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Social Skills, Autonomy and Communication in Children with Autism

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Abstract. The number of people with autism spectrum disorder is growing at an accelerated rate from year to year. Unlike 20 or 30 years ago, when few people in the general population had ever heard of autism, now you rarely meet a person who has not heard of this disorder and does not know anyone with a relative diagnosed with ASD. A sample of 30 children with ASD was assessed with Adaptive Behavior Assessment System II (ABAS II), a Screening of personal autonomy skills from PEDa (Cognitrom, Cluj-Napoca) and a Screening of social skills from PEDa (Cognitrom, Cluj-Napoca). Our main objectives were: (O1) Identifying the correlations between personal autonomy, social skills, and communication in children with autism spectrum disorders, and (O2) Identifying the differences between personal autonomy, social skills, and communication according to the sex of children with autism spectrum disorder. The hypotheses of our study are: (1) It is assumed that there is a correlation between social skills and communication in children with autism spectrum disorder; (2) It is assumed that there is a correlation between communication and personal autonomy in children with autism spectrum disorder; (3) It is assumed that there is a difference in personal autonomy depending on the sex of children with ASD; (4) It is assumed that there is a difference in social skills according to the sex of children with ASD; (5) It is assumed that there is a difference in the development of communication according to the sex of children with ASD. Results show the existence of a relationship between communication, social skills, and personal autonomy, and we also obtained differences based on gender in social skills. In terms of personal autonomy and communication, although some differences were obtained, they were not statistically significant. Results are discussed in the context of the importance of personalized interventions plans for children with ASD.

Keywords. Social skills, autonomy, communication, children, autism.

1. Autism. A historical perspective

The term *autism* was first used in 1911 by German psychiatrist Eugen Bleuler to describe a schizophrenic patient who had retired to his own world. According to Bleuler (1950), autistic thinking was characterized by avoiding unsatisfactory reality and replacing it with fantasies and hallucinations.

In 1943, American psychiatrist Leo Kanner described the first cases of autism in children. He observed 11 children with similar patterns of behavior (Matson & Minshawi, 2006): inability to use language for communication, poor social skills, desire to keep objects in the same place. Thus, autism was described as a distinct from schizophrenia.

Another approach belongs to Hans Asperger, who described a very similar pathology in roughly the same terms. He defines autism as an original way of thinking and experiencing, which can lead to exceptional success in life (Mureşan, 2004).

In 1979, Lorna Wing, a behavioral psychologist, and the parent of a girl with profound autism, alongside Judith Gould, started a study on the prevalence of autism among the population. They conducted an epidemiological survey of all children living in a London area (Wing & Gould, 1979). They found several children with different speech problems, from those who could not speak at all, to those who talked too much and insistently about the things they were passionate about. The study showed a marked tendency for social, communication, and imagination deficiencies to appear together (Happé, 1994).

DSM III first introduced five-factor pervasive developmental disorder with the subgroup of childhood autism (Feinstein, 2010): lack of reaction to others, lack of language or improper use, resistance to change and attachment to objects, absence of schizophrenic features, and onset before 30 months.

DSM IV (2003) brings the following classification: pervasive developmental disorder, unspecified pervasive developmental disorder, autistic disorder, Asperger's syndrome, disintegrative disorder of childhood, and Rett syndrome.

The most important change brought about by DSM V is the use of an umbrella-type diagnosis: Autism Spectrum Disorder (ASD). Autism Spectrum Disorders are also known as Pervasive Developmental Disorders. The term *pervasive* describes the group of behavioral disorders with difficulties in several areas of development that produce a complex of characteristics and traits (Verza & Verza, 2011). People with pervasive developmental disorders are different in terms of skills, cognitive level, or behavior. Some individuals with this disorder can communicate in simple words or sentences while others do not acquire verbal communication skills. In terms of cognitive abilities, people can have a very low IQ, within normal limits or even above the limit. Social and play skills are limited.

