three major subtypes: disturbances in sensory modulation, disturbances in sensory differentiation and movement disorders with a sensory basis.

Sensory modulation disorders:		
Sensory hypersensitivity:	**Sensory hyposensitivity:**	**Searching for sensory stimuli:**
• the child may avoid being touched by others; • get nervous when someone accidentally knocks them down; • scream while cleaning and combing hair; • choke or avoid foof with a certain consistency; • yell or cover its ears when he or she hears a vacuum cleaner or a barking dog; • feels the fear of ordinary movement activities on swings, • slides or slipways.	• the child may have less sensitivity to pain, cuts and bruises; • bite inedible items such as clothes and toys; • bump into objects and collide with them; • easy to get tired; • avoid others.	• the child can set the TV's volume to the highest level; • continually collide with various objects, • enjoy violent games, constantly look for objects and touch them, wiggle or have problems staying still; • lick, chew, suck clothes or other inedible items.

Table 2 on the basis of the charts in Rozpoczynanie terapii Integracji Sensorycznej, Arnwine Bonnie, Harmonia Universalis, Gdańsk 2016

Disorders of sensory differentiation:
• children with sensory differentiation disorders may have a problem with differentiating similar sounds (e.g. words such as "kaczka" (duck) and "taczka" (wheelbarrow) may sound the same; • may not understand what they are touching if they can not see it, e.g. when they put their hands in a paper bag, they are not be able to distinguish a small toy from a ball without looking at it; • make the impression of being awkward and clumsy; • have difficulty recognizing the differences between the fragrances and the consistency of food.

Table 3 on the basis of the charts in Rozpoczynanie terapii Integracji Sensorycznej, Arnwine Bonnie, Harmonia Universalis, Gdańsk 2016

Movement disorders on the sensory basis:	
Postural disorders	Dyspraxia
• Children with postural disorders may have difficulty performing various tasks; • often make the impression of being tired, have difficulty with sitting upright, have a disturbed sense of balance, fall over, fall from the chair, write in a careless and illegible way.	• children with dyspraxia can often stumble and make the impression of being clumsy; • bump into people, destroy various things and appear vulnerable to accidents; • have difficulty with chewing and eating or tend to be drooling; • have problems with dressing, taking care of themselves and their appearance; • have difficulty with holding a pencil or completing a task that consists of many stages.

Table 4 on the basis of the charts in Rozpoczynanie terapii Integracji Sensorycznej, Arnwine Bonnie, Harmonia Universalis, Gdańsk 2016

The main task of sensory integration therapy is to provide a controlled amount of sensory stimuli, especially vestibular, proprioceptive and tactile, so that the child spontaneously make adjustment reactions. During the classes, the child performs a series of activities in the convention of fun, thanks to which the natural integration of sensory stimuli follows, leading in consequence to improvement of learning processes and general functioning (3).

After getting a diagnosis of abnormal process of sensory stimuli of their child, parents ask how they can practice with the child at home, so that the therapy is more effective and can

bring the expected results. An important factor is to design together with the therapists and parents set of exercises, consisting in a "sensory diet" that can be used at home. The purpose of the diet is to indicate which things should be limited in everyday life and which stimuli should be more. Helping a child at home leads to changing certain habits and lifestyle. If the parent can succeed in it, he or she is well on the way to improving the mechanisms of sensory integration of the child that can positively affect the child's behavior.

If the child is visually hypersensitive, do not use wallpapers and paints with bright colors with a lot of patterns. The light switch should be equipped in adjusting the light intensity so that the intensity can be adjusted to the needs of the child. It is best to limit the number of toys in the room, put them in containers and giving them for the play time. If your child already goes to school, it is better not to put a desk by the window. The child will not be able to concentrate on his or her homework but probably he or she will stare at the window. It is also not advisable to place the desk opposite the shelf with toys and colorful books. All these elements will stimulate and distract the child.

If the child is audio hypersensitive, you should avoid the excess of sound in the room. Do not allow the TV or radio to be turned on for a long time. We must pay attention that in the child's room there are no devices producing continuous sound all the time, e.g. a filter in the aquarium, an air conditioner. The noise from the street can also disorganize the child's behavior. Then, the best way is to use headphones, which can be a great help while doing homework as well as in part of the day when the child needs to "cut off" himself or herself from the excess of the sound.

