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Autism and its Impact on School Development

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Abstract---This article investigates the influence of autism on school development, addressing both the challenges and opportunities that Autism presents in the field of academic performance and the relevance of the interaction between education. Through a theoretical review and qualitative research, the characteristics of autism and its effect on teachers and families are examined to promote inclusion. The main objective is to analyze the influence of autism on school development, identifying the challenges that students face and intervention strategies that promote their inclusion and academic performance. The methodology used included semi-structured interviews, participant observation, and analysis of school documents, which made it possible to comprehensively capture the experiences and needs of the different actors involved. The results reveal that, although ASD brings with it difficulties in communication, socialization, and curricular adaptation, the implementation of inclusive pedagogical strategies, such as Universal Design for Learning, together with strengthening communication between home and school, can significantly improve the integration and academic performance of students with autism. In addition, recommendations are presented aimed at teacher training, the adaptation of resources, and the personalization of learning, with the aim of optimizing the educational environment for this population.

Keywords---curricular adaptations, inclusion, school development, universal design for learning, autism spectrum disorder.

Introduction

Autism (ASD) is a neurodevelopmental disorder that manifests itself through difficulties in communication, social interaction, and the adoption of restrictive and repetitive behavior patterns. In recent years, we have witnessed an increase in the prevalence of this disorder, which has led to the need to rethink teaching models and integration in the school environment. Educational inclusion represents a crucial challenge to ensure that students with ASD receive the necessary conditions and support to develop their full academic and social potential (Menéndez et al., 2024).

In this context, it is essential to analyze how autism impacts school development, exploring the barriers that these students face in the educational environment and the strategies that can be implemented to improve their learning and integration process. Recent research has shown that early detection and intervention, along with the incorporation of active technologies and personalized strategies, can significantly transform the educational environment for students with ASD. This multidisciplinary approach, which involves professionals from education, psychology, and occupational therapy, not only improves academic performance but also enhances the development of socio-emotional skills and personal autonomy of students (Vanderlinde & Van Braak, 2010).

It is vital to continuously update educational models and implement inclusive practices, which are key tools to break down traditional barriers, allowing the classroom to become an enriching space that promotes diversity and respect for individual differences.

Despite advances in early detection and the design of intervention programs, students with ASD continue to face multiple challenges in the school environment. The difficulties inherent to the disorder, such as communication and social interaction problems, are aggravated by the lack of curricular adaptation and inclusive pedagogical strategies in many educational centers. This situation not only creates a gap in academic performance but also limits the comprehensive development of these students. Additionally, the lack of coordination and effective communication between families and teachers makes it difficult to create an optimal learning environment and continuous support. Given this problem, it is essential to identify and analyze the variables that affect the educational process of students with autism to propose interventions that favor their inclusion and enhance their academic performance.

Materials and Methods

La presente investigación se sitúa dentro de un estudio cualitativo cuyo propósito es profundizar en las experiencias, percepciones y vivencias de los actores involucrados en el proceso educativo de estudiantes con Trastorno del Espectro Autista (TEA). Este enfoque nos permite explorar la complejidad del fenómeno, identificar patrones y comprender los factores que influyen en el desarrollo escolar de estos alumnos.

La población de estudio está compuesta por docentes, familiares y estudiantes diagnosticados con TEA, quienes participan activamente en el entorno escolar. La selección de la muestra se llevó a cabo de manera intencionada y no probabilística, tomando en cuenta criterios de relevancia y experiencia directa en el proceso educativo inclusivo. Se seleccionaron 20 participantes: 10 docentes, 5 familiares y 5 estudiantes, elegidos por su vinculación con instituciones educativas que cuentan con programas de inclusión para alumnos con autismo.

