

Comparison of the pragmatic level of communication in children with autism spectrum disorder using pictorial and drawn material

(overview essay)

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Abstract: *The paper provides an insight into the possibilities of using different types of visual material, intended for practical use in the evaluation or development of social communication skills. The aim of the paper is to assess the optimal type of task and the way of its administration in terms of effectiveness in students with ASD. The theoretical part of the paper contains both the definition of autism spectrum disorders and the pragmatic language level, as well as a thorough insight into Skinner's analysis of verbal operants, especially intraverbal and receptive skills, mastering which is necessary for functional application of learned skills in everyday social communication situations. Three types of pictorial and cartoon materials are used in the research survey. The first is a pair of images designed to distinguish socially acceptable behaviors. The second contains situational pictures, where the student distinguishes the main character's likes or dislikes according to the context of the situation. The third material is modified by the principles of structured learning, in which the respondent assigns to the pictures a suitable statement from the menu. The aim of the research part of the paper is to evaluate the results of individuals in partial tests, especially if they achieve significantly more acceptable results in tests for identification, assignment or spontaneous creation.*

Keywords: *autistic spectrum disorders, intraverbal skills, pragmatic language level, pictures with social context*

1 Introduction

According to Bělohávková (2013), we learn adequate communication and social skills inadvertently and naturally in the context of interaction with other people throughout our lives. Deficits in the field of communication and social interaction form, among other things, the core of autism spectrum disorders. The ICD-10 dis-

tinguishes between communication and social skills within the diagnostic criteria, but they are already grouped into one category within the DSM-V, as deficits in these areas are a manifestation of the same basic problem. As part of intervention strategies focusing on the development of skills of individuals with ASD, applied behavioral analysis (ABA) is currently gaining prominence, the effectiveness of which has been proven and supported by numerous researches. During therapy, the ABA uses various forms and techniques in order to modify behavior, improve social communication skills, develop leisure and gaming activities, self-service skills, but also the ability to perform work tasks.

Cottini and Vivanti (2017) include social stories and cartoon dialogues among the didactic strategies using pictorial material which is particularly interesting for children. Social stories are short written stories often supplemented with pictures or visual diagrams describing a particular person, situation, ability, or event. Specific sentences, most often written in the first person, contain instructions for an adequate response, describing the thoughts and feelings of other people in a given situation. Social stories aim to teach individuals to regulate their own behavior during an interactive situation. Part of the story is a description of the acquired behavior, the appropriate situation for the use of this behavior, the possible consequences of the behavior, including the feelings and reactions of other individuals. Stories are effective precisely because individuals with PAS often cling to routine. We can thus create a routine or rule using a proposed story, which the individual can then transfer to a real situation, (Šporclová, 2018). Cartoon dialogues use pictures, symbols and colours to illustrate abstract concepts and ideas during conversations. Cartoon dialogues should be used in situations where the situation is difficult for the child, or to clarify a new situation or to clarify the behavior of other people. Schematic pictures are created by the teachers during their interpretation. It helps students who do not understand the rapid exchange of information during a normal conversation. Everything is done in slow motion and the students can more easily focus their attention on essential information. Cottini, Vivanti (2017)

1.1 Autistic Spectrum Disorders

Based on the terminological changes set out in the Diagnostic Static Manual (DSM – V), Volkmar, Wiesner (2017) abandons the umbrella term pervasive developmental disorder, which is replaced by autism spectrum disorder. Autism spectrum disorders are the most serious disorders of children's mental development. "This category includes severe developmental disorders that originate in early childhood and are characterized by a quantitative disorder of social interaction, communication, and a tendency to stereotypical and ritualistic behavior. It is therefore a pervasive developmental disorder, where the term pervasive can be interpreted as permeating into all sides of the

personality and foreshadows the fact that the child's development is deficient, profoundly in many ways." (Říhová, Vitásková, 2012, p. 7). It is a very complex disability that negatively interferes in the earliest childhood with the development of the child's communication, who is later unable to form interpersonal relationships within the norm. (Mühlpachr, 2004)

