

# Autism in Brazil: a study on the view of Basic Education teachers

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**Abstract**— The United Nations highlights that the number of autistic people in the world is steadily increasing. In this context, schools continue to enroll autistic children, but are not prepared to provide the necessary care these students require. Objective: to verify teachers' views in relation to Autistic Spectrum Disorder and their need for professional development and training in order to better support these students and the challenges they face in school settings. Method: to support this study, we used a digital questionnaire, a bibliographic review and scientific articles by reference authors in the field. Thus, a study was carried out with 119 teachers in Basic Education, based on an online survey with five questions. Resulting data was presented by means of graphs generated by the digital questionnaire. Results: the results were demonstrated through five graphs and analyzed in a descriptive way, guided by reference authors in the field of study. Conclusion: Although there is a law that states the need for teacher training in inclusive education, in view of the diagrams exhibited in the present research, we concluded that most of the teachers approached do not have solid knowledge about ASD, which directly impacts the student in class.

**Keywords**— Autism, Brazil, Education. Teacher, Training.

## I. INTRODUCTION

Autistic Spectrum Disorder (ASD) has been extensively studied, both in the area of education and health. People with ASD have the following characteristics: persistent and clinically significant deficits of communication and social interaction, restrictive and repetitive patterns of behaviors, interests and activities. According to each level, a child may present signs of mild, moderate, or more severe difficulties (DSM-V, 2013). In Brazil, there are no precise statistics about the number of autism cases in the country. It is estimated that there are approximately two million cases of ASD with the health sector defining the diagnosis of ASD as complex given the several etiologies and varying levels presented by the disorder (Cunha, 2017). Therefore, these individuals require specific support in the school environment. Within this framework, this research highlights important aspects of teacher training in ASD, demonstrating their current view on the subject.

Thus, this study is justified due to the growing number of students with ASD in Brazilian schools with the understanding that teachers are ill prepared to deal with this new reality, which in turn makes it difficult for them to adequately support the development of these individuals' school performance. The teacher, as an active participant in the classroom, wants all students to learn; individuals with ASD present different learning styles, requiring teachers to have precise information on how to best manage these students and their needs in order to enable them to develop intellectually and interactively. A well-prepared teacher can better contribute positively to continued improvement in their students' academic performance. The objective of this research is to verify the teacher's view and understanding of Autistic Spectrum Disorder and the need for professional development in relation to the disorder. The research methodology was based on an online survey, bibliographic review and scientific articles by reference authors on the subject, seeking to support the study's proposal.

Therefore, the present work intends to demonstrate the results of a study carried out with 119 teachers, from Basic Education, in order to verify their view in relation to Autistic Spectrum Disorder in a broader and deeper context. The study further analyzed the need for specific teacher training as it relates to ASD. Based on the results of the present research it will be possible to understand how public policies can be better applied to provide free ASD training to teachers of Basic Education which will consequently allow them to better provide for autistic students in school.

## II. OVERVIEW OF ASD IN SCHOOL AND LACK OF TRAINING FOR TEACHERS

The National Guidelines for Special Education in Basic Education, Resolution CNE/CEB n. 2/2001, in article 2, determines that "education systems must enroll all students. In addition, it is up to schools to ensure they are able to provide for students with special educational needs, offering an environment that allows for quality education for all." (MEC, 2008). The number of ASD children in school classes is increasing. Thus, the need for specific training of professionals who work with these children in the classroom is evident, especially given the unique needs inherent to their condition. Kirk and Gallagher (1987, p. 33), point out that "not all children learn and develop at the same pace, react emotionally in the same way, and see or hear equally. Autistic individuals need differentiated time to accomplish their tasks and process the most varied types of information that make up a teaching-learning process." The authors also point out that "the 'disabled' children withdrew from school because they could not compete with 'normal' or "typical" children and schools were not organized with their specific needs taken into account. As a result, the difficulties became even greater for individuals called "atypical" and their families, who had no legal backing to fight for their rights.

### a. Autism Spectrum Disorder (ASD)

ASD has been one of the most frequently studied disorders in both health and education, due to its high incidence and limited understanding of its real underlying causes.

The World Health Organization (WHO), estimates that autism affects one in 160 children worldwide. The incidence of autism is high in all regions of the world, while the lack of understanding about the disorder has a strong impact on individuals, their families and communities. The United Nations states that much scientific research suggests there are many contributing factors that could make children more prone to autism,

including environmental and genetic issues (Edgard Junior, UN News-NY, 2017, p.1).

