



Early speech therapy intervention in language development in the Autism Spectrum Disorder: parental perception

Intervenção fonoaudiológica precoce no desenvolvimento da linguagem no Transtorno do Espectro Autista: percepção dos pais

Intervención fonoaudiológica precoz en el desarrollo del lenguaje en el Trastorno del Espectro Autista: percepción de los padres

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Abstract

Introduction: Autism Spectrum Disorder- ASD is manifested by changes in behavior, language and socialization. In light of this symptomatology, one of the featured areas in the intervention of these symptoms is the Speech-Language therapy, since early intervention has been showing improved results for these clinical conditions. **Objective:** to typify the perception of parents in regards to early Speech-Language therapy intervention results in the language development of ASD children. **Method:** semi-structured interview with ten parents of ASD-diagnosed children, who started early Speech-Language therapy intervention, between two and three years of age, and who would receive assistance from the CER II/UNIVALI for the same year of the data collection. **Results:** the majority of parents described development in receptive language aspects, verbal and non-verbal communication, behavior and socialization. A variance in the described developments was observed in most categories. Feedbacks from parents have indicated their acknowledgment for the multi-professional healthcare team. **Conclusion:** Early Speech-Language therapy intervention in ASD individuals presents positive results regarding

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JCB: Study design; methodology; outline of the article; critical review and guidance.

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aspects of receptive language, expressive language, behavior and socialization. The ability of the multi-professional healthcare working team emerged as an important and quite significant finding in the parental statements.

Keywords: Speech, Language and Hearing Sciences; Language; Autistic Disorder.

Resumo

Introdução: O Transtorno do Espectro Autista - TEA se manifesta por alterações de comportamento, socialização e linguagem. Diante desta sintomatologia, uma das áreas que se destaca na intervenção destes quadros é a Fonoaudiologia, sendo que a intervenção precoce vem demonstrando melhores resultados nestes quadros. **Objetivo:** Caracterizar a percepção dos pais quanto aos resultados da intervenção fonoaudiológica precoce no desenvolvimento da linguagem da criança com TEA. **Método:** Entrevista semiestruturada com dez pais de crianças diagnosticadas com TEA, que iniciaram a intervenção fonoaudiológica precocemente, entre dois e três anos de idade, e que no ano da coleta de dados receberiam atendimento no Centro Especializado em Reabilitação Física e Intelectual localizado na UNIVALI. **Resultados:** A maioria dos pais relataram desenvolvimento nos aspectos de linguagem receptiva, comunicação verbal e não verbal, comportamento e socialização. Na maioria das categorias observou-se uma variabilidade nas evoluções descritas. Verificou-se o reconhecimento da equipe multidisciplinar nos relatos dos pais. **Conclusão:** A intervenção fonoaudiológica precoce nos indivíduos com TEA apresenta resultados positivos no que se refere aos aspectos de linguagem receptiva, linguagem expressiva, comportamento e socialização. A atuação da equipe multidisciplinar apareceu como um achado importante e bastante significativo nas falas dos pais.

Palavras-chave: Fonoaudiologia; Linguagem; Transtorno Autístico.

Resumen

Introducción: El trastorno del espectro autista -TEA se manifiesta a través de alteraciones del comportamiento, de la sociabilización y del lenguaje. Frente a esta sintomatología, una de las áreas que se destaca en la intervención de estos cuadros es la Fonoaudiología, ya que la intervención precoz ha venido demostrando mejores resultados en estos cuadros. **Objetivo:** Caracterizar la percepción de los padres en cuanto a los resultados de la intervención fonoaudiológica precoz en el desarrollo del lenguaje del niño con TEA. **Método:** Entrevista semiestruturada con diez padres de niños diagnosticados con TEA que iniciaron la intervención fonoaudiológica precozmente, entre los dos y los tres años de edad, y que el año de la recolección de datos recibieron atención en el CER II-UNIVALI. **Resultados:** La mayoría de los padres declaró notar un desarrollo en los aspectos de lenguaje receptivo, comunicación verbal y no verbal, comportamiento y sociabilización. En la mayoría de las categorías se observó una variabilidad en las evoluciones descritas. Se verificó el reconocimiento del equipo multidisciplinario en los informes de los padres. **Conclusión:** La intervención fonoaudiológica precoz en los individuos con TEA presenta resultados positivos en los aspectos de lenguaje receptivo, lenguaje expresivo, comportamiento y sociabilización. La actuación del equipo multidisciplinario apareció en las conversaciones de los padres como un hallazgo importante y muy significativo.