The International Classification of Diseases (ICD-10) published by the World Health Organization and the Diagnostic-Static Manual (DSM-V) issued by the American Psychiatric Association are the main diagnostic systems for classifying autism spectrum disorders that corresponded significantly until 2013. The current fifth revision of the DSM brings a number of changes related to autism spectrum disorders, not only in the terminological field, but also within the division of partial disorders. The manual reconsiders the hitherto stable view of the area of the diagnostic triad, defining the deficits typical for the determination of PAS. The concept of the diagnostic triad is still being worked on by the 10th revision of the ICD; in foreign literature (Volkmar, Wiesner 2017, Cottini, Vivanti 2017) we already find a redefinition of the "symptomatic dyad", which is based on deficits in the areas of imagination and social communication. The concept of autistic dyad links social and communication deficits into one category, because the shortcomings in these two areas do not reflect two different deficits, but only one. In the area of social communication, we include both deficits related to verbal and nonverbal communication, and shortcomings in the social area including a limited ability to initiate social interaction and the ability to respond to the initiative of the other person. Deficits in the field of imagination manifest themselves as a limited repertoire of activities and interests and stereotypical, repetitive behavior, (Cottini, Vivanti 2017). However, according to Bogdashina (2003, p. 13), these manifestations "are only a complex of functional compensatory reactions conditioned by a certain basic disability and cannot be considered as primary features". The Diagnostic – Static Manual creates a new diagnostic category, social communication disorder, which identifies individuals with deficits in the field of social communication, but without the fulfilled criterion of stereotypical and rigid behavior, when this person does not have narrowly defined interests and sensory specifics. (Volkmar, Wiesner 2017, Thor 2016)

1.1.1 Social skill training

Čadilová, Žampachová (2020) indicate social skills as a wide range of skills that we apply in interpersonal relationships, thanks to which we can naturally express our needs, verbalize our intentions, feelings and take into account the needs of others. Social competencies are always impaired in pupils with ASD, even in individuals with high cognitive functionality, so it is necessary to pay increased attention to the development of these skills. Learning with social skills takes place throughout life within the framework of social learning, during which complex ways of acting and

behavior appropriate to the social situation are acquired. Behavior patterns applied during social situations are not innate, but later mastered, thus there is space opening up for us to compensate for deficits in this area.

According to Vosmik and Bělohávková (2010), social skills include the ability to correctly perceive, understand, respond and communicate. These components are defined by Patrick (2011, pp. 37–38) as social input, internal processing and social output. “Social input refers to the way we perceive speech and voice modulation, body language, eye contact, attitudes, gestures and other cultural expressions that accompany the addressed social message. Internal processing concerns our own interpretation of the transmitted message in order to know and manage our own emotions and reactions. The social output concerns our response to the message we receive, which we express in our own words, voice colour, body language, eye contact, attitudes, gestures and cultural behavior.”

Social skills training can be carried out individually, in groups or during normal real-life situations, with the provision of an appropriate level of support. The examiner presents and clarifies social issues, focuses on the individual problems of the individual, together they deal with situations and conflicts. We use visual materials to convey social skills – pictorial diagrams, written procedures, teaching aids focused on social situations. For group teaching, it is appropriate to use games, dramatization leading to an understanding of the specifics of behavior and training in adequate responses. Frequent repetition and creation of suitable situations leading to the necessary use of the acquired skill leads to the generalization of the learned skill (Čadilová, Žampachová, 2020).

The ABA offers a number of methods and strategies that can be used in learning of social skills. For example, it can be a task analysis in which a complex skill is divided into individual steps, or various types of prompts, positive feedback, etc. The complex method includes the so-called behavioral skills training, which consists of 4 components: instructions (explanation of the learning goal and giving instruction), modeling (examiner demonstrates skill), training (student demonstrates skill), feedback (examiner will provide immediate feedback to student). The process of modeling and practising a given skill takes place until the student automates the skill and demonstrates it flawlessly (Fisher, Piazza, Roane, 2011, Hassan et al. 2018).

1.2 Pragmatic language level

The pragmatic level of language, or the level of social application of communication, represents the use of speech in practice, in a social context. According to Lechta (1990), we cannot look at the pragmatic language level as a compendium of individual language standards, but as a complex communication skills of an individual applied in social interactions. According to Vitásková, Kytnarová (2016), the pragmatics of communication form a strong position among other levels, which is due to the in-

creasing pressure on social competences and conversational skills of the individual in the educational and professional environment.