Autism is a neurodevelopmental disorder, characterized in DSM V by quantitative and/or qualitative abnormalities of social interaction and communication, the appearance of stereotypical behaviors, with significant impairment in all areas of social and professional life, the symptoms not being attributed to intellectual disability or general retardation in the developmental process (Colman, 2015).

According to ICD-11 (cf. <https://icd.who.int/en>), ASD is characterized by persistent deficiencies in initiation and social interaction and social communication, through a series of restricted, repetitive, and inflexible patterns of behavior and interests. ASD occurs during the developmental period, in early childhood, and the symptoms may not fully manifest until later, when social requirements exceed limited capabilities. Deficiencies are severe enough and can cause impairment in personal, family, social, educational, professional, or other important areas of functioning and are usually a pervasive feature of the individual and may vary by social, educational, or another context.

2. ASD symptoms

The symptoms of ASD, according to the DSM-V (2016), and diagnostic criteria are:

- persistent deficiencies in communication and social interaction that occur in many contexts: deficiencies in socio-emotional reciprocity, deficiencies in nonverbal behaviors used in social interactions ranging from poorly integrated verbal and nonverbal communication to visual contact and body language abnormalities or deficiencies understanding and using gestures;

- restrictive, repetitive patterns of behavior, interests or activities: motor activities, use of objects and speech all of a stereotypical and repetitive nature, very restrictive and fixed interests that have abnormal intensity;
- onset in early development;
- significant impairment in social, professional or other important areas of operation at present.

Looking back, some parents of children with ASD describe their children when they were babies as good as angels, or remember that they screamed a lot of anything and another category describes them as typical babies without out-of-the-ordinary behaviors (Exhorn, 2005).

Among the early signs of ASD we list the most common (Johnson, 2004):

- the child does not answer the name until the age of 12 months;
- does not point to the object he wants;
- does not play role-playing games (does not pretend to feed dolls);
- avoids eye contact and prefers to be alone;
- does not understand the emotions of others or their own emotions;
- has communication and language delays;
- often repeats words or phrases (echolalia);
- gives answers unrelated to the question;
- is reluctant to change;
- obsesses over objects or activities;
- shakes hands, spins in a circle;
- has unusual reactions to the way it sounds, smells, tastes, looks or feels.

When diagnosing ASD, the following conditions need to be met (A.P.A., 2016):

- the child must have all three components of the deficit in social communication and social interaction,
- present at least two of the components of restricted, repetitive behaviors, interests or activities
- the symptoms observed must be present at the beginning of the developmental period and cause significant impairment in social, professional or other functions,
- the observed deficits cannot be more adequately explained by an intellectual disability or a global developmental delay,
- an additional assessment must be made to determine if the child has ASD with or without an intellectual and / or communication impairment,
- if an associated medical, genetic or environmental factor or another of neurodevelopment, psychiatric or behavioral disorder is identified, this information must be specified.

People with ASD may also have an associated intellectual disability, but social communication would be below the expected level of development. Furthermore, children with social communication deficits who do not meet the TSA criteria would be assessed for a social communication disorder.

3. Social skills in children with ASD

Social skills can be described as a collection of skills needed to interact and communicate, verbally and nonverbally, with others (Dundon, 2019). These are skills that we use every day

when we are surrounded by people, they help us to interact with them, to read their feelings and to adapt our behavior according to the situation.

The cultural context of people with ASD is also important in the analysis of social skills. Some social skills may be considered appropriate in a particular context and the same skills may be sanctioned in other living environments. For the global development of children, it is necessary to adapt the social skills and the way of social interaction to the cultural context of which the person with ASD belongs (Costescu, 2021).

These skills develop from birth and continue to evolve into adulthood. For typical children, learning from the environment is done naturally through interaction with adults, through visual contact with them and through verbalization. As you get older, your interest in communicating and interacting with your colleagues increases. Around the age of five, children become aware that people have their own thoughts, feelings, emotions, and feelings (Dundon, 2019).

