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# Self-perception of children with autism spectrum disorder and speech-language pathologists' perception of their reading and writing skills

## Autopercepção de crianças com distúrbio do espectro do autismo e a percepção de fonoaudiólogos sobre suas habilidades de leitura e escrita

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### ABSTRACT

**Purpose:** this study aimed to investigate the self-perception of children with autism spectrum disorder regarding their reading and writing skills and to compare these with the perceptions of their therapists. **Methods:** Ten children with a diagnosis of autism spectrum disorder and their respective therapists participated in this study. An individual questionnaire with eight multiple-choice questions was applied orally to both groups. **Results:** The answers presented by the two groups diverged in some questions. Some therapists reported that working on self-perception is a part of the therapeutic planning. **Conclusion:** The results suggest that children with autism spectrum disorder do not always have a realistic self-perception about their reading and writing skills. Researching children's self-perception can be important to enable parents and professionals to help these students to engage in their difficulties.

**Keywords:** Autistic disorder; Language development disorders; Child psychiatry; School health services; Asperger Syndrome

### RESUMO

**Objetivo:** o presente estudo buscou investigar a autopercepção de crianças com distúrbio do espectro do autismo, no que se refere às suas habilidades de leitura e escrita, e comparar com a percepção de seus terapeutas. **Métodos:** participaram desta pesquisa dez crianças com diagnóstico de distúrbio do espectro do autismo e seus respectivos terapeutas. Foi aplicado, oralmente, um questionário individual para ambos os grupos, composto por oito perguntas de múltipla escolha. **Resultados:** as respostas apresentadas pelos dois grupos foram divergentes em algumas questões. Alguns terapeutas registraram que o trabalho da autopercepção faz parte do planejamento terapêutico de seus pacientes. **Conclusão:** nem sempre as crianças com distúrbio do espectro do autismo possuem autopercepção realista sobre suas habilidades de leitura e escrita. A pesquisa da autopercepção das crianças pode ser importante para que pais e profissionais possam auxiliar os escolares a se engajarem e trabalharem suas dificuldades.

**Palavras-chave:** Transtorno autístico; Transtornos do desenvolvimento da linguagem; Psiquiatria infantil; Serviços de saúde escolar; Síndrome de Asperger

Study conducted at the Departamento de Fonoaudiologia, Faculdade de Medicina da Universidade de São Paulo – FMUSP – São Paulo (SP), Brasil.

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**Conflict of interests:** No.

**Authors' contributions:** ACMC participated in the study design, data collection, analysis and interpretation, in addition to writing the paper; FDMF participated in the study conception, data interpretation and writing of the paper.

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## INTRODUCTION

Self-perception is formed by individual experience and interpretations of the environment in which one lives. This concept is multidimensional and multifaceted, having physical, emotional and social components<sup>(1)</sup>.

Pereira & Carvalho<sup>(2)</sup> described that this self-assessment process influences the learning process, since developing a perception of one's own performance brings us closer to the successful accomplishment of new tasks. For the authors, children's perception would be an important predictor of their motivation, behavior and performance.

Westerveld et al.<sup>(3)</sup> argued that learning to read is just another challenge for children with autism, as their study found that approximately 30% to 60% of these children have difficulties with literacy skills.

Jones et al.<sup>(4)</sup> described that cognitive heterogeneity in children with autism spectrum disorder (ASD) is an aspect that hinders characterization of the academic abilities of this population and reported that these children usually are not congruent in their general intellectual functioning.

In addition, studies have suggested that the factors that contribute to learning disabilities the most are difficulties in maintaining interpersonal relationships and social cognitive disabilities<sup>(5,6)</sup>.

Eccles et al.<sup>(7)</sup> reported in their research that students do not have good notions about their own reading skills. Rezende et al.<sup>(8)</sup> indicated that children's self-perception of their academic skills becomes more critical as they get older and become more aware of their academic successes and failures.

The literature points to the importance of having children as informers of their own feelings and perceptions, since only they have the ability to define their notions about themselves. Despite this, Johnson et al.<sup>(9)</sup> questioned the reliability of data obtained by means self-reports when information is provided by individuals with disorders that affect their psychological and cognitive functioning. Thus, the authors suggest comparing these answers with their respective guardians or therapists'.