Bednářová, Šmardová (2011) state that the pragmatic level of speech includes the so-called regulatory function of speech, which is achieving goals using speech and directing social interaction. The use of communication in social interaction requires a continuous analysis of the relationships between communication partners in a specific context, as well as the ability to understand the intentions of the conversers. (Thorová, 2012) The American Association ASHA (Social Language Use, Pragmatics) identifies the use of language for various purposes as three essential skills at the pragmatic language level, ie the individual's ability to greet, make requests, promises, modify speech according to the listener's situation or needs and knowledge of certain rules for conversation and storytelling.

According to Thorová (2012), the following skills are needed to apply the pragmatic level of language:

- Knowing that it is necessary to answer when a question is asked
- Participate actively in the conversation and keep in mind whose turn it is during the conversation
- Keep in mind the fact that the individual must represent his message in a form that is understandable and interesting for the listeners
- Ability to keep a conversational topic
- Fulfil one's own intention of communication so that the individual influences and convinces the listeners with their speech
- Choose the right words and conversational style appropriately
- Know appropriate behavior when communicating with different communication partners

1.3 Verbal behavior

One approach to applied behavioral analysis, which Cottgini and Vivanti (2017, p. 80) describe as "systematic and long-term teaching in small measurable units; tasks, individualized on the basis of the dynamic functional profile of the child, are divided into short sections, each unit is taught in repeated and short periods, initially in an individualized relationship of two people", is verbal behavior based on the theoretical work of B.F. Skinner Verbal Behavior (1957). Skinner considers language to be a verbal behavior, where the skill of understanding and speaking can be acquired by an individual through learning and empowerment, (Cooper, 2014). Esch, Esch (2010, p. 190) define the analysis of verbal behavior: "Skinner's analysis of verbal behavior is not an instructional strategy or learning method – it is an analysis. It analyzes the contexts of the environment in which certain verbal reactions occur."

Verbal behavior deals with the analysis of human communication, which he views as a type of behavior that can be taught like any other behavior. In the approach of verbal behavior, the emphasis is on the function of the word, not its form. One word that sounds the same can have several different functions depending on the context in which it is used (Skinner, 1957). Verbal behavior is strengthened both in interaction with other people and in the form of so-called automatic reinforcement, where the individual tries to produce sounds from their surroundings (Barbera, 2007). According to Skinner (1957), the complete language repertoire consists of several different types of speaker and listener behavior.

Verbal behavior involves social interaction, where the speaker gains access to empowerment and control over the environment through the behavior of his listener. At the heart of Skinner's functional analysis of verbal behavior is the difference between *manda*, *tact*, and *intraverbal* response, which, according to Cooper (2014), can be considered as elementary verbal operants. These are the types of verbal behavior traditionally included in the expressive component of speech. Skinner (1957) categorizes verbal behavior into two areas, which are formed by primary and secondary operants. The classification of Barber and Rasmussen (2018) corresponds to the division of communication as such, because it divides verbal operants into nonverbal and verbal operants. The basic unit of communication is made up of primary verbal operants – *mand* (requirement), *tact* (designation), *intraverbal* (reaction to what others say), *echoic* (verbal repetition). Among nonverbal operants, the authors of imitation skills – *mimetic*, *visually perceptual* skills. According to Skinner (1957), secondary verbal operants modify speech.

Example:

The word CAT has 4 basic functions within the expressive component of speech:

1. An individual says "cat" when he wants to get a cat (request, so-called *mand*).
2. The individual says "cat" when he sees the car (description, so-called *tact*).
3. The individual repeats the word "cat" after the examiner says the word "cat" (*echoic* reaction).
4. The examiner asks, "What pet has four legs, a tail, body hair and hunts mice? The individual answers: "Cat." (Ability to answer questions without visual support, so-called *intraverbal*).

Intraverbal skills can be considered (Barbera, Rasmussen, 2018) as the basis of conversation. Functional dialogue often consists of a combination of three verbal operants – *tact*, *mand*, *intraverbal*. More complex comments or *tacts* can be considered a *mand* used to start a conversation and seek attention. The core of the conversation is mostly a *mand*, whose goal is to get information. The conclusion is made up of *intraverbal* reactions – answers to questions. Carbone (2016) states that in a situation

where an individual has a limited repertoire of intraverbals, it is necessary to provide a sufficient number of visual stimuli during the teaching and to modify the teaching according to the pupil's skills. It is appropriate to use the individual's repertoire of descriptive vocabulary (tacts), receptive component of speech (listener's reaction), echoic reaction, visual perception or motoric imitation.