The factors that lead to social relationship difficulties are:

- **Poor theory of mind** - In human developmental psychology, the theory of mind refers to the ability to understand nine mental states of others: perceptual states (visual perceptions), volitional and motivational states (desires and intentions), epistemic states, thoughts, and emotions (Emery, 2005; Flavell, 1999). People with ASD have delays or deficiencies in skills associated with the theory of mind, which makes it difficult to socialize.
- **Poor central coherence** - Refers to the ability to understand and process information given in a context in a unitary way. This aspect includes connecting all information from separate sources, relevant in each situation, by creating a whole, an overview (Roşan, 2015). The tendency of people with autism to focus on details, a skill appreciated in certain areas of activity is a hindrance in the development of social relationships.
- **Limited imagination** - Refers to the use of imagination to find solutions to problems, to anticipate situations. Although they have a rich imagination in different areas, sometimes it is missing in social relationships, especially in new situations, in which people with autism have not been placed. Not infrequently, anxiety caused by a new event, such as a vacation, prevents them from imagining themselves in that situation.
- **Limited social experiences** - Social behavior is also influenced by external factors. Families with children with ASD tend to socially isolate themselves for various reasons: the child's sensory difficulties, the child's inability to cope with emotions in new situations and places, his difficult communication (Dundon, 2019). These factors can turn an outing in the family environment into a negative experience due to the incomprehensible behaviors of children, which leads to maladaptation in the social space. Due to negative social experiences, parents avoid going out in public by limiting positive social experiences, situations in which the child can learn.
- **Difficulty of learning intuitively** - There are many unwritten social rules that we expect everyone to know. Typical people learn these rules by observing those around them from a positive or negative experience. In the case of children with autism, learning from the environment is very difficult to achieve, especially at a young age. This results in a long series of negative social experiences until they are ready to learn this skill through controlled opportunities, by adults or through therapy.

Children with autism can learn social skills through tailored behavioral therapy programs, tailored to their needs (Koenig, 2012). A list of social skills is difficult to draw up because of their cultural differences and complexity.

Several explanatory models are used to better understand how social skills develop (Mejia, Kliewer & Williams, 2006):

- The model of ecological systems regards competence as a set of tasks implemented in the family, the group of elders, the community, which are directly influenced by these social networks. The interaction of children with those around them, the environment in which they carry out certain activities influences their social skills.
- The transactional model presents social competence as a product of the child's abilities and social experiences in the family and social media. In the school environment, for example, the child may be accepted by colleagues as a situation that generates increased self-esteem. If the child is excluded from the school group, he will experience negative feelings, maybe even aggression. The interaction between the child's social environment at school and the child's traits can affect the functioning of the family.
- The social learning model refers to learning social norms and rules by imitating adults and the elderly.
- The information processing model defines social skills by the way in which children manage to control their unwanted behaviors and manage to adopt a social behavior approved by those around them.

Social skills in children with ASD do not develop with age (Mendelson, Gates & Lerner, 2016) but specific intervention is needed to improve these skills. In the typical development of children through social interaction certain social skills are trained and through constant imitation and feedback from those around them new skills are acquired. In the case of children diagnosed with autism spectrum disorder, there are deficits in imitation, which also influence the acquisition of social skills, the interaction with others being difficult (Costescu, 2021). Social deficits in children with ASD deepen in the absence of specialized intervention because social requirements increase with age and highlight deficits in this area (Picci & Scherf, 2015).