Palabras clave: Fonoaudiología; Lenguaje; Trastorno Autístico.

Introduction

Autism is characterized by changes in the areas of socialization, symbolization and language¹, being present since birth and manifesting before the age of three².

Currently, this disorder is called Autistic Spectrum Disorder-ASD, according to the criteria established by the Diagnostic and Statistical Manual of Mental Disorders - DSM-5³. However, it is noteworthy that, despite this change, the literature still uses the nomenclature autism to refer to the disorder.

This change occurred because of a scientific view that Global Developmental Disorders, which included Autism, Childhood Disintegrative Disorder and Asperger's and Rett Syndromes have the same condition with gradations in two classes of symptoms: (1) deficit in communication and social interaction; (2) pattern of restricted and repetitive behaviors, interests and activities. The American Psychiatric Association-APA, the association responsible for the publication of the DSM, understands that there are no diagnostic or therapeutic advantages in the division of these disorders and highlights that the possible difficulties in subclassifying these groups could hinder an appropriate diagnosis⁴.

In recent years there has been a dramatic increase in cases of ASD, without a clear explanation for this phenomenon. A survey conducted by the Centers For Disease Control and Prevention points out the prevalence of 1 case of ASD for every 59 children in the age group of eight years old⁵. Given this reality, there is a need for studies on effective treatments for this clientele.

Early diagnosis is essential to establish a good prognosis, since the later the intervention in the ASD, the more the symptoms will be consolidated⁶. This is related to the fact that brain plasticity, which refers to the ease and ability to learn new skills, decreases with increasing age. In this way, early intervention makes it possible to increase positive results in the long run⁷.

The results of a research show that the impairments in the areas of language and social behaviors are the most previously observed by family members of children with ASD⁸.

Language acquisition delays are often reported by parents, and the usual patterns of language acquisition, such as babbling and playing with

sounds, may be absent or rare. When they are older, these children tend to guide their parents' hand to obtain a desired object, without making eye contact².

The communication of these subjects has several peculiarities and does not follow the development observed in typical children⁹. Although there is no typical pattern of development in autistic children, existing studies reaffirm the presence of verbal and non-verbal language disorders and their associations with cognitive and social disabilities¹⁰.

In individuals within the spectrum who develop oral communication, it is often possible to observe the presence of an immediate echolalia - to repeat what they are told, or of a late echolalia - to repeat what they hear in the environment^{2,11}. The change in the functional use of communication is commonly observed¹⁰, presenting a slow speech, with inadequacies in the understanding of idiomatic expressions and metaphors¹².

In addition, it is observed that the use of pronouns, verbs, adjectives and conjunctions is generally flawed, often using the third person to refer to oneself¹³. The use of gestural means in communication is another aspect regularly observed in cases of ASD⁹.

In view of this symptomatology, one of the areas that stands out in the intervention in these cases is Speech Therapy, since language is paramount in social relations, playing a relevant role in the treatment of the communicative and social aspects of these individuals and in working with the family¹⁴. Therefore, the presence of a speech therapist in the teams that care for individuals with ASD becomes relevant in promoting a more global and effective communication¹¹.