Example:

(Barbera, Rausmussen, 2018):

Person # 1: "I haven't seen you here yet." – tact/mand for information

"Are you new here?" – information mand

Person No. 2: "Yes, I moved from Olomouc last week." – intraverbal reactions

Person No. 1: "Aha, from which part of Olomouc?" – mand for information

Person No.2: "From Slavonín."

Person No. 1: "It's very nice in Slavonín." – intraverbal reactions, mand for attention

Communication is an integral part of the whole educational process. Deficits in communication can then cause barriers to the acquisition of new skills in pupils with ASD (Sundberg, 2008). If we look at speech from the point of view of verbal behavior analysis, we will see connections that will help us identify deficits in communication. Based on this finding, we can then design appropriate learning methods and goals (Carbone 2016).

2 Methodology

Although the diagnosis of autism spectrum disorders in the Czech Republic is the exclusive competence of clinical experts who determine this on the basis of behavioral manifestations, it is essential that experts from other disciplines are competent to identify major deficits in the individual. Most of the standardized test material, which is significantly limited, is targeted at the individual's overall profile, but the detection of partial deficits by individual experts is in the interest of influencing the individual's further development. Thus, experts often have to modify the available test material to work with individuals with ASD, and there is a difficulty in evaluating the results obtained in this way, because there is a complete lack of normative data.

The research part of the survey is qualitatively focused, as the data collection took place in the form of individual interaction with deliberately selected respondents. The main research goal is to examine skills in the field of pragmatic language using pictorial and drawn material. The analysis of the problem will be based on the use of the material Evaluation of the level of the pragmatic language level in people with ASD (Vitásková, Kytnarová 2016), Picture cards by A. Gully – Emotions, Joy, Sadness or Anger and modified social stories (Cottini, Vivanti, 2017).

2.1 Research objectives

The main goal of the research survey was to create material for the research survey in the form of modification of available didactic material intended for work with pupils with ASD – choice of picture cards, creation of a drawn social scenario.

Sub-objective No. 1 was to find out whether there is a difference in the evaluation of skills results by identifying, assigning or commenting on pupils with autism spectrum disorder.

Sub-objective No. 2 was to find out whether there is a connection between the age of the respondents and the results achieved in the individual tasks.

Partial goal No. 3 was to find out whether the type of school is reflected in the level of social and communication skills of an individual with ASD.

Based on the setting of sub-objectives, the following hypotheses were formulated:

H1: In individuals with ASD, there is a difference in social communication skills assessed through identification, assignment or commentary.

H2: The age of the respondents is reflected in the level of acquired skills.

H3: There is a difference between the skills of respondents educated in mainstream schools and schools established according to §16 par. 9 of the School Act.

2.2 Description of the research set and methods

The research sample consisted of boys and girls with autism spectrum disorder aged 8–14 years, ie pupils fulfilling compulsory school attendance both in mainstream schools and in schools established in accordance with Section 16, Paragraph 9 of the School Act. The intellectual preconditions of the majority of respondents (7 out of 8) fall into the zone of mild mental disabilities. Respondents' legal representatives were contacted through personal contact or electronic communication. After being informed of the objectives and testing procedure, the legal representatives gave their consent to the involvement of their children in the investigation. Subsequently, three diagnostic materials were administered in direct interaction with the examiner. The testing itself was preceded by a short anamnestic interview. The survey itself took place in January 2022. Respondents in this research survey are divided into three categories – according to gender, age and type of school where they attend compulsory school. For the purposes of this research, each pupil was identified by an abbreviation consisting of a gender designation and a number. A total of 8 people were examined, of which only two subtests were administered to one pupil, because the respondent

did not yet have a functionally acquired reading skills. The distribution of the research sample based on the above groups is represented by Tables 1, 2, 3.