The term "autism" was first used by Swiss psychiatrist Eugen Bleuler in 1911. The researcher used the word "autism" to refer to his patients suffering from schizophrenia, seeking to explain the signs of escape from reality and an exacerbated intrinsic behavior. The etiology of the word "Autism" comes from the Greek "autós", which means "from oneself" (Ajuriaguerra, 1977). The term indicated loss of contact with reality, or those who lived in their own world. Later, Leo Kanner, in 1943, published papers revealing the issue of "autism" present in 11 children diagnosed with schizophrenia, using the expression "Authentic Contact Disorder" (Cunha, 2017). The following year, Hans Asperger published studies with children exhibiting behaviors similar to those described by Kanner, demonstrating that children with autism had a certain cognitive resourcefulness, with abilities for logic and abstraction, superior intelligence, presenting eccentric interests. Both descriptions were compared in 1981, when Lorna Wing translated Hans Asperger's papers and published it in an English language journal, using the term "Autism" (Assumption, 2015).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V, 2013) of the American Psychiatric Association (APA), used by health professionals to diagnose psychiatric disorders, the terminology to characterize an autistic individual is Autism Spectrum Disorder (ASD). The DSM-V (2013) outlines the characteristics presented in ASD as: deficits in social interaction; deficits in verbal or non-verbal communication and behaviors with restricted, repetitive and stereotyped patterns, with unusual sensory aspects.

According to Cunha (2017), the individual with ASD may present difficulties in initiating and maintaining a conversation, early or late echolalia, and may also present significant sensory sensitivities that may impact their daily lives.

Law no. 12,764/12, which establishes the National Policy for the Protection of the Rights of Individuals with ASD, determines the characteristics to be observed for diagnosing the disorder as: difficulty in social interaction, communication, and the incidence of repetitive and restrictive behavior patterns, manifested by motor and verbal stereotyped movements. Thus, as described in the law: "persistent and clinically significant communication and social interaction disability, restrictive and repetitive patterns of behavior, interests and activities" (Brazil, 2012, Art. 1, § 1).

The ASD individual presents great resistance to breaking routines, demonstrating restricted and fixed interests, in an exaggerated manner. Healthcare professionals define the diagnosis of ASD as complex, because there are several etiologies and varying levels. ASD is classified, according to the Classification of Mental and Behavioral Disorders (ICD-10), as one of the Invasive Developmental Disorders, which can present itself in three different levels, denoting signs of a mild, moderate or more severe condition. In severe cases language and learning are extremely impaired (DSM-V, 2013).

Thus, in school settings, these individuals demand specific support appropriate to their needs, aligned with content that must be adapted by the teacher, in order for these students to obtain gains in their academic development.

#### **b. ASD in school and the need for teacher training**

Briefly, it can be said that the objectives of the National Policy on Special Education from the perspective of inclusive education are to ensure the absolute school inclusion of students with disabilities, global developmental disorders and high skills/gifted, guiding the education system in search of ensuring access to: a) regular education, with full participation at the highest levels of education; b) continuity of special education models from early childhood education to higher education; c) specialized educational support; d) training of teachers and other para-professionals in the field in specialized and inclusive education; e) full family and community participation; f) architectural accessibility, in transportation, furniture, communications and information (Brazil, 2008).

Thus, teachers need greater structural support from their institutions and must endeavor to seek training that can support their effective performance and satisfaction in relation to the achievements and results of their autistic students.

In Decree number 7084/10, article 28, it was established that the Ministry of Education will adopt mechanisms to promote accessibility in academic programs for special education students and teachers of public basic education schools (Brazil, 2008).

Law no. 12.764/12 consolidates a set of rights for the individual with ASD, and in its article 7, prohibits refusal of enrollment to persons with any type of disability, establishing penalties for the school manager or competent authority that practices this discriminatory act.

Law no. 13.005/14, which establishes the National Education Plan - PNE, anchored in the deliberations of the

National Education Conference - CONAE/ 2014, in its item III, paragraph 1 of Article 8, determines that States, the Federal District and Municipalities ensure the fulfillment of specific needs in special education, ensuring an inclusive educational system at all levels, stages and modalities. Therefore, the objective is to ensure comprehensive care of people with disabilities, global development disorders and high abilities/gifted, in the age group of 4 to 17 years, and guarantee access to basic education and specialized education. (Brazil, 2014). The existing framework confirms we are not lacking in legal documents to begin a process of training teachers on the academic needs of their students with ASD.

An inclusive educational modal creates new challenges for teacher training. It is no longer enough to ensure teachers aren't segregating ASD students, but rather to train them to work effectively in differentiated classrooms. To do so, it is necessary to develop a unique understanding of the specific knowledge, skills and attitudes to work with inclusive classes (Rodrigues, 2008).

There is an immediate demand for teachers who are more than just competent in their specific content and subject. Teachers must be competent in pedagogical and psycho-pedagogical application in teaching methodologies, group animation, respect for diversity, among requirements. There are also mounting expectations about the role of the teacher in promoting education in further fields, such as citizenship, civic, sexual, and community education, among others. For this reason, some scholars have called the mission of contemporary teachers as an "impossible mission" (Rodrigues, 2008).