One study found that children with ASD who underwent direct speech therapy - characterized by targeted child care, or indirect - characterized by guidance to family and school, showed an evolutionary pattern in the first 6 months of intervention, with an increasing improvement over 12 months¹⁵. In another study, it was observed that three children with ASD who underwent speech therapy intervention showed important progress, becoming involved in activities of shared attention, symbolic play and dialogues, using discourse resources appropriately and using non-verbal communication as support¹⁶.

Based on these statements, this study aimed to characterize the parents' perception of the results of

early speech therapy intervention in the language development of children with ASD. The answers of these parents can clarify how the results of speech therapy are perceived by the family and how we can develop actions that enable this perception. In addition, knowing these results promotes reflection on the speech therapy practice and its effectiveness. This reflection may promote necessary changes or improvements in this process, with the objective of guaranteeing the resolution of the speech therapy intervention in subjects with ASD.

Methods

This research was approved by the Research Ethics Committee of the University of Vale de Itajaí, under registration No. 2,585,989. The study is a cross-sectional qualitative study and was carried out at the Specialized Center for Physical and Intellectual Rehabilitation located at UNIVALI (CER II/UNIVALI).

CER II/UNIVALI aims to provide an appropriate multidisciplinary treatment for individuals who have physical and intellectual disabilities, giving priority to cases of ASD in children up to 12 years old¹⁷.

The objective of the research was to characterize the parents' perception regarding the results of the early speech therapy intervention in the development of the language of children with ASD.

For data collection, a sample survey was initially carried out, as well as the days and times for the interviews.

The study sample consisted of parents of children with ASD who started speech therapy early (between two and three years old) and who were followed up at CER II/UNIVALI in the first semester of 2018. Parents who did not fit these criteria and did not sign the Informed Consent Form (ICF) were excluded. The choice of age was made through a survey of patients who are treated at CER II/UNIVALI and by the authors, who consider this age group, between two and three years, as being early, considering the reality of the beginning of the diagnosis.

Thus, the sample was characterized by the interview of ten guardians of children diagnosed with ASD and aged between two years and six months old and three years and nine months old. This was the total number of subjects that fit the criteria established and referred to above. It is noteworthy

that among the interviewees, nine were mothers and one father.

This group underwent an evaluation with the multidisciplinary team to close the diagnosis of ASD and, after this stage, they were receiving care by the same professionals at CER II/UNIVALI for a period ranging from six months to eleven months. The intervention started when these children were between two and three years old.

Regarding the diagnosis, it was carried out by the multidisciplinary team and was characterized by the application of tracking scales, protocols of specific areas, and the relationship of the findings with what is determined by the DSM - 5 to define the level of the disorder.

Regarding the characteristics and systematicity of the intervention, all children received individual care not only by a speech therapist, but also by a psychologist and a nutritionist. Each appointment lasted about 50 minutes and took place on a weekly basis. In addition, one of the children in this group received individual occupational therapy care. After six months of intervention, in addition to individual assistance, two children began to attend appointments in pairs (two professionals in the same session) with the Psychologist and the Occupational Therapist. Another child from the group started to attend appointments in pairs with the Speech Therapist and the Psychologist, and two other children started to receive group care (appointments with more than one child diagnosed within the spectrum) by the Psychologist, the Occupational Therapist and the Speech Therapist.

The health actions of the CER II/UNIVALI team consider the use of the therapeutic project as a work tool, taking into account the individual and collective needs of the subject and his family.

The Speech Therapist professional's main objective is to stimulate language. The Psychologist focuses on the evolution of issues related to behavior. The Nutritionist aims to improve eating conditions. The Occupational Therapist, in turn, promotes the adequacy of the activities of daily living and the independence of the subject in intervention. However, it is noteworthy that all team professionals have the same main objective previously established in the evaluation process.

The work at CER II/UNIVALI is based on the tripod therapy, family and school. For this reason, all parents are advised to enroll their children in the UNIVALI daycare center. Of this research group,

only one child was not enrolled in the daycare center.