Table 1: *Distribution of the research sample – gender*

Gender	Number	Percentage (%)
Boy	6	75 %
Girl	2	25 %
Sum	8	100

Table 2: *Distribution of the research sample – age*

Age	Number	Percentage (%)
8–10	2 (B1, B2)	25%
10–12	2 (B4, B3)	25%
12–14	4 (G1, G2, B5, B6)	50%
Sum	8	100

Table 3: *Distribution of the research sample – school*

School	Number	Percentage (%)
Mainstream school	3 (CH1, CH2, CH4)	37,5%
School \$16 par. 9 SA	5 (CH3, D1, D2, CH5, CH6)	62,5%
Sum	8	100

The analysis of pragmatics skills in pupils with autism spectrum disorder was performed using three non-standardized pictorial and drawn materials, some of which were modified on the basis of the principles of structured learning.

K. Vitásková and L. Kytarová (2017) are the authors of the material Evaluation of the Pragmatic Language Level in People with ASD. Diagnostic material, created primarily for the needs of speech therapists, evaluates the pragmatic communication behavior of individuals with ASD. Partial illustrations are associated with a pragmatically communication-oriented event. The pairs of images are intentionally black and white so as not to evoke negative feelings. The pair of pictures evaluate visual contact, greeting, farewell, request, proxemics during communication, expression of displeasure, waiting during communication, alternation during conversation, behavior in the store and reaction to loss. The aim of the respondents, after submitting a pair of pictures by the examiner, was to select one on which the correct variant of the communication situation is depicted and to justify their choice of the picture.

The social stories created for the purposes of this survey are based on the didactic material of the publication Autsimus (Cottini, Vivanti 2017). The material consists

of three pairs of pictures, always with a similar social context. The pictures are very reminiscent of comics. The aim of the respondents was to correctly add an adequate comment from the offer of verbal comments, which would correspond to the social situation. The choice of picture pairs was intentional, just to focus on a similar area of social skills – greeting, peer interaction, adult interaction – request for a thing. Due to the typical deficits in individuals with ASD, this material was modified on the basis of the method of structured learning, where the respondents chose the correct text from the menu for the pictures.



Picture 1: *Picture material – social stories*

The image material for the assignment consists of the image cards Emotions and Joy, Sadness or Anger, published by Pasparta, by Angela Gully. Illustrations of social situations are colourful, but the coloured border of the cards, evoking emotions has been removed. The aim of the respondents was to distinguish the emotions depicted in the 9 illustrations only within the bipolar evaluation – pleasing/displeasing, pleasant/unpleasant. Most respondents also marked their answer graphically in the corner of the card – a red circle indicates unpleasant emotions, a green circle indicates pleasant emotions. One respondent stuck a smiley and frowning emoticon sticker in the corner. The file consists of 5 pleasing pictures and 4 displeasing.



Picture 2: Picture material for assigning positive/negative emotions

3 Results and discussion

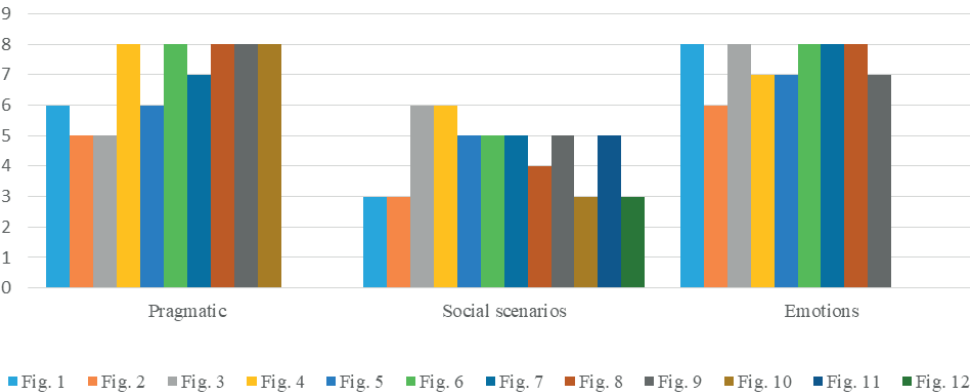
The evaluation of the results of individuals in partial tests is given in Table 4. The order of respondents in the table is chosen in ascending order according to age from the youngest to the oldest. Due to the fact that individuals in the individual tests were able to obtain a different number of points, the graph includes a percentage representation of the results, which is necessary to compare the success of individuals in the sub-tests, see. Graph 2.