Important features in the development of social skills in children with ASD are:

- **Perception of faces.** Studies conducted on children with ASD show that they have a low interest in imitating facial expressions (Klin, Jones, Schultz, Volkman & Cohen, 2002), have difficulty identifying and interpreting social cues on the face. Poor interpretation of facial expressions and directing the gaze to certain areas of the face influence social interaction and the understanding of certain signals that the conversation partner can provide during the meeting.
- **Eye contact.** Lack of eye contact in children with ASD can be seen from the first years of life. This makes it difficult to establish attachment relationships, disrupts the process of imitation and interpretation of facial expressions (Joseph, Ehrman, McNally & Kheen, 2008).
- **Imitation** consists of the ability to observe the environment, verbal, and nonverbal communication of others and to integrate them into their own behavior and daily activities. Lack of this ability hinders incidental learning in children with ASD. Imitation plays an important role in the development of social skills, helping to acquire skills such as communication, play, cognitive skills, shared attention (Rogers & Vismara, 2014), a deficit in this area hinders the development of those skills.
- **Shared attention** is a deficit present in children with ASD and can be observed from the eighth month in a child (Hannan, 1987). This ability is acquired through specialized intervention and its lack creates difficulties in social interactions.

- **Social discourse** can be reduced to children with autism spectrum disorder. They are not attracted to the human voice even if the person uses different tones (Čeponienė, Lepistö & Shestakova, 2003).
- **Organized and symbolic game.** In children with ASD, the game is restrictive and repetitive. With limited interests, these children do not take advantage of learning opportunities through play with peers (Manning & Wainwright, 2009).
- **Attachment relationship.** Lack of eye contact, lack of shared attention, reduced ability to interpret facial expressions lead to the establishment of an attachment relationship with parents often atypical (Vivanti & Nuske, 2017).
- The ability of children to create and maintain peer-to-peer friendships is essential to a child's overall development. Depending on the severity of the symptoms of children with ASD, the creation of friendships is from very difficult to friends who are maintained over time (Costescu, 2021).

4. Autonomy in children with autism

A definition that includes the most common elements in the literature on personal autonomy is given by Albu Monica (2007), describing personal autonomy as a personality trait which consists in the individual's capacity for self-determination, in the ability to make decisions about his own life and in his ability to carry out those decisions by initiating, organizing, supervising, and reviewing his own actions without being controlled by external forces or constraints, assessing existing options and taking into account their own interests, needs and values. Furthermore, personal autonomy is the feeling that the person has such an ability to make choices about the direction of his actions, as well as the freedom to carry out these elections.

In early childhood, personal autonomy facilitates cognitive, emotional, social, motor development. The child must learn simple notions such as: taking off his socks, putting his hands in the sleeves of his blouses, putting his feet in his pants, taking off his shoes when the laces are untied. Serving food can be very complicated for a child with autism spectrum disorders, from the use of cutlery, respecting mealtimes to adjusting to different dishes. For a start, the child learns to use the cup, the spoon, the fork with the adult's hand on the child's hand. Subsequently, the tasks will be performed verbally (Cucuruz, 2004).

There is a higher probability that a child with a low level of autonomy will not be able to get involved in various tasks, will not solve problems that they consider difficult, will not accumulate knowledge in the same way as a child with a high level of autonomy or with a well-developed autonomy, who will develop their skills in different school and social fields, if they are involved in different tasks.

Autonomy exercises start with the formation of simple skills related to sphincter control, toilet use, washing, dressing, feeding. Autonomy exercises should aim at: a child's preference for different foods, limited verbal abilities using gestures, visual demonstrations, tendency to stereotypes, routines, which prevents the formation of autonomy skills, training the ability to concentrate, using visual, auditory stimuli, which focus and maintain attention (Mureşan, 2004).

The skills needed to form personal autonomy are often omitted in therapy programs, with children depending on their parents' help. It is important to recover these skills from an early age because most children with ASD will not develop them naturally (Granpeesheh, Tarbox, Najdowski & Kornack, 2014). Parents and therapists usually focus on language recovery, behavior correction, social and academic skills. Learning the skills of personal autonomy has a major impact on improving the quality of life and increasing the child's independence.