Regarding the level of ASD, three children in the group were diagnosed with ASD level I, six children with ASD level II and one child with ASD level III.

After the project was approved, the parents learned about the research, were invited to participate in the study and signed the consent form. These parents answered a semi-structured interview composed of questions about the role of early speech therapy in the language development of children with ASD in the parents' view.

The interviews were conducted in one of the rooms at CER II/UNIVALI and at the speech therapy clinic at UNIVALI and lasted about 20 minutes. These were recorded on a digital recorder and later transcribed for data analysis. The analysis of the results found was carried out according to topical coding, which seeks to identify a section of the text with the most salient categories or themes, which normally concern specific questions or central themes of the research project, seeking to list topics using the most discussed passages in the interviews¹⁸.

Results

From reading the interview transcripts, categories were identified based on the most significant statements. These findings will also be presented in a chart containing the results in a more simplified way. (Chart I).

1.1 Category: Positive results in relation to early speech therapy intervention.

- *Subject 1:* Yes ... yes, **he certainly developed ... he has already established a communication**, a language already, there is a great advance there ...
- *Subject 3:* Regarding verbal language, he still doesn't speak, but he's creating a second language ... **he takes my hand and takes me to the fridge ... shows me things when he wants to.**
- *Subject 4:* He didn't speak a word, not one, and **now he's ...** he doesn't form a sentence, but **he says a lot**, you know, he didn't say anything, not a word, he didn't speak and now he speaks a few words, you know?
- *Subject 5:* **He has already started to point to what he wants**, especially with gestures ... **so it's improving, for me it's improving a lot.**

Chart I. Parents' perception of the results of early speech therapy intervention in the language development of children with ASD.

Effects of speech therapy on communication	<p>Positive results (10 reports):</p> <ul style="list-style-type: none"> • Establishment of non-verbal and verbal communication; • Expansion of vocabulary; • Improved social interaction
Effects of speech therapy on receptive language	<p>Positive results (9 reports):</p> <ul style="list-style-type: none"> • Improved understanding of simple orders.
	<p>Negative results (1 report):</p> <ul style="list-style-type: none"> • Absence of evolution in receptive language.
Effects of speech therapy on expressive language	<p>Positive results (10 reports):</p> <ul style="list-style-type: none"> • Development of verbal communication; • Development of non-verbal communication.
Effects of speech therapy on behavior	<p>Positive results (6 reports):</p> <ul style="list-style-type: none"> • Development of more appropriate behavior; • Reduction in the frequency of stereotypes.
	<p>Negative results (4 reports):</p> <ul style="list-style-type: none"> • Absence of evolution in behavior.
Effects of speech therapy on social interaction	<p>Positive results (8 reports):</p> <ul style="list-style-type: none"> • Development in social interaction.
	<p>Negative results (2 reports):</p> <ul style="list-style-type: none"> • Absence of development in social interaction.

- *Subject 9:* Yes! **He expanded vocabulary and interaction.** Before he had poor vocabulary, but he had some vocabulary and he didn't use it to interact with others.

2.1 Category: Development of receptive language.

- *Subject 2:* **he already has an understanding** ... before he didn't have it, before it was very, very limited ... his very intention of wanting to interact, to want to play with something, to pull me, to take me by the hand to sit, to play with him, **this for me is already an association of understanding.**
- *Subject 3:* Usually when it is **"no" he understands**, he understands very well when I'm saying that he is not supposed to do something ... but in relation to "let's take a bath", he doesn't know, he doesn't associate...
- *Subject 4:* Before, he didn't understand anything, I said something to him and he didn't understand, **now he understands**, but let's say it's about 30%, you know? Of a total, about 30% he understands, **he understands more direct things**, you know, like, words like **"please", "stop", "enough"**, you know?