Para la obtención de información, se emplearon diversas técnicas que permitieron captar la riqueza y diversidad de las experiencias de los participantes:

Entrevistas semiestructuradas: Se elaboraron guías de entrevista dirigidas a docentes, familiares y estudiantes, facilitando así la recolección de testimonios y perspectivas sobre el impacto del TEA en el rendimiento académico y la integración escolar.

Observación participante: Se realizaron observaciones en el aula y en otros espacios escolares, con el fin de identificar interacciones, estrategias pedagógicas y comportamientos que reflejan la realidad del proceso inclusivo.

Análisis de documentos: Se revisaron informes escolares, planes de intervención educativa y otros registros institucionales, lo que permitió contrastar y complementar la información recopilada a través de las entrevistas y la observación.

Tabla 1
Entrevista a docentes

CRITERIOS	% Alto	% Medio	% Bajo
¿Ha tenido estudiantes con Trastorno del Espectro Autista (TEA) en su aula?	81,90	18,10	0
¿Cómo describiría su experiencia trabajando con estudiantes con TEA?	54,50	27,30	18,20
¿Qué nivel de conocimiento tiene sobre el Trastorno del Espectro Autista?	12,20	36,40	18,20
¿Ha recibido formación o capacitación específica sobre estrategias educativas para estudiantes con TEA?	18,20	45,50	36,40
¿Considera que la escuela proporciona los recursos y el apoyo necesario para atender a estudiantes con TEA?	9,10	36,40	54,50
¿Conoce o aplica el Diseño Universal para el Aprendizaje (DUA) en su práctica docente?	45,50	27,30	27,30

In the classrooms, there is a notable presence of students with Autism Spectrum Disorder (ASD). However, not all teachers have the necessary experience and training to provide adequate care. There is a clear lack of knowledge and training about ASD, which can negatively influence the quality of inclusive teaching. Additionally, teachers feel that schools do not provide sufficient resources and support to serve these students effectively. Although almost half of the teachers are familiar with and apply Universal Design for Learning (UDL), there are still significant opportunities to improve its implementation.

Table 2
Interview with families

CRITERIA	%High	%Fear	%Low
How did the diagnosis affect your perception of your child's education?	28,6\$	57,1	14,3
Do you think the school has provided the support necessary to overcome these difficulties?	14,3	85,70	0%
How often do you communicate with teachers about your child's school progress?	71,40	28,60	0
Have you seen improvements in the development? your child's school with the strategies applied?	14,3	71,4%	14,3
How would you rate the effectiveness of the support that your child has received?	14,3	57,20	28,60

The diagnosis of Autism Spectrum Disorder (ASD) has a notable impact on how families perceive their children's education, underscoring the importance of guidance and emotional support. Although families value the efforts made by schools, most of them believe that the support received is only moderate and does not fully satisfy their needs. On the other hand, communication between parents and teachers is quite fluid, which is positive and can facilitate effective collaboration. Although the strategies implemented have shown some effect, the majority of families do not observe significant improvements in their children's academic development. Furthermore, a considerable percentage of families question the effectiveness of the available supports, considering them insufficient to meet their needs.

Analysis and Discussion of Results

Definition and conceptualization of autism

Autism (ASD) is a neurological developmental disorder that is distinguished by the presence of difficulties in communication, social interaction, and the exhibition of restricted and repetitive behavioral patterns ([American Psychiatric Association, 2013](#)). These characteristics can vary markedly between individuals, underscoring the need for personalized assessment and intervention. Understanding these particularities is essential for the design of appropriate educational strategies that promote the inclusion and effective learning of students with ASD.

School development in children with autism

ASD influences the school environment in multiple ways, affecting areas such as academic performance, socialization, and adaptation to classroom dynamics. According to [Smith \(2018\)](#), difficulties in communication and social interaction can restrict students' active participation in group activities, which impacts their integration in the classroom. However, it has been shown that early intervention and the implementation of specialized pedagogical methods can significantly improve these aspects ([Vazquez et al., 2020](#)). The use of individualized support programs and assistive technologies has proven to be effective in the learning process.