Going to the bathroom is one of the most important skills that the individual needs to gain independence in everyday life but also for integration in kindergarten and school (Barbera & Rasmunssen, 2019). To perform this task, the child needs to have certain mastery acquisitions already: to ask for a non-verbal or verbal toilet, to know how to take off his pants and lift them, to walk from room to room and to know the function of the rooms, to be able to wipe or ask for help at this step, to wash their hands.

As the child gets older and reaches school, his or her degree of recovery can be predicted. If it is observed that that child will need support for a long period of time or for a lifetime, the intervention programs focus mainly on the personal autonomy skills needed in daily life (Granpeesheh et al., 2014). It can be easy for a parent to wash their child for 2-3 years, but as the child gets older this will become more and more difficult to do. Then it is desirable that the young person with ASD be taught to wash himself, if it is not possible at least in part. The same thing happens with preparing breakfast or snacks.

Personal autonomy skills are easier to learn if there is effective positive reinforcement. It is easy to lose sight of how important this is when teaching these skills because their natural consequences are usually strong enough for typical children: the consequence of preparing a snack is that it will be eaten after it is ready, the consequence of the fact that the individual dresses himself may be going out to play. Often these natural consequences are not enough for children with ASD (Granpeesheh et al., 2014). Thus, very strong rewards can be very helpful at the beginning of teaching these skills and gradually taken out as the child learns them. It takes a lot of repetition to master these skills and a visual routine most of the time to maintain them permanently. For example, some children with ASD do not notice that they are combed or have dirty clothes and do not even consider the social consequences.

The skills that the child needs to learn must be adapted to the cultural context and the specifics of the family. It is important to know how family members eat at the table, with or without cutlery, whether they use a napkin, whether or not they are vegetarians, whether they eat at the table, on the floor or in bed. Parents will be included in the child's intervention plan because these skills must be maintained and generalized in the natural environment. Either parents are taught to teach their children these skills in turn, or they receive instructions on how to keep them at home after their child has mastered therapy.

5. Communication in children with autism

Communication disorders in children with ASD fall into two broad categories: preverbal communication disorders and actual language disorders (Avramescu, 2002). Disorders of preverbal communication are characterized by the lack of pointing gesture and gestures that draw attention to others on an object, the absence of gestures that can communicate a desire in an appropriate way (Vrabie, 2015). This communicative gestural poverty and the lack of expression of feelings and desires often lead to protest.

Equally obvious in children with autism spectrum disorder is the lack of facial expressions, the smiles that usually appear in a dialogue, and the inability to mimic the facial expressions seen on others. There are cases in which children in the first six months of life have muttered, said a few words but as the disorder has settled these acquisitions have been lost (Verza 1996).

Ecolalia is a feature of language disorders proper, "occurs when speech is repeated, partially or totally, sooner or later, after it has been issued by another person" (Cucuruz, 2004). In some cases, children with ASD do not understand the meaning of the sentence, they repeat the string. There are also situations in which children with ASD may begin to speak by imitating what others say.

Improper use of the possessive personal pronoun is another problem for children with ASD. One explanation would be that these children are confused about their own identity. Another explanation is that the pronoun is relative to the speaker and listener and individuals with ASD learn through association.

Through its receptive component, language is an indicator of the ability to process information, integration, and semantic decoding of meaning, and through its expressive component highlights the ability to select, organize, plan and psychomotor gear (Trifu, Bodea-Hățegan, & Miclea, 2017).

Among the early stimulation interventions based on language and communication in children with autism spectrum disorder we list (Roșan, 2015): augmentative communication, Picture Exchange Communication System, Verbal Behavior Approach, facilitated communication, Social-Pragmatic Development Model, and The SCERTS model - a personalized approach for developing communication skills.