In the case of a hypersensitive olfactory child, the worst effects are caused by odor mixtures or long-term exposure to odors (fragrance fireplaces, electric aromatizers). Fragrances that air during the cooking or frying process can also have the adverse affect on the child's behavior. Too strong cosmetics used by parents can affect the child's functioning and commuinication with them. Heavily flavored soaps and liquids used for bathing can cause trouble sleeping and a calm dream.

A hypersensitive to touch children may feel uncomfortable wearing clothes with the thick seams on the inside, clothes tags, elastic bands around wrists or hips.It is especially if they are applied directly to the skin. Sensitive children avoid putting on turtlenecks, woolen sweaters, too tight tights. Hair and nail cutting can also be a big problem.

In summary, sensory integration therapy is a complex intervention procedure, which specifically emphasises activities that stimulate sensory organs, mainly proprioceptive, vestibular and tactile systems. It is a therapy that aims to improve basic neurological processes and organize the work of the central nervous system (5).

A therapist work with a child with autism is based on careful observation of activities preferred by the child. He analyzes his or her reactions to the proposed stimuli in order to implement targeted activities in a controlled manner. At the same time he follows the feedback signals that comes from the patient. Then, he selects the appropriate exercises so that the therapy is as effective as possible.

The list of sensory integration therapists can be found, among others on the website of the Polish Association of Sensory Integration Therapists: www.pstis.pl. and on the website of the Polish Society of Sensory Integration www.integracjasensoryczna.org.pl.

Literature:

1. Maas V.F .:Uczenie się przez zmysły. WSiP, Warsaw1998

2. Borkowska M .: Uwarunkowania rozwoju ruchowego i jego zaburzenia w mózgowym porażeniu dziecięcym. Zaułek Publishing House, Warsaw 2001

3. Wiśniewska Marta: Profil Sensoryczny Dziecka PSD. Pracownia Testów Psychologicznych i Pedagogicznych, Gdańsk 2016

4. Arnwine Bonnie: Rozpoczynanie terapii Integracji Sensorycznej, Harmonia Universalis Gdańsk 2016

5. Przyrowski Zbigniew: Integracja sensoryczna wprowadzenie do teorii, diagnozy i terapii, EMPIS, Warsaw 2015
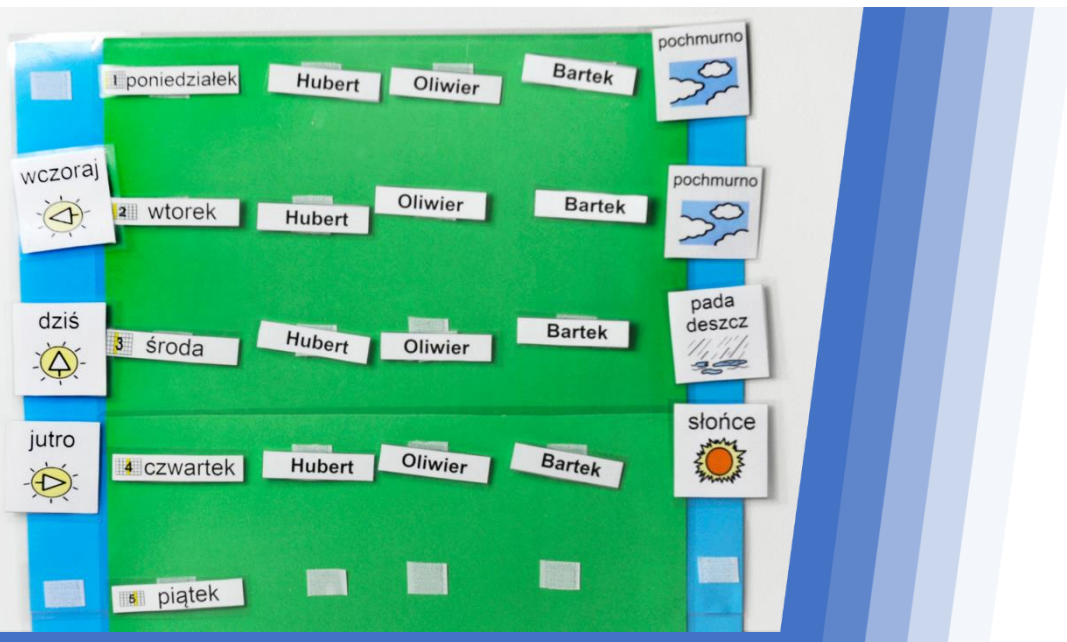
CHAPTER V