Autism Spectrum Disorder (ASD) is a complex genetic development disorder characterized by deficiencies in communication and social relationships, restrictions on imaginative thinking and behavioral flexibility, and deficits in adaptive skills. The literature suggests that autistic children have specific difficulties in the cognitive mechanism necessary to represent mental states<sup>(10)</sup>.

Learning reading and writing skills represents a challenge not only for individuals with autism themselves, but also for their teachers and speech therapists, as it requires these professionals to approach teaching methodologies from a different perspective. Research studies with students with ASD often find that children with better language performance and better Theory of Mind and Central Coherence abilities are more often equated with their typical peers in reading and writing tasks<sup>(5,6)</sup>.

It is believed that knowledge on the self-perception of children with ASD may help implement new strategies and specific clinical procedures in this area aimed at this population<sup>(9)</sup>. Thus, the present study sought to investigate the self-perception of children with autism spectrum disorder regarding their reading

and writing skills and to compare this with their therapists' perception.

## METHODS

This study and its Informed Consent Form (ICF) were approved by the Research Ethics Committee of the School of Medicine of Universidade de São Paulo - FMUSP (n° 2.178.674).

Ten children diagnosed with autism spectrum disorder (nine boys and one girl) attended weekly sessions with their respective therapists at the FMUSP Speech Therapy Investigation Laboratory. The children included in the study were between 6 and 12 years old and were enrolled in regular public and private elementary schools of the metropolitan region of São Paulo.

The therapists had been in charge of these children's speech therapy for at least six months and had prior knowledge about the schooling data and academic performance, which had been informed by their parents and guardians.

All participants and their guardians signed the Informed Consent Form.

To collect information on children's self-perception of their reading and writing skills, an individual questionnaire was applied orally. It consisted of eight multiple-choice questions developed by the researchers, which investigate the self-perception of children diagnosed with ASD (Group 1) regarding their reading and writing skills. The speech therapists (Group 2) were instructed to answer the same questionnaire, informing their perceptions about their patients' abilities.

## Inclusion and exclusion criteria

Inclusion criteria for participants in Group 1 (G1) were:

- Diagnosis of ASD
- No diagnosis or complaint of sensorineural losses
- Being on speech therapy at the Speech Therapy Research Laboratory for Autism Spectrum Disorders of FMUSP
- Being enrolled in elementary school

The inclusion criteria for participants of Group 2 (G2 - speech therapists) were:

- Practice speech therapy at the Speech Therapy Research Laboratory for Autism Spectrum Disorders of FMUSP
- Having been seeing the child for at least six months

## RESULTS

### Question Number 1: Do you already know how to read and write?

The results indicated that although 100% of the children answered that they already knew how to read and write, therapists replied that only 70% of them actually did. That is, there was a 30% disagreement between group responses, as therapists replied that three of the children could not read, although the children had answered yes.

Question Number 2: Who helped/helps you to learn how to read and write?

When asked who taught/teaches children to read and write, the categories most marked by both groups were “parents” (G1 - 50%; G2 - 70%) and “teachers” (G1 - 100%; G2 - 30%). Only one individual from the children’s group indicated that the speech therapist assisted him/her in the process of learning reading and writing skills. However, none of the therapists marked this category. Two children (20%) reported learning to read and write by themselves, but this information was not confirmed by the respective therapists.

### Question Number 3: Do you have trouble reading or writing?

Although 80% of therapists stated that their patients had difficulties in reading and writing, less than half of the children (40%) said they believed they had some difficulty. It is important to highlight that the answers presented by the children who mentioned having difficulty confirm the answers presented by their respective therapists.

### Question Number 4: Do you like to read?

In this question, 80% of the responses of children and therapists were the same, stating that their patients liked to read. Only one participant in the G1 replied that he/she did not like reading-an answer confirmed by his/her therapist.

### Question Number 5: Do you like to write?

Fewer children said they liked to write compared to the number of children who said that they enjoyed reading. The same participant who mentioned in question number four that he/she did not like to read also pointed out that he/she did not like to write. The answer was confirmed again by the therapist. The number of affirmative answers presented by therapists (40%) was also lower compared to the question about reading, i.e. children with ASD showed a preference for reading over writing.

### Question number 6: Do you need help getting things done?

The answers presented by the two groups were very similar-70% of the children answered that they need help performing the tasks and 80% of the therapists’ answers were affirmative. No negative response was presented by therapists, who stated that 100% of patients need help to perform tasks (Table 1).