Augmentative communication is “a multisystem of integrated components-verbal, gestural and pictographic” (Roșan, 2015). The child with TSA who has a severe speech disorder needs several augmentative techniques to develop oral-residual communication. If the speech is completely missing, gestural symbols or pictograms are used, the alternative communication being the only way of interaction, through codes. When we talk about augmentative and alternative communication we differentiate between augmentative and alternative communication without help and assisted one. Augmented and alternative communication without assistance includes those modes that do not require the use of external materials, such as language, touch, facial expressions, gestures.

Given the poor communication and the high percentage of people with autism spectrum disorders who remain nonverbal or minimally verbal throughout their lives, the use of augmentative and alternative communication is inevitable. Children with ASD considered verbal or vocal may also benefit from these types of communication. Predominantly visual systems are useful to improve comprehension and to support expression when needed. Communicating basic desires and needs can help reduce the negative behavior of people with ASD. In addition, the ability to communicate has the potential to increase the quality of life for people who use this system. People around the child with ASD who use this system also benefit from its positive effects. They may no longer have to guess the wishes and needs of the person using the device. People with ASD usually agree to communicate with these devices. However, the individual need must be determined. The design and implementation of these systems must support functional independent communication (Porter & Cafiero, 2009). Such independent functional communication should take place in a variety of settings (school, home, grocery store, restaurant) with several different people (caregivers, siblings, family members, teachers, colleagues).

6. Objectives and hypotheses

The main objectives of our study are: (O1) Identifying the correlations between personal autonomy, social skills, and communication in children with autism spectrum disorders, and (O2) Identifying the differences between personal autonomy, social skills, and communication according to the sex of children with autism spectrum disorder.

The hypotheses are:

- H1. It is assumed that there is a correlation between social skills and communication in children with autism spectrum disorder.
- H2. It is assumed that there is a correlation between communication and personal autonomy in children with autism spectrum disorder.

- H3. It is assumed that there is a difference in personal autonomy depending on the sex of children with ASD.
- H4. It is assumed that there is a difference in social skills according to the sex of children with ASD.
- H5. It is assumed that there is a difference in the development of communication according to the sex of children with ASD.
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7. Sample and instruments

The research was performed on a group of 30 children with autism spectrum disorder. The age of the sample members is between 3 and 6 years. In terms of gender distribution, the sample consisted equally of 15 boys and 15 girls. The children come from legally constituted families and are included in various cognitive-behavioral therapy programs.

All the ethical and deontological conditions for carrying out this study have been met, parents have given their consent for the participation in the study. Data was collected in July-December 2021. The testing was performed online, and the questionnaires were completed by the parents.

Three instruments have been used to verify our hypotheses:

- Adaptive Behavior Assessment System II (ABAS II), designed to assess important and individual behaviors that a person exhibits in different places: at home, at school, at work, and in other settings.
- Screening of personal autonomy skills from PEDa (Cognitrom, Cluj-Napoca).
- Screening of social skills from PEDa (Cognitrom, Cluj-Napoca).

8. Findings and results

The data from the questionnaires were processed in the SPSS Statistics 2.0 program. The first step was to determine the type of correlations that would be used. This was done by performing the test of normality of the distribution for the variables present in the hypotheses. We obtained a normal distribution for the variable social skills and an asymmetric distribution for the variables personal autonomy and communication.

H1. *It is assumed that there is a correlation between social skills and communication in children with autism spectrum disorder.* To test the hypothesis, following the analysis of the starting indices for both dimensions, we applied the Spearman correlation, since on the communication scale we obtained an asymmetric distribution of the data. We obtained a .851 correlation, significant at $p=.000$. The hypothesis was confirmed.

H2. *It is assumed that there is a correlation between communication and personal autonomy in children with autism spectrum disorder.* For communication and personal autonomy, we obtained a non-parametric distribution, so we will apply the Spearman correlation index. We obtained a .372 correlation coefficient, significant at $p=.043$. The hypothesis was confirmed.