2.2 Absence of evolution in receptive language.

- *Subject 5:* **No**, only if I show the clothes for him to see and say "take the clothes", in this case it would be in my hand and even then **he does not obey my signals.**

3.1 Category: Development in verbal communication.

- *Subject 1:* Yes ... both facially and in words too, he is already associating for each thing.
- *Subject 4:* Yes ... **when he wants cornflakes he says "lion, lion"** and when he is hungry, like, as I always say, "let's eat, let's eat, let's eat" (laughs), then **when he is hungry he says "let's eat"** ... before he didn't even do that.
- *Subject 6:* So, **some sounds, some words he is already making to communicate.**

3.2 Category: Development in non-verbal communication

- *Subject 3:* He had no movement, when he started to come here he started to **create an alternative language**, where he did not start speaking, but

he shows me in **some gestures, some signs** for what I needed to understand, what he wanted in that moment.

- *Subject 5:* He ... doesn't point yet, but he shows me with screams ... and **making gestures to that place**, I always try to leave things in the same place, but where he can't reach for him to ask, then **he starts screaming, looking and showing me with gestures what he wants...**
- *Subject 7:* When she wants something, like a lot, **she points or cries**, something like that to show what she wants. Before she didn't do that, she just cried and you had to be guessing what she wanted...

4.1 Category: Development in social behavior.

- *Subject 1:* **Calmer. After he developed a communication, he became much calmer, less irritated** ... he screamed all the time, he was certainly nervous, because nobody understood him...
- *Subject 2:* He is very energetic like that, this issue has yet to be worked out, it is the reality, **but he has improved a little**, before it was worse.
- *Subject 5:* ... He seems **more communicative, looking more, calmer, paying more attention...**

4.2 Category: Reduction in the frequency of stereotypies.

- *Subject 5:* Yes, he had a lot of stereotypies, **nowadays he does it very rarely.**
- *Subject 9:* Stereotypies **have decreased considerably by the orders.**

4.3 Category: Absence of evolution in behavior.

- *Subject 4:* I don't believe it's the fault of the speech therapy plan, it's not that, but **I never thought it could get worse** ... since he was two years old and he hasn't stopped, only now he creates other behaviors ... he screams and rattles, so if you go to him, he screams and screams.
- *Subject 8:* **No** ... it's still the same ... he's very agitated, he's hyperactive, right!

4.4 Category: Recognition of the performance of the multidisciplinary team.

- *Subject 6:* Together with the speech therapist, he goes to the psychologist and the occupational therapist, so ... it's everything ... it's a group

of people ... it's a sum, **everyone together has made him better.**

- *Subject 5:* ... I don't know if it was only the speech therapist, but the other professionals too. I believe it was the whole, right? **It was a little from each...to get to where he is today.**

5.1 Category: Absence of development in social interaction.

- *Subject 6:* **No...**it's one of his biggest difficulties, his relationship with other people.
- *Subject 8:* **No, it's the same...**he is well away from everyone.

5.2 Category: Development in social interaction.

- *Subject 1:* This year **he started to play a little**, it is not total socialization, but **he already accepts the presence**, he is not so isolated, **he mixes up with others.**
- *Subject 5:* Yes...every Sunday my family gathers at my mother's house, and one thing I couldn't do was leave P. with his cousins...and there was a time when I was isolated, I never left the house to go anywhere and now **I am able to go out, go to my family's house, friends, I can go to birthday parties already, which I couldn't do before. He's not a boy who interacts, right? But he already manages to stay in a place without freaking out**, let's say, he is more relaxed...I would even say that he was afraid of people, I didn't know if it was the noise, if it was the social interaction, what it was exactly. So, **today I can go without disturbance, he comes in, even plays, if he sees a child running around he even gets close**, before he didn't, before he couldn't do that...he's not friendly, he really is not, but **he doesn't run away as before...**it's a very good change, because he used to run away as if he were running away from an animal, but not now.
- *Subject 7:* Yes... because before she was not very close to people... before she preferred to play alone... **then after she started coming here, she began to interact more with the children.**

5.3 Category: Recognition of the performance of the multidisciplinary team in the development of socialization.

- *Subject 1:* **I don't know if it was because of the speech therapist, if it was influenced by OT, or others, or because he changed schools**, but he is starting to play a little.
- *Subject 4:* It is like this... I believe that all the good things that happened were not only due to the speech therapy, **it was a set of things, you know, it was the therapist, it was everything, it was everyone**, it was not just one single thing that helped him.