Thus, in practice, teachers have limitations in reconciling their willingness to help these individuals with the demands generated by school's and society's high expectations. Consequently, it becomes increasingly difficult for children with educational disabilities to learn in a planned, structured and effective way that enables them to achieve proposed goals. This panorama is deteriorating every day, with the growing number of students with ASD in mainstream classes, coupled with the lack of training of professionals in the field of inclusive education.

As a result, the teacher finds it difficult to fulfill or meet all the expectations generated around his or her work and to be able to act more accurately in the face of the needs presented by a child with ASD.

### III. METHODS

A freestyle and general online survey was conducted with a group consisting of 119 predominantly Brazilian teachers, of both genders, working in Basic Education. Participants were asked to answer just five questions via Google Forms Application after which it was possible to obtain reasonably unanimous responses on their views about ASD and the lack of training thereof. The questions asked were aimed at verifying teachers' level of contact with these students, as well as their understanding of the subject and the need for training in the area. Therefore, to support this study a bibliographic review was done searching reference authors in the field.

From the point of view of nature, this research can be considered applied; it generates knowledge for practical application, directed at a solution of a specific problem, that is, the training of teachers to better support autistic students. Regarding the approach to the problem, the research is qualitative and quantitative. It is qualitative, because it dealt with the interpretation of phenomena and assignment of meanings, as clarified by Kauark et al. (2010, p. 26): "The interpretation of phenomena and assignment of meanings are basic in the process of qualitative research. It does not require the use of statistical methods and techniques". Therefore, the research fits as qualitative, since it proposes a survey of information gathered from Basic Education teachers. The quantitative technique provides precise results, seeking to explain relationships among variables, through statistical correlations, incidences and frequency analysis (Michel, 2005). In this sense, the questionnaire used generated statistical data exhibited in explanatory graphs. As for technical procedures, this research can be classified as bibliographic, since it was prepared from several materials already published, such as books, newspapers, journal articles and materials available on the Internet (Kauark et al, 2010).

Thus, the methods applied delivered the subsequent results presented topic IV.

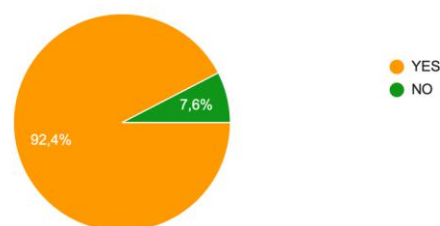
### IV. RESULTS AND DISCUSSION

According to research done by the National Institute of Educational Research Anísio Teixeira (Inep, 2019, p.33), from 2014 to 2018, the percentage of students with disabilities, global developmental disorders or high skills enrolled in common classes has gradually increased in all stages of education. According to information contained in the Technical Summary Basic Education Census (2019), more than 88% of students with disabilities were included in mainstream classes in 2018, considering all stages of

basic education, with the largest increase, between 2014 and 2018, being 11.5%, observed in early childhood education. In 2019, there was a significant increase in the number of students with autistic spectrum disorder (ASD) who are enrolled in common classes in Brazil increased 37.27% in one year. In 2017, 77.102 children and adolescents with autism were studying in the same class as people without disabilities. This rate rose to 105.842 students in 2018. Both public and private school students are considered (Globo-online, 2020). In view of the frequency and increase of individuals with ASD in mainstream schools, this research is relevant because the results shown can impact new procedures in the field of education and the care of autistic students. On this basis, the following are the results:

**Diagram 1 – Question 1**

Have you ever had contact with an autistic individual?  
119 Answers



The diagram (1) presents that most teachers approached have already had prior contact with an autistic individual.

**Diagram 2 – Question 2**

Have you ever had contact with an autistic at your school?  
119 Answers

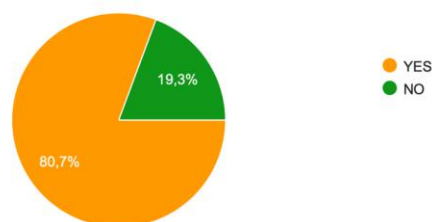


Diagram (2) confirms the information cited by this study regarding the increasing enrollment of these children in Brazilian schools. The majority of teachers answered that they have had prior contact with ASD individuals at school.



**Diagram 3 – Question 3**

Have you ever had any contact with autists in the classroom?

119 Answers

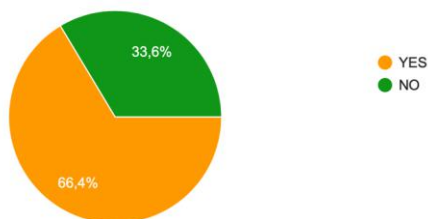


Diagram (3) presents a significant percentage demonstrating that more than 60% have already had ASD students in the classroom. This amount is compounded with 80% (2) of teachers that had contact with autistic individuals in school presents a worrisome reality.