PRINCIPLES OF WORKING WITH A CHILD FROM THE AUTISM SPECTRUM

Katarzyna Sznajder-Grześ
Katarzyna Trybułowska

The current state of knowledge about autism is still insufficient. There are still many questions in its area, at the same time there is an increase in the population of people with this disorder. "This means that an increasing number of children, as well as young people and adults and their families will need help" (E. Pisula) The aim of this article is to sensitize the need to apply specific standards in working with people on the autism spectrum as well as a comprehensive presentation and systematization of information on the principles of work. We hope that it will be helpful not only for specialists, but above all for parents and carers who often work on behaviors, skill deficiency of their children in the home environment. To a large extent, these principles were created based on the experience of therapists.

As E. Pisula writes, the time of revealing the dysfunction is not the same, therefore, in many cases it will not be necessary to apply all the rules. However, as the practice shows, often for different periods of the child development, principles must be applied that were previously unnecessary.

Many professionals dealing with the subject of autism, among others Lovaas, Kaufman emphasize the effectiveness of systematic therapy carried out as soon as the early childhood.

1. Principles of working with a child from the autism spectrum

1. Workplace organization:
• minimizing or completely eliminating the distracting elements (colorful decorations on the walls, too bright light, noise coming from behind the window or behind the door, behaviour of the child sitting nearby, etc.).

• marking the rooms in a manner understandable to the student.

• division of space into: intended for unorganized activities (time for playing) and organized activities and a place of rest.

• proper arrangement of space (providing a separate place for individual work, ensuring the possibility of isolating the child in a difficult situation, e.g. establishing a "safe place").

2. Communication
• using a simple, unambiguous language.

• short instructions for exercises, making sure that the child has understood the instruction addressed to the group and whether it accepts it as directed also to him.

• supporting oral commands, presenting them in a visual way, depending on the student's level of understanding, e.g. by writing a command on a piece of paper, showing a pictogram or a photo.

• using short messages, supported by a gesture.

• establishing a system of supported or alternative communication.

3. Didactic process:
• developing a timetable (together with the child) and familiarizing the child with the structure of the day or classes (e.g. a PCS picture board), considering routine activities predictable, making small changes in the plan but informing the child well in advance.

• specifying the duration of activity by marking how many tasks are to be done or by

indicating with a sound the end of activity.

• clearly marking the end of a specific activity before going on to the next one.

• using various means of expression and methods in the teaching process (visual, movement, based on imitation and specific things - using models, diagrams, drawings, specific objects).

• application of an appropriate incentive system and positive reinforcements.

• presenting the task as clearly as possible for a child, dividing it into smaller stages.

• depending on the situation and level of the child's functioning, reducing the difficulty of the task or making it shorter.

• using the child's interests and favorite forms of learning to teach him new skills.

• creating situations in which the child has a sense of success, reducing sometimes the requirements or changing the process of learning.

• selecting materials for work, making sure that only the necessary materials and educational aids are present in the workplace.

• choosing clothes to wear that are neutral and non-stimulant.taking care of adjusting the time of individual and group classes to the individual possibilities of the child.

• remembering of the gradual withdrawal of prompts used in the teaching process.

• adaptation of the learning material to the age of the subject.

• a holistic approach, development of all spheres.

• always ending the activity that was started.

4. Social interactions

• proper organization of the free time,

• help in establishing positive relationships with peers,

• learning deficient social skills in a safe therapeutic environment, then gradually transferring them to the ground of the peer group.

• enabling the analysis of one's own behavior and social skills through a visual image for clarity.