5.4 Category: Evolution in socialization since the child's insertion in school.

- *Subject 3:* The moment I was asked to put him in a kindergarten at the beginning of the year, **then he had an improvement ...**

Discussion

In relation to the contributions of early speech therapy intervention in language development, it is observed that all parents who participated in this research were able to perceive positive effects. They reported development in the aspects of verbal and non-verbal communication, understanding, behavior and interaction.

This finding is in line with the literature that highlights in several studies the effectiveness of speech therapy intervention in ASD^{1,9,10,15,16,19-21}. The speech therapy intervention promotes improvements in the development of functional communication through oral language and forms of symbolism, in addition to stimulating spontaneous and communicative eye contact, as well as improving the ability of joint attention with adults and other children¹⁹. The most significant objective to be achieved in speech therapy intervention is the establishment of functional communication, helping children with ASD to communicate effectively²⁰.

In ASD we have a wide variation in the expression of symptoms², which means that we have different evolutions depending on the condition and the needs of individuals. Within the autism spectrum, there are subjects who do not develop speech at all, and others who develop oral communication, but have echolalia, difficulty in using pronouns, verbs, adjectives and conjunctions, in

addition to changes in the functional use of communication^{2,9-13}, all of which are determining factors in the prognosis of the condition's evolution.

It is noteworthy that the children in this research were undergoing speech therapy for a period ranging from six months to eleven months, and that all parents involved were able to observe some kind of evolution in their children. The literature shows that after six months of speech therapy intervention it is already possible to identify an evolutionary pattern in children with ASD and that, over twelve months, this pattern becomes even more evident¹⁵.

Regarding the questions about the development of receptive language, the statements of parents were grouped into two categories: development of receptive language and absence of development in receptive language.

It was possible to observe in the transcripts that most of the parents reported that the speech therapy intervention helped in the development of their children's receptive language. In this sense, it was also possible to verify variability in the described evolution charts. It is notable that, in the vast majority, children started to understand basic concepts, such as "stop", "kiss", "sit" and some simple orders such as "put the toy away", "let's take a shower", "turn on the lights". However, in one of the reports, it is observed that the child had a lower evolution and started to understand only the word "no".

Data about this subject is found in an analysis present in the literature, where it is observed that a child with ASD undergoing speech therapy has improved receptive language, starting to understand situational orders with up to three actions, and demonstrated to understand what was requested, providing responses through gestures and some vocalizations²¹.

The development in receptive language is directly related to the evolution in verbal and non-verbal language, as there is an intrinsic relationship between reception and expression. The understanding of a certain concept is necessary so that it can be used in communication. It is observed that parents who mentioned development in receptive language also mentioned development in expressive language later.

One of the interviewed parents was unable to observe improvements in understanding, reporting that the child does not respond to requests. There are some topics that may justify this non-identifi-

cation of an evolutionary pattern, which include the time of intervention, the family's participation in the therapeutic process, the level of severity of the condition and the presence of associated factors.

The DSM-5 classifies ASD into three levels of severity. At level I we have individuals who have mild difficulties in communication and social interaction, thus needing little support; at level II we have individuals who need substantial support, as they have serious deficits in communication, social interaction and behavior; at level III we have individuals who demand greater support, due to the fact that their deficits cause severe social limitations³.

In this research, we obtained a group with children classified in the three levels, being three children with ASD level I, six children with ASD level II, and only one child with ASD level III.