Table 4: Evaluation of results in partial tests

Respondents	Identification Evaluation prag.		Spontaneous creation Social scenario		Matching Pictures – emotions		Celkový výsledek	Final result
B1	7/10	70%	6/12	50%	8/9	88,8%	21/31	67,7%
B2	5/10	50%	–	–	9/9	100%	14/19	73,6%
B3	10/10	100%	8/12	66,6%	9/9	100%	27/31	87,1%
B4	8/10	80%	6/12	50%	9/9	100%	23/31	74,1%
G1	9/10	90%	10/12	83,3%	9/9	100%	28/31	90,3%
G2	10/10	100%	12/12	100%	9/9	100%	31/31	100%
B5	10/10	100%	10/12	83,3%	9/9	100%	29/31	93,5%
B6	10/10	100%	10/12	83,3%	5/9	55,5%	25/31	80,6%
Overall success	89/100	89%	62/84	73%	49/54	90,74%		

Within the research, respondents were able to obtain a total of 31 points: evaluation of the pragmatic language level of speech – 10 points, social scenarios 12 points, emotional images 9 points. Each sub-item was evaluated by one point. From the above graphical representation of the results, it is clear that the best results were obtained by individuals with autism spectrum disorder in a task focused on matching, which was evaluated using emotional images. The error rate for this subtest was only 9.26%. When evaluating the pragmatic language level, the overall error rate of all respondents was 11%. The highest error rate of 27% results from the evaluation of respondents' results focused on social scenarios. The average success of respondents in all subtests ranges from $\approx 90.74\%$ (pictures – emotions) to the level of 73% (social scenarios).

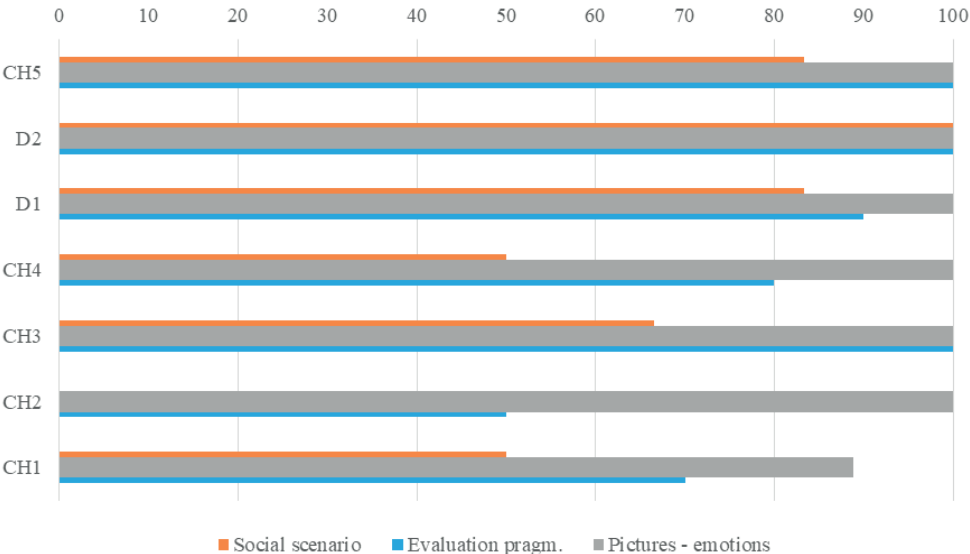
Graph 1: Number of correct answers of individual items of partial tests



If we monitor the number of correctly answered items in Graph 1, we can find a relatively low discrepancy in the Images-Emotions subtest, where we find the highest error rate in Figure No. 2 farewell on departure. We find more significant differences in the test aimed at identifying communication situations, where for half of the items all respondents marked the correct picture. The items with the highest error rate in this test are items No. 2 and No. 3, which evaluate visual contact during greetings and farewells. The uneven distribution of the correctness of the answers is evident in the social scenarios, where we find the same error rate for four items, which reaches 50%. On the contrary, all respondents correctly completed the children's response to the greeting.