Educational inclusion represents the practice of integrating all students, regardless of their abilities or needs, into the same learning environment. [Ainscow \(2005\)](#) states that "inclusion is a process that seeks to improve the participation of all students in educational activities."

There are various pedagogical strategies that teachers can use to facilitate inclusive learning:

Cooperative Learning: This strategy promotes collaboration between students, allowing them to support each other. According to [Domingo \(2008\)](#), Cooperative learning not only improves academic performance but also promotes social inclusion.

Curricular Adaptations: Modifying the curriculum to meet the needs of all students is essential. [Reta Sabarrós & Primaria \(2016\)](#), point out that "curriculum differentiation allows each student to access the content in a way that fits their learning style and pace."

Use of Educational Technologies: Technological tools can promote inclusion by offering accessible resources. [Romero Martínez et al. \(2018\)](#), maintain that "information and communication technologies can be a great ally in inclusive education, providing multiple forms of representation and expression."

Finally, the continuous training of teachers is key to implementing effective inclusive strategies since teacher training on inclusion issues is essential for educators to feel prepared and confident in their practice.

Factors that influence the educational process

Various studies highlight the relevance of having an inclusive educational environment to promote the academic development of students with Autism Spectrum Disorder (ASD). [Escobar-Villacrés et al. \(2024\)](#), highlight that the adaptation of the curriculum and teacher training in inclusive strategies are crucial elements to facilitate its integration. Furthermore, collaboration between education professionals and families is essential to create a supportive environment that enhances the comprehensive development of the student ([Espinosa et al., 2019](#)). These aspects are interconnected and contribute to improving both the academic performance and the quality of life of students with autism.

Autism, or ASD, is a developmental disorder that impacts communication, social interaction, and behavior. Students with autism may face multiple difficulties in the school environment, which affects their learning and social integration. Among the main difficulties that these students face is communication. Many present challenges in understanding and using language, both verbal and nonverbal, which makes their interaction with classmates and teachers difficult ([Alcantara, 2022](#)). This barrier in communication can lead to misunderstandings and frustrations for the student and their peers.

Additionally, students with autism frequently have problems in emotional regulation and managing social situations. This can manifest in challenging behaviors, such as aggression or social withdrawal, especially in noisy or chaotic environments ([Ortiz, 2023](#)). A lack of social skills can lead these students to feel isolated, which can negatively impact their self-esteem and motivation to participate in group activities. Another significant challenge is the preference for predictable routines and structures. Students with autism often benefit from a structured environment where expectations are clear and transitions are made gradually ([Zalaquett et al., 2015](#)). However, in many classrooms, inconsistency in routines can lead to anxiety and problematic behaviors.

Finally, it is essential that educators receive specific training on autism and inclusive teaching strategies. The implementation of adapted pedagogical approaches, such as the use of visual supports and the explicit teaching of social skills, can significantly improve the educational experience of students with autism ([Bejarano Martín et al., 2017](#)).

The role of the family and teachers in their school development

Interaction and collaboration between family and educators are essential to promote the school development of students with autism. The family, as the first area of learning, plays a fundamental role in the early identification of the student's needs and the application of support strategies at home. For their part, teachers have the responsibility of adapting the curriculum and using inclusive pedagogical methods that facilitate the active participation of these students in the classroom. A constant dialogue between both actors allows the creation of a comprehensive intervention plan that combines family experiences and expectations with specialized educational methodologies, thus optimizing the teaching-learning process ([Baña Castro, 2015](#)).

Numerous recent studies have examined the influence of Autism Spectrum Disorder (ASD) on academic performance, highlighting the importance of early intervention and adaptation of educational practices. Evidence suggests that by implementing personalized intervention programs and adjusting methodologies to the specific needs of the student, significant improvements can be seen in areas such as reading, mathematics, and social skills. These researches emphasize that timely detection and support are crucial to reducing achievement gaps and facilitating the educational integration of students with autism ([Prudente Rodríguez, 2025](#)).