Another factor that may be associated with the difficulty of evolution is the possible presence of comorbidities. According to DSM-5, ASD is often associated with intellectual impairment, structural language disorder and psychiatric symptoms, reporting that 70% may have a comorbid mental disorder, and 40% may have two or more comorbid mental disorders³.

Regarding development in expressive language, the participants mentioned improvements in verbal and non-verbal communication.

It was found that six of the ten research participants were able to observe development of verbal communication in their children. According to the contents of the excerpts, it is observed that these parents reported that their children started to use words to express themselves and to request certain objects or actions. This means that most of these parents reported an important gain in terms of language development, which is the achievement of the possibility of using verbal means to communicate.

As previously mentioned, speech-language intervention assists in the development of communication, and studies have been showing that children with ASD undergoing speech-language intervention present positive results with regard specifically to the development of verbal communication^{16,19-21}.

A study carried out on language therapy in three children diagnosed with ASD shows that all have made important progress, and these children have started to use the verbal medium more frequently, to be involved in shared games,

dialogues and interpersonal exchanges. In addition, some started to initiate communicative turns and presented a development of syntactic and discursive skills¹⁶. In another analysis described in the literature, it was found that a child began to present verbal responses, producing some isolated syllables to refer to some objects or actions and naming some animals through onomatopoeia²¹.

There are also reports of developments in non-verbal communication. The literature has shown that 20 to 30% of individuals with autism never develop speech, and this percentage is considerably lower than it was a few years ago, mainly due to early intervention².

It was possible to observe in the parents' reports that the children started to use non-verbal communication, making use of gestures, crying, screaming and looking in order to communicate with their parents. This finding is in line with a study that demonstrates the gestures produced by children with ASD have communicative intent in some situations²². Children with communicative intent cry, vocalize, point out recognizing others as someone with whom they can communicate and have the intention of addressing them²³.

The literature shows a predominance of non-verbal communication compared to verbal communication in children with ASD²². However, in this study it was possible to verify that, of the ten parents interviewed, only three reported that their children started to use the non-verbal medium more frequently than the verbal medium, and six parents reported that the children started to use the verbal medium more frequently, associated with gestures and expressions in certain situations.

It is extremely important to value the language of the child with ASD, both in verbal and non-verbal communication, without placing speech itself as a priority. Any form of communication presented by people with ASD must be interpreted as a rich expression resource for these subjects.

It is noteworthy that the use of gestures favors the development of language, as they serve several functions, among which are communication, compensation and transition to verbal language.

Regarding the development of behavior, the statements of the parents were divided into: development of social behavior, reduction in the frequency of stereotypies, absence of development in inappropriate behavior, and performance of the multidisciplinary team.

ASD is a pathology with behavioral disorders, defined by restricted and repetitive patterns of behavior, which are manifested by a range of symptoms according to the age and ability of each individual³.

Some parents report changes in their children's behavior after the intervention. Changes in social behavior were present in five of the analyzed reports, most of which were exemplified with the phrase "it is calmer", demonstrating a reduction in agitation and stress crises. Two of these parents made a direct relationship between the change in their children's behavior and the evolution of language, associating the fact that the child is more communicative with the decrease in agitation. This statement is significant, as it is known that behavior permeates all the development and directly influences the acquisition of language skills²¹.

Changes in behavior after a period of speech therapy intervention were also reported in a study on ASD, where it was observed that the child showed a decrease in tantrum behavior in unwanted situations, reduced stereotypies, improvements in establishing eye contact and longer attention on objects²¹.

Stereotyped movements are commonly observed in children with ASD, such as walking on tiptoes, snapping fingers, swinging the body, among others. These movements are performed as a way of self-regulation and can be exacerbated in situations of extreme stress².

Some of the parents who were interviewed characterized motor stereotypy as a behavior, and reported a decrease in frequency after the start of the intervention, as well as less systematic stereotyped movements.

As previously mentioned, speech therapy intervention indirectly assists in changes in behavior in cases of ASD²¹. If we consider stereotypy as a behavior, the finding of our study is justified.