Question number 7: Do you ask for help when you do not understand the task?

Although the percentages of responses were the same, and both groups stated that 70% of children ask for help when they do not understand the task, the answers were not the same when paired per individual (Table 2).

### Question number 8: Do you think you need tutoring?

Very divergent answers between the groups were presented in this question, as 90% of the therapists stated that their patients needed tutoring, and only 30% of the children agreed with this hypothesis. It is noteworthy that the same children who reported that they needed reinforcement classes were also marked affirmatively by their respective therapists (Table 3).

**Table 1.** Answers of individuals from G1 and G2 to question number 6

	Child			Therapist		
	YES	NO	Sometimes	YES	NO	Sometimes
Indiv 1		X		X		
Indiv 2	X			X		
Indiv 3		X		X		
Indiv 4	X			X		
Indiv 5	X			X		
Indiv 6		X				X
Indiv 7	X			X		
Indiv 8	X			X		
Indiv 9	X			X		
Indiv 10	X					X
Total	70%	30%	0%	80%	0%	20%

Caption: Indiv = individual

**Table 2.** Answers of individuals from G1 and G2 to question number 7

	Child		Therapist	
	YES	NO	YES	NO
Indiv 1		X	X	
Indiv 2	X		X	
Indiv 3		X		X
Indiv 4	X			X
Indiv 5	X		X	
Indiv 6		X	X	
Indiv 7	X		X	
Indiv 8	X		X	
Indiv 9	X			X
Indiv 10	X		X	
Total	70%	30%	70%	30%

Caption: Indiv = individual

**Table 3.** Answers of individuals from G1 and G2 to question number 8

	Child		Therapist	
	YES	NO	YES	NO
Indiv 1		X	X	
Indiv 2	X		X	
Indiv 3		X	X	
Indiv 4		X	X	
Indiv 5		X	X	
Indiv 6		X		X
Indiv 7	X		X	
Indiv 8	X		X	
Indiv 9		X	X	
Indiv 10		X	X	
Total	30%	70%	90%	10%

Caption: Indiv = individual

## DISCUSSION

Boyer & Mailloux<sup>(10)</sup> reported that self-perception arises from a personal comparison with that of others and can be positive or negative, realistic or unrealistic. The answers presented by groups G1 and G2 were often divergent, suggesting that children with ASD are not always able to understand their reading and writing difficulties as reported by their therapists.

Thaler et al.<sup>(11)</sup> suggested that children with ASD have trouble recognizing the expectations and emotional states of others because of difficulties related to their own emotional perceptions and experiences. In accordance with the findings of the present study, Thaler et al.<sup>(11)</sup> found a discrepancy between self-perception and the perception of others. The researchers justified this discrepancy by suggesting the existence of gaps between interoceptive experience and the perception of emotion in the population of children with ASD.

McCauley et al.<sup>(12)</sup> described that academic self-perception is defined as the individual's perception of their own academic skills. In their study, the authors reported that research measuring self-perception of schoolchildren can help individuals identify their strengths and those who need improvement. In addition, they mentioned that children with ASD perform better when they are aware of their abilities and difficulties.

Kenneth & Mitchell<sup>(13)</sup>, in a study comparing adolescents' self-perception of their interpersonal behaviors with their parents' perceptions, found that individuals with ASD can be overconfident as a means to protect themselves from being discouraged by their disabilities. The study also emphasized that the analysis and perception of parents and professionals can be of great help for students to engage and work through their difficulties.

In the present study, some therapists reported, in note, that working on self-perception is a part of the therapeutic planning of their patients.

Raising awareness of academic difficulties can be a relevant, useful strategy for the speech therapy process, so that students do not consider them as an insoluble problem, but rather a challenge that is part of the learning process. In addition, further research on children's learning difficulties through self-assessments can provide input for interventions that are increasingly appropriate to their needs.

Future research may investigate the impact on school success after stimulation of self-perception skills of children with ASD in therapy.

The present study notes, as a limitation, the fact that parents' perception was not investigated in order to compare it with their children's perceptions and to understand if their self-perception can be influenced by parents' opinion.

## CONCLUSION

Children with autism spectrum disorder do not always have realistic self-perception of their reading and writing skills.

Researching children's self-perception can be important to enable parents and professionals to help them engage in and work through their difficulties.

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