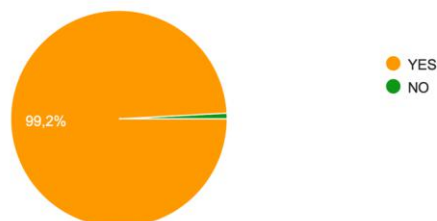
In this sense, Gatti (2010, p.1360), highlights that "there is no consistency in professionalization without the constitution of a solid base of knowledge and forms of action" and states that we should move away from the idea of the "the teacher has to find his way without any training or being the purely technical teacher". The author believes that we should focus on a new concept of a professional in education who has "conditions to confront complex and varied problems, being able to build solutions, mobilizing his cognitive and affective resources". In this perspective, an insufficiently trained teachers can negatively impact the development and learning of ASD students.

Cunha (2012, p.90), emphasizes that "with proper training, educators are better equipped to evaluate the necessary support and interventions for students who do not achieve expected results in the school environment".

**Diagram 4 – Question 4**

Do you think the teacher needs more training on the subject?

119 Answers



As more than 99% of teachers approached feel the need for training on the subject (4), it confirms our hypothesis regarding the need for specific training in ASD so that teachers will be better equipped to ensure impactful

improvements in the classroom with ASD students. In this sense, some research has demonstrated that most teachers have had their training based on a traditional model of teaching, which presents leveling and exclusionary educational practices, a model that associates disability with inability and incapacity (Mizukami, 1986; Glat, Ferreira, Olive Tree, Senna, 2003).

In this context, unpreparedness is inherent in the framework of teacher training designed or developed over the years. Therefore, laws have been adapted to the new reality in the classroom, where students with ASD are increasingly present, but teachers remain unprepared given their training to support these students.

**Diagram 5 – Question 5**

Have you ever taken a course on Autism?

119 Answers

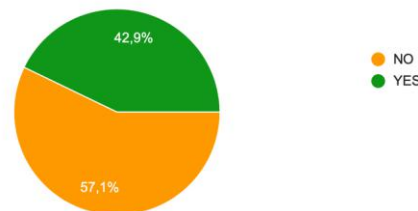


Diagram (5) shows that more than 55% of teachers that participated in this survey had never taken part in a course on ASD, confirming that they are unprepared to support these individuals in the classroom. However, most of the professionals approached would embrace working with autistic students.

Nóvoa (1995), emphasizes the importance of applying the expertise teachers acquire in their daily experience: "In the field of education, the objective of continuing education is to propose new methodologies and to carry out current theoretical discussions, with the intention of contributing to readjustments of the pedagogical praxis at school. Understanding new theories is part of the process of professional development, but it is not enough if these theories do not allow the teacher to relate them to their practical knowledge obtained in their day-to-day" (p. 27). Thus, teachers that seek to prepare for new situations in the classroom, such as establishing contact with autistic students, should always keep themselves informed. By staying updated with emerging theories and knowledge teachers are better prepared to modify their pedagogical practices when necessary.

Therefore, the research clearly establishes the need for teacher training due to the increasing number of individuals with ASD in Brazilian schools. As noted,

66.4% of teachers state having had students with ASD in the classroom and have further confirmed their willingness to engage in continued professional development to better support these individuals and their challenges. Teachers that participated in this research all indicated their enthusiasm to help these children with their learning needs, however, they feel poorly prepared to support ASD individuals according to this research.

## V. CONCLUSION

In a competitive, yet unequal society, education is one of the ways to disseminate the right to equality. By allowing all members of society equal access to knowledge and skills that broaden their possibilities to function in autonomous and practical ways, they can insert themselves into a market where equality prevails. The same should be true for teachers and students. In this context, inclusive education becomes a process that seeks to provide people with special educational needs with the potential of full development and growth. Thus, must include the different levels and degrees of the teaching system, and should further be based on theoretical references aligned to student's specific needs.

According to the authors and the results of this research, teachers are unclear as to how to adequately perform their roles when they come across an autistic student. Therefore, questions were formulated through an online survey in order to understand the level of teacher knowledge regarding ASD as well as their views on the lack of information regarding the subject. In this survey 99% of the teachers approached expressed willingness and need for training in ASD. All confirmed previous contact with autistic students, either inside or outside the classroom. In addition, they confirmed their limited understanding of how to best work with these students assist them in their difficulties and learning process given their inadequate training. Although there is a law that states the need for training for teachers in inclusive education, in view of the diagrams presented in this research, we concluded that most of the teachers approached do not have solid a solid understanding about ASD, which directly impacts the student in class. Finally, the results showed that the teacher's view of ASD is still limited and that teachers themselves feel the need for further training on the subject.

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