This result may be directly related to the participation of other team professionals, such as the Psychologist, who works directly with the behavioral issues presented by these individuals²⁵.

Less than half of the parents reported the absence of significant improvements in the aspect of behavior. This lack of development can be justified by factors previously discussed, such as family participation, the therapeutic relationship, the method of care, the variability of symptoms and the possibility of associated comorbidities^{1,3}.



However, the patients' level of ASD and the presence of associated factors were not exclusion factors in this study.

Although it was not the objective of this research, the recognition of the performance of the multidisciplinary team that treated the children was mentioned by the parents in the interviews. This theme appeared spontaneously in their responses when asked about behavior and socialization. They attributed the evolutions observed in their children to the treatment carried out by the group of professionals who make up the team. This data raises the doubt whether the effectiveness of the treatment and the positive effects described here are not directly related to this type of intervention, characterized by the presence of professionals from different areas, raising the need for further research on the treatment methodology for ASD.

Since this disorder presents a variability of symptoms within the aspects of behavior and language, the importance of a multidisciplinary team in the assessment and treatment of the difficulties present within the spectrum is undeniable. The literature recommends that the treatment in cases of ASD be carried out by a multidisciplinary team so that better results can be obtained²⁶.

Regarding the socialization aspect, the parents reported positive evolution or absence of evolution, school participation and again highlighted the recognition of the multidisciplinary team.

Absence of evolution in social interaction is observed in the statements by the parents. One of the biggest and most significant characteristics of TEA is the difficulty of socializing. Interaction difficulty is a symptom that has been described in the literature since the discovery of the disorder¹³. Difficulty in the social approach, difficulty in having a conversation, reduced sharing of interests and emotions and absence of interest in peers are striking characteristics.

It is believed that the developments described in the previous categories, related to the aspects of language and behavior, are directly linked to the development in socialization. It is interesting to note that children who achieved improvements in socialization also showed development in expressive language, and many of them showed an evolution in receptive language and behavior.

The literature demonstrates that interaction is paramount in the construction of language, since it is in interaction that dialogic practices occur¹³.

This same study demonstrated that from the moment that interactions between the subject and the therapist were established, the attitude of the child with ASD in intervention changed in relation to the interlocutor and his/her own language¹³.

Although it is known that the children were subjected to teamwork, it is important to note that several studies argue that social interaction permeates the ability to communicate, to establish verbal exchanges or not. Therefore, the objective of speech therapy within the multidisciplinary team becomes essential to provide a basis for behavioral and consequently social evolution.

Conclusion

Based on the analysis of the statements of the parents, it is possible to conclude that the early speech therapy intervention in individuals with ASD presents positive results in the aspects of receptive language, expressive language, behavior and socialization.

Regarding the receptive and expressive language, most of the parents reported that the speech therapy intervention helped in the development of these aspects, observing variability in these evolutions. The concomitant evolution of verbal and non-verbal communication in some reports stands out.

With regard to aspects of behavior and socialization, most statements demonstrated that speech therapy intervention may have helped in the development of the adequacy of social behavior and in reducing the frequency of stereotypies.

It is pointed out that some parents had difficulties in identifying what the speech therapist's work really was, which can be explained by these patients being part of a multidisciplinary team. This fact raises some questions: Would there be a difference in the results if these patients had seen only a speech therapist? Does the severity of the condition influence the differential performance of professionals?

Therefore, the findings demonstrate the need for further research that points to the influence of different realities in the intervention of the individual with ASD. Although the importance of early speech therapy intervention has become evident, studies are needed to demonstrate the effects of the intervention with only one professional and with a team, the effects of individual and group therapy, the systematicity of care, the importance of includ-

ing children with ASD in the educational system and the influence of the subjects' level of ASD in care. Thus, these studies would identify factors that can assist in the construction of increasingly effective treatments for this clientele.

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