Collaboration between family and educators is vital to enhance the comprehensive development of students with ASD. The family provides an environment of emotional support and helps in the early detection of the child's needs, while the teachers are in charge of adapting the curriculum and applying individualized pedagogical strategies that favor inclusion in the classroom ([Baña Castro, 2015](#)).

This synergy allows intervention plans to be designed that not only improve academic performance but also strengthen the student's social skills and autonomy (Zaldivar Guzmán et al., 2019). In this context, effective and continuous communication between both actors is key to appropriately and timely addressing the challenges presented by ASD.

In conclusion, students with autism face various difficulties in the classroom that demand specific attention and strategies from educators. By understanding and addressing these challenges, a more inclusive and effective learning environment can be cultivated.

Universal Design for Learning (UDL) is presented as a pedagogical approach that seeks to guarantee equitable access to education by diversifying teaching methods, the representation of information, and the evaluation of learning. As Pincay-Reyes & Cedeño-Tuárez (2023) indicate, DUA is based on the idea that there is no single teaching method that works for all students. Therefore, it suggests the use of flexible strategies that adjust to the diversity present in classrooms. This approach is particularly beneficial for students with Autism Spectrum Disorder (ASD), as it allows the design of more accessible educational environments, reducing barriers and encouraging the active participation of all students.

Among the advantages of DUA, the ability to offer multiple forms of representation of information stands out - whether visual, auditory, or kinesthetic - which facilitates the understanding of the contents for students with different learning styles, as noted by Mendoza et al. (2022). Furthermore, this approach promotes the autonomy and self-regulation of students, establishing the possibility for them to choose between various forms of expression and evaluation adapted to their abilities and needs. In particular, for students with ASD, the use of pictograms, structured materials, and technological supports within the DUA framework plays a decisive role in their integration and academic success, improving their communication and participation in the classroom.

Impact of autism on academic performance

The impact of autism on academic performance is a topic that has been the subject of extensive studies, given that the manifestations of Autism Spectrum Disorder (ASD) in the educational field are diverse. According to Bustillos Murillo (2024), students with ASD may experience variations in their academic performance, which largely depends on the level of support they receive, the pedagogical strategies used, and the understanding that teachers have of their specific needs. While some students stand out for their exceptional abilities in areas such as mathematics or visual memory, others may face difficulties in reading comprehension, writing, and problem-solving, mainly due to challenges related to communication and cognitive flexibility.

Likewise, the school environment plays a crucial role in the performance of these students. Recent research, for example, has highlighted that factors such as sensory overload, lack of curricular adaptations, and difficulties in social interaction can cause stress and anxiety, thus affecting the learning capacity of students with ASD (Jofre, 2024). However, the adoption of inclusive strategies, such as Universal Design for Learning (UDL), the use of visual supports, and structured teaching is effective in improving both academic performance and classroom participation. The personalization of learning and joint work between teachers, families, and specialists are essential to optimize the educational development of students with ASD and promote their inclusion in the school system (Kardina et al., 2020).

The implementation of the Universal Design for Learning (UDL) is very important. It is suggested that teachers be trained in the UDL, which will allow them to apply flexible pedagogical strategies adjusted to the specific needs of students with Autism Spectrum Disorder (ASD). The use of visual supports, structured activities, and diversified evaluations facilitates access to information and promotes student autonomy (Pazmiño et al., 2024).

It is essential to establish regular and effective communication channels between teachers and families. Regular meetings, along with the use of digital tools, can facilitate the monitoring of student progress and allow adjustments to intervention strategies (Kaat & Lecavalier, 2013).

It is recommended to carry out workshops and training courses for teachers, aimed at the management of ASD and inclusive methodologies. Likewise, collaboration between specialists (such as psychologists and occupational therapists) and educational