5. Cooperation with parents

• cooperation of all adults that are dealing with the child,

• implementing the same rules regarding the requirements, praise and treatment of the child at home as well as at the facility.

Bibliography

1. Delacato C.H. (1999). Dziwne, niepojęte. Autystyczne dziecko. Warszawa: Fundacja Synapsis.

2. Pisula E. (2000). Autyzm u dzieci. Diagnoza, klasyfikacja, etiologia: Warszawa Wydawnictwo naukowe PWN.

3. Pisula E. (2005). Małe dziecko z autyzmem. Diagnoza i terapia. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
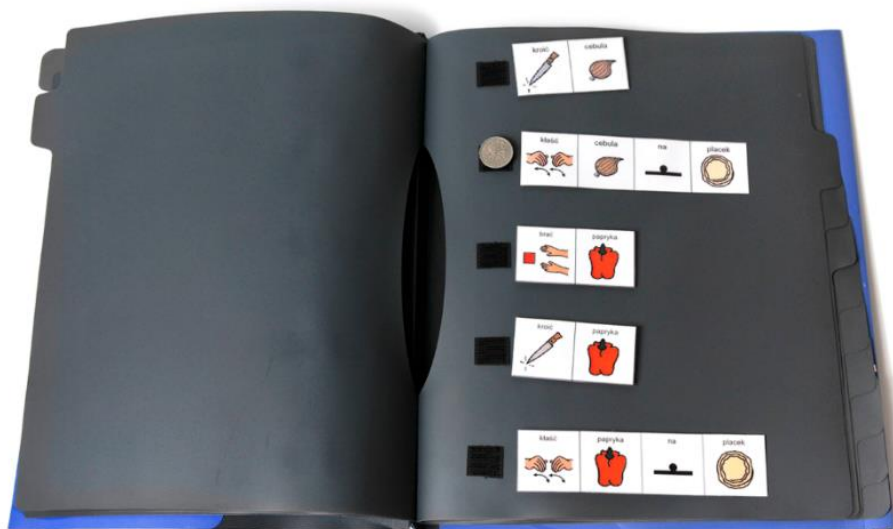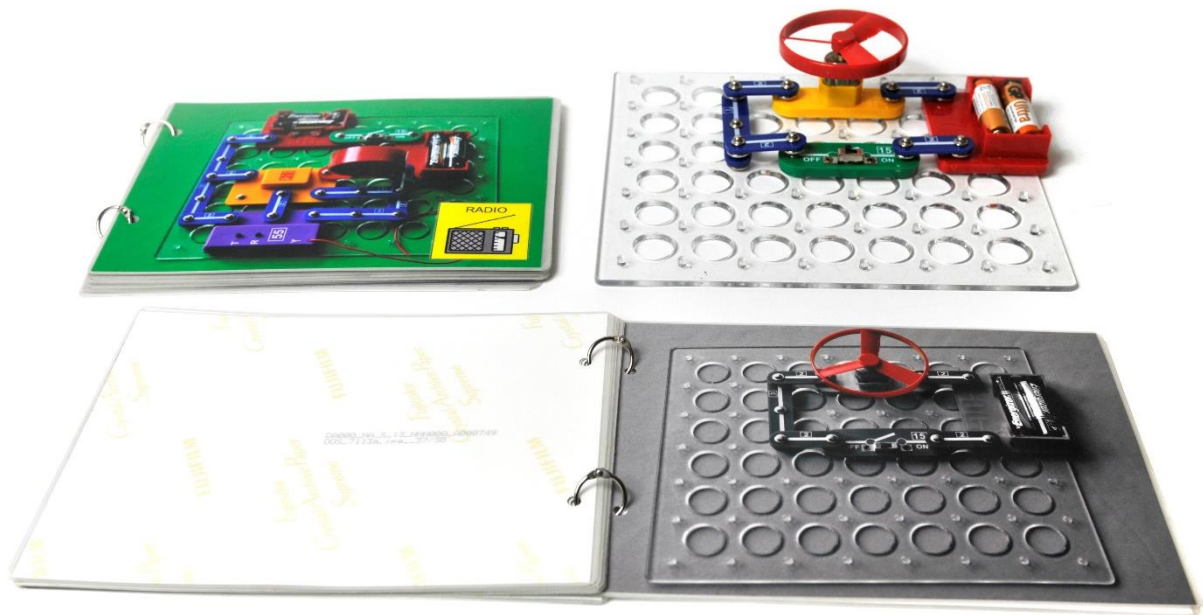
CHAPTER VI