H3. *It is assumed that there is a difference in personal autonomy depending on the sex of children with ASD.* The distribution of scores for personal autonomy is asymmetric, this leads us to apply the Mann-Whitney test. We obtained a mean rank of 17.37 for boys and 13.63 for girls, but this difference is not statistically significant ($p=0.243$). The hypothesis was rejected.

H4. *It is assumed that there is a difference in social skills according to the sex of children with ASD.* We obtained a mean rank of 12.27 for boys, and of 18.73 for girls, which proved to be significant at $p=.044$. The hypothesis was confirmed.

H5. *It is assumed that there is a difference in the development of communication according to the sex of children with ASD.* We obtained a mean rank of 14.30 for boys and of 16.70 for girls, but the comparison coefficient did not show a statistically significant difference ($p=.454$). This hypothesis was also rejected.

9. Discussion

We obtained a significant correlation between social skills and communication.

Studies conducted by Johnny L. Matson, Julie A. Hess and Sara Mahan in 2013 confirmed the relationship between communication and social skills in children with autism spectrum disorder. Children with better communication skills demonstrated superior social skills.

Social interaction consists of verbal and nonverbal communication (Sigafoos, Schlosser, Green, O'Reilly & Lancioni, 2008). Communication deficit affects the child's ability to interact with others. Social skills involve speech, conversations, social relationships. Problem areas for children with ASD include a lack of social reciprocity, the ability to understand the interlocutor's perspective, a tendency to dwell on certain topics, difficulties in understanding and expressing emotions, difficulties in interpreting non-literary language such as sarcasm. and metaphor.

Interventions based on the principles of applied behaviour analysis have been shown to improve functional communication skills in children with ASD (Lovaas, 1987). Better communication facilitates social interaction, which creates more opportunities for practicing and acquiring new social skills. In the applied behavioural analysis program, in the stage of socialization and integration in the community and in school, the child with ASD goes to school/kindergarten accompanied by a shadow that helps him to integrate and develop his social skills.

Eye contact and shared attention facilitate the acquisition of communication skills and social skills. Verbal communication predicts social functioning.

We obtained a significant correlation between autonomy and communication.

Communication is related to personal autonomy by facilitating the process of expression of the child with ASD when making their own decisions, formulating their own opinions, justifying them and expressing their desire to act alone, without help. The subject who communicates and understands, manages to work better in society.

In the case of daily activities such as dressing, undressing, going to the toilet, serving meals, the child with autism spectrum disorder is desirable to communicate his need to be understood by those around him. Verbal communication is the main socially accepted option, but in case the language is missing, augmentative and alternative communication methods can be used.

Communication facilitates the process of learning the skills of personal autonomy in everyday life, the process being easier if the child with ASD understands the requests and provides verbal feedback to the learner. In the absence of communication, the learning of personal skills is done promptly at the beginning and with the help of the viewing schedule, the help being withdrawn along the way.

Multidimensional construct, personal autonomy aims at the following dimensions cognitive autonomy, functional autonomy, emotional autonomy. autonomy of behavior and autonomy of values. To be able to exercise the skills of personal autonomy, it is necessary that the person with autism spectrum disorder also can communicate.

Personal autonomy skills and communication skills are also necessary for the adaptation of the child with ASD in the school environment, being good predictors for the involvement in the

task, the confrontation with difficult problems, the accumulation of knowledge through discovery.

We obtained no statistically significant difference between boys and girls regarding personal autonomy. But we had a greater mean in the male sample. In some cultures, boys have more opportunities to take the initiative while girls are not encouraged to become independent. These differences also appear depending on the education received in the family. Boys who were supported by their parents to make decisions on their own proved to be more cooperative in kindergarten activities (Warash & Markstrom, 2001).