According to Skinner's analysis of verbal behavior, we cannot clearly determine which of these subtests evaluates individual verbal operands. Skills in the field of pragmatics are such complex skills that in order to identify partial verbal operands, it would be necessary to perform a detailed analysis of verbal behavior, which is not the purpose of the research. In general, however, the situation can be seen as that if the respondent's goal is only to respond to the examiner's verbal instruction (eg show which picture is correct) without adding a verbal speech to his/her answer, this is receptive identification. In contrast, a situation where the respondent responds to the instruction verbally (eg this situation is nice/unpleasant for the person and the proband answers nice), we can call the skill as intraverbal. Only one communication act is composed of several verbal operands, it always depends on its purposes and the way the communication partners react.

Graph 2: *Percentage representation of respondents' success in partial exams*



7 individuals with intellectual preconditions in the zone of mild mental disabilities were involved in the research survey, only one respondent (B1) did not have an associated intellectual disorder. One respondent was able to meet only two subtests within his abilities and skills – evaluation of pragmatics and matching of images of emotions. Only one respondent won 100% in all exams. 75% of respondents achieved 100% success in at least one administered subtest. By far the highest error rate was captured by the youngest respondent included in the research survey.

In finding the answer to the research question “There is a difference in individuals with ASD in the field of social communication skills assessed through identification, matching or commentary.” We compared the overall success of respondents in all three areas, for better clarity, the data obtained are shown in Table 4. It is clear from this that the respondents achieved different results in the individual tests. The research assumption that there is a difference in socio-communication skills assessed through identification, assignment or commentary has been confirmed.

Another research question was: “Is the age of the respondents reflected in the level of acquired skills?” To clarify this question, it was effective for better orientation to rank the respondents by age and evaluate their results and transfer this data to a comprehensive graph. By comparing the data from the graph of the percentage of success in the partial exams, Graph 2, we could notice that the success rate for respondents from the lowest age category is declining. In contrast, success rates increase with the age of the respondents. The research hypothesis that the age of the respondents is reflected in the level of acquired skills was accepted.

The third research assumption was that there is a difference between the skills of respondents educated in mainstream schools and schools established under § 16 par. 9 of the School Act. We cannot clearly confirm or refute this hypothesis, because for its assessment it would be necessary to assess the same number of respondents of the same age educated both in mainstream schools and in schools established according to §16 par. 9, SA. Within this research, the ratio of respondents was 3: 5 in favour of schools established in accordance with §16 par. 9, SA, while two respondents educated in mainstream schools were included in the lowest age category. From the evaluation of the results demonstrated in Graph 2, it is clear that individuals educated in schools established according to §16 par. 9, SA, achieve a higher score in individual exams, but we must also take into account another variable, which is the age of the respondents. To evaluate this hypothesis, it will be necessary to carry out further research.

4 Conclusion

Part of the grant-specific research entitled Research of specific determinants and mechanisms of verbal and nonverbal communication disorders, voice, cognition and orofa-

cial processes from speech and special pedagogical point of view (IGA_PdF_2021_030) was a paper entitled Comparison of the pragmatic communication plane in children with Autism Spectrum using pictorial and drawn material.

The content of the paper was first a theoretical introduction to the issue of autism spectrum disorders and a closer look at social skills training, as well as to the area of verbal behavior and pragmatic language levels of speech. Deficits resulting from the pragmatic language level of speech in individuals with ASD can be predicted with respect to the diagnostic criteria set by the Diagnostic-Static Manual (DSM-V) of the American Psychiatric Association, which views communication and social skills as intertwined.

The research was carried out using three types of pictorial and drawn material. At present, we in the Czech Republic are not offered any standardized test material to evaluate the pragmatic language level in pupils with ASD. During the research survey focused on the evaluation of social and communication skills of individuals with autism spectrum disorder, further stimuli and questions arose for a new research survey. Above all, it will be necessary to establish cooperation with a behavioral analyst in order to analyze the behavior of respondents in the administration of pictorial and drawn material, as well as to obtain a higher number of respondents. The main benefit of the survey lies primarily in the comparison of available educational materials and their subsequent use in the practice of special educators, but first it will be necessary to verify it on a higher number of probands.

Clearly, the same diagnosis of autism spectrum disorder, combined with intellectual assumptions in the same level of mild mental retardation, does not imply the same communication profile in the pragmatic language level of speech. Deficits resulting from the diagnosis require education in various areas, ideally also with the use of different types of educational material, which we wanted to point out in the article. Although the pragmatic profile of an individual is very similar in many areas, it is necessary to treat each of them as an individual.

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