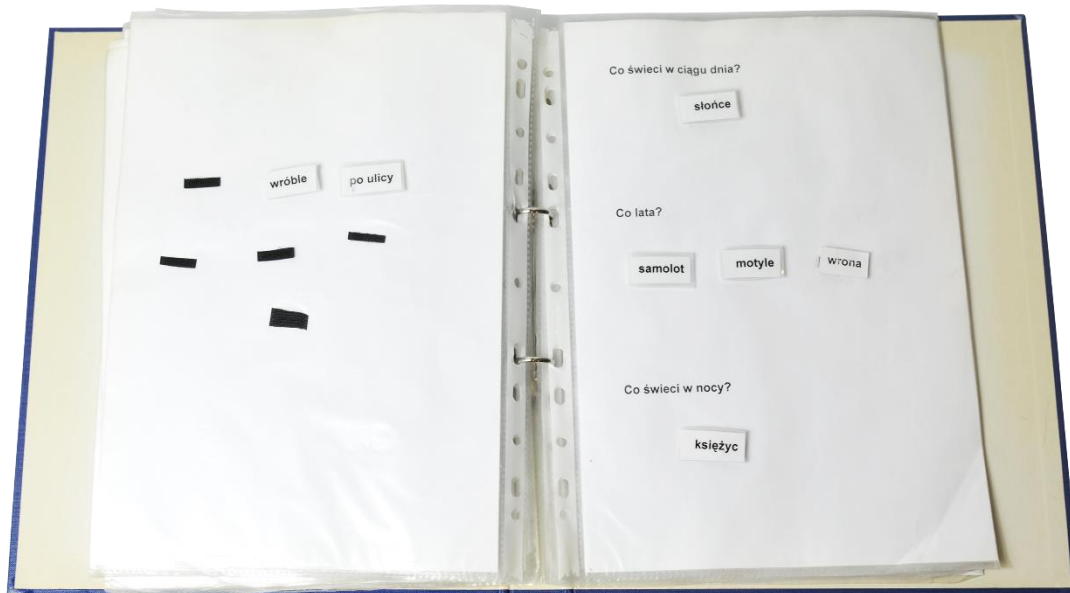## Strategies of visualisation and structuralisation of information
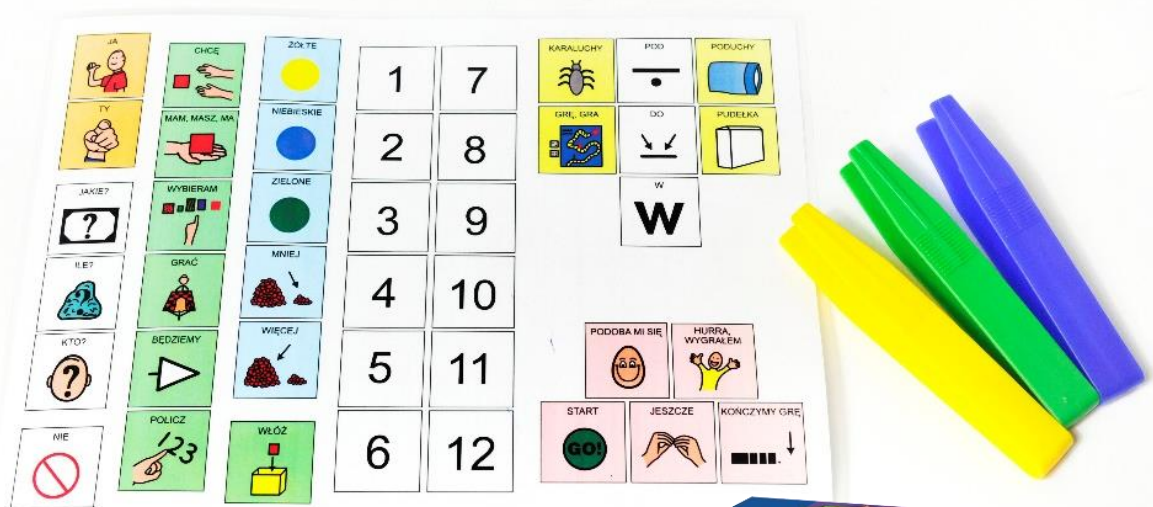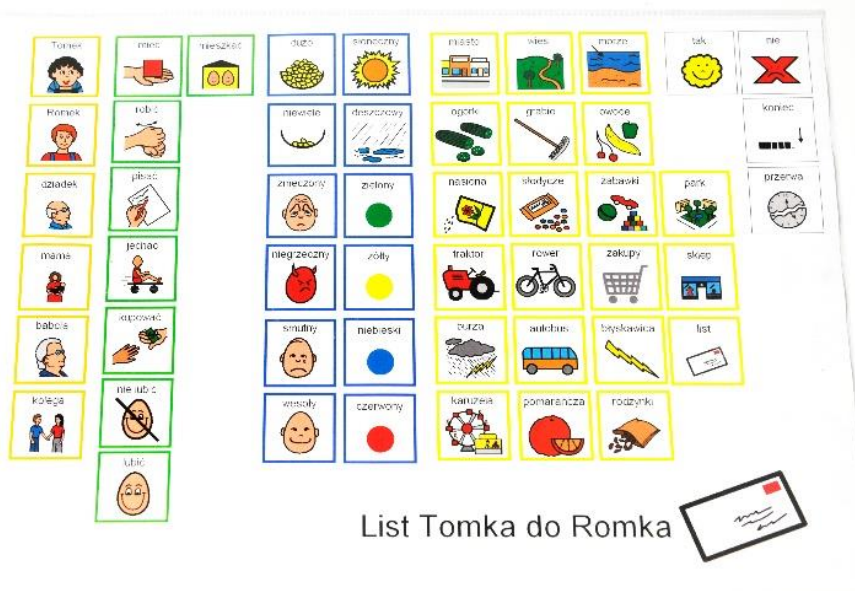
Andrzej Cwaliński, Nina Zawadzka