Girls tend to behave passively unlike acting boys (Kopp & Gillberg, 2011). A study on executive function in people with autism spectrum disorder showed that girls have difficulty controlling the inhibitory rate (inhibition rate) used in the stop task (Lemon, Gargaro, Enticott & Rinehart, 2011). Behavioral consequences of inhibition of response include impulsivity, risk-taking, and jeopardizing general executive function (planning and organization), (Barkley, 1997). In the context of ASD, poor inhibition of the response would further affect social networking skills (appropriate social behavior), especially when arousals are high (anxiety). Under these conditions, all dimensions of personal autonomy are affected, especially behavioral autonomy, by making it difficult to self-regulate behavior, functional autonomy by the impossibility of planning and organizing life, control over one's own existence being endangered.

We obtained a significant difference between boys and girls regarding social skills. The hypothesis is confirmed by the clinical observations of other studies that highlight the fact that girls with ASD have better social and emotional skills than boys with autism spectrum disorder.

Boys with ASD have difficulty establishing and maintaining friendships with peers because of their limited interests, the fact that they direct the conversation only to their favorite topics, and the lack of desire to venture outside their comfort zone. such as going to new places or training in a new game (Carrington, Templeton & Papinczak, 2003). In the absence of common interests, the friendships of boys with autism spectrum disorder do not continue. This type of behavior is also specific to neurotypical boys who are more willing to socialize around an activity of common interest such as a sport or a game, rather than around emotional activities (Baines & Blatchford, 2009).

In contrast, girls with ASD develop adaptive mechanisms and can imitate and memorize positive social behaviors (Wing, 1981). To cope with situations they do not understand, girls with ASD use cognitive skills to respond appropriately to social demands (Attwood, 2007). They manage to better maintain friendships with girls of the same age because they do not limit themselves only to their interests but can imitate and enter the game of those around them.

Girls do better than boys in “masking” deficits in social relationships and with good communication skills and strong social motivation (Dworzynski, Ronald, Bolton & Happe, 2012).

The final hypothesis was rejected, we obtained no significant difference in communication skills. Still, girls had higher scores, confirmed through empirical observations. Girls told certain stories, obviously using more narrative elements than the boys. The detailed linguistic analysis showed that girls tell stories using more details, including more descriptors of planning and intention than boys. Also, girls seem to have a better level of nonverbal communication than boys, they initiate social games and sought and provide attention. One explanation may be that parents have higher expectations of girls in language and focus more on developing communication with girls than boys.

10. Conclusions

Our study provided evidence for the relationship between communication, social skills, and personal autonomy, and we also obtained differences based on gender in social skills.

Our results confirm that:

- deficiency in verbal and non-verbal communication affects the child's ability to interact with others;
- language is important in social skills due to the fact that, in the social environment of which it is part, kindergarten, school, the child has more and more complex demands from the teacher and colleagues and to cope it is necessary that social skills be well developed;
- positive relationships with both peers and adults can develop when the child with ASD has a high level of social skills;
- communication skills are important in initiating and maintaining positive social interactions with others;
- communication skills and personal autonomy are related because the child with ASD can cope more easily if he is able to express the needs of those around him;
- the child who communicates and understands manages to integrate and function better in society. In the context of the fifth COVID-19 wave it is imperative to effectively address the negative impacts far crucial to developing innovative coping mechanisms;
- the personal autonomy of boys with autism spectrum disorder is better than that of girls. These differences appear because parents are more supportive of boys to become autonomous, to make decisions on their own;
- in terms of social skills, girls with autism spectrum disorder are better off than boys with ASD;
- girls with ASD communicate by giving more details, sentences are more elaborate and it is easier for boys with ASD to integrate into society, having better communication skills than boys.

We emphasize, however, that to clearly understand these differences and the mechanisms underlying their production, further studies are useful.

This paper can be a starting point for future research. As study directions we mention:

- establishing correlations between the variables used in this paper and other specific feature specific to children with ASD;
- whether the results of this study are maintained during adolescence and even adulthood in individuals with autism spectrum disorders;
- designing diagnostic tests for differentiated autism spectrum disorder, depending on the sex of the children;
- development of differentiated types of recovery programs for girls with ASD and boys with the same disorder.

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