Symbols of the assisted communication:

Activity plans:

Co świeci w ciągu dnia?

słońce

Co lata?

samolot   motyle   wrona

Co świeci w nocy?

księżyc

rzucać woreczkami

Communication boards

Boards of the choice:

Attendance boards:
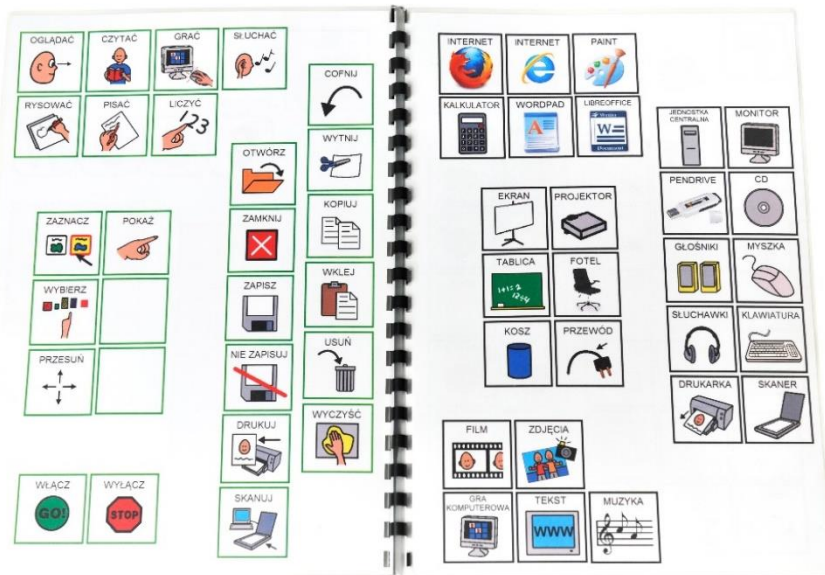
List Tomka do Romka

Contextual boards:

Communication books:
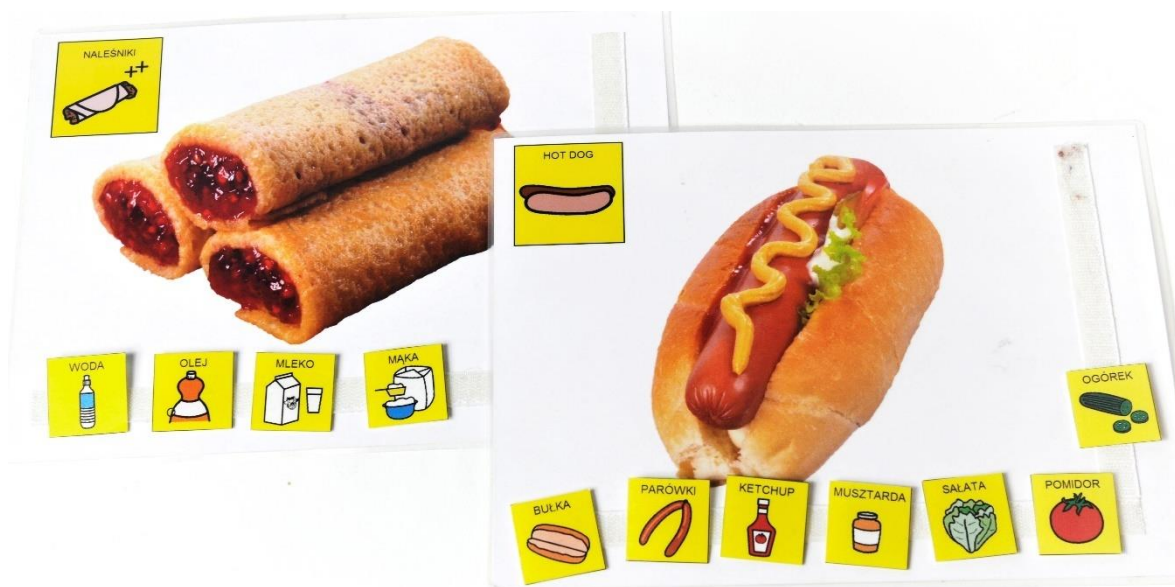
Dynamic communication boards:
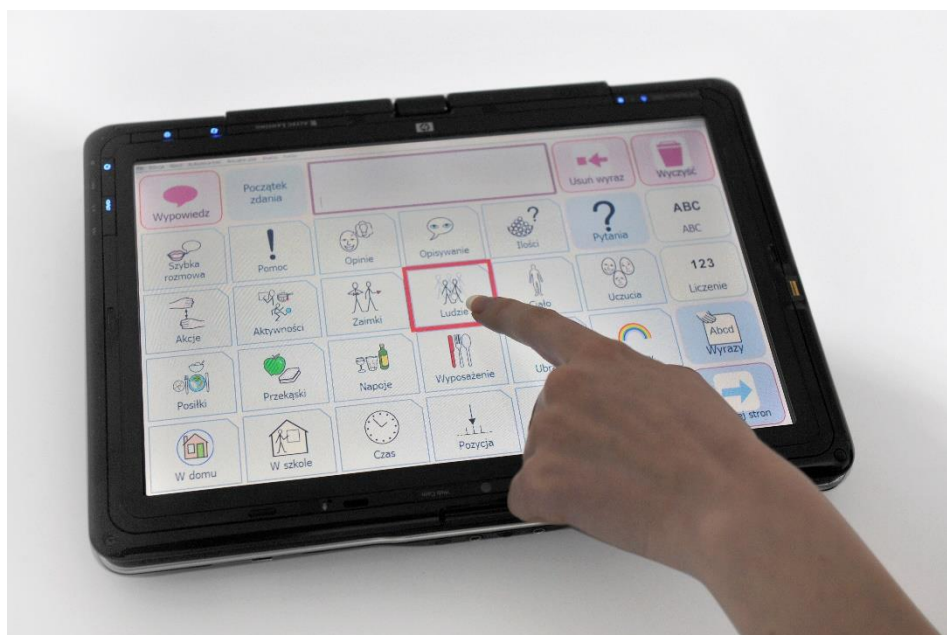
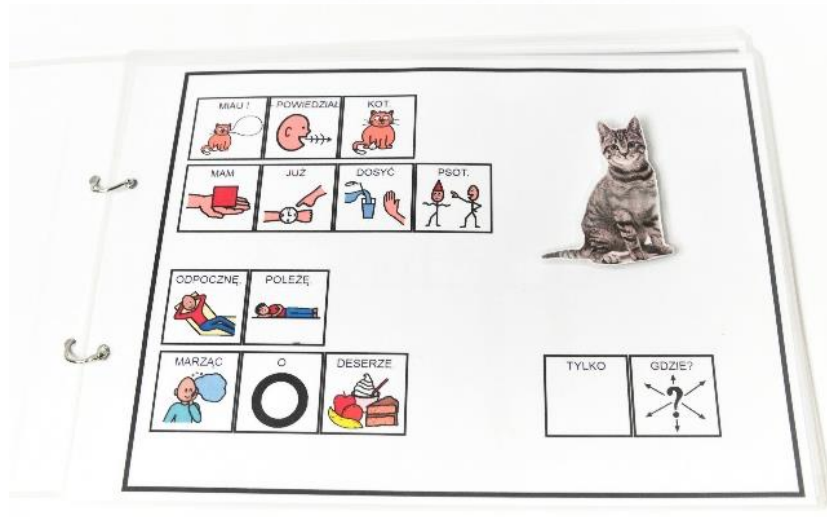**Visualisation of the unavailable motivations:**
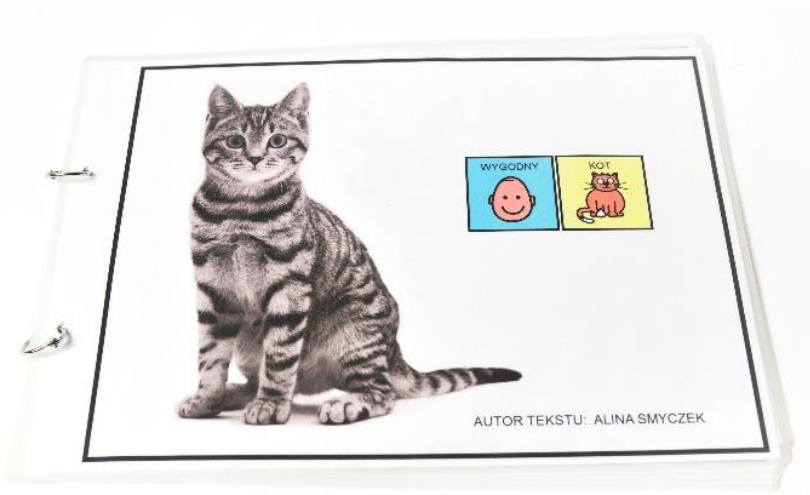

Visualistaion of the curriculum materials:
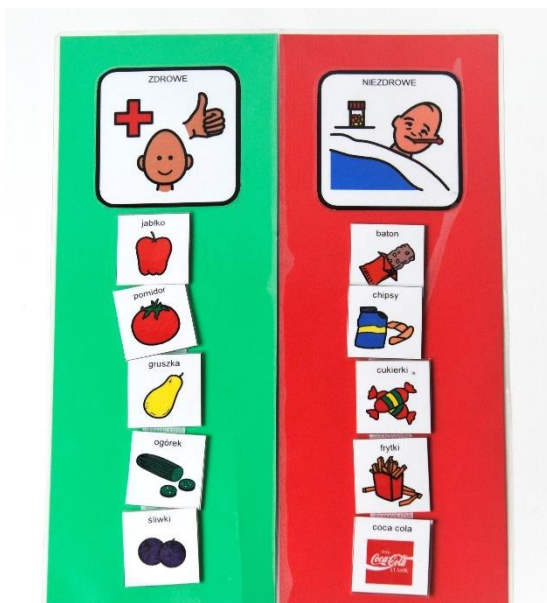
Books for participating reading (active reading):

Day Plans:

Plan of the day (extract):

Activity board:

Token economy (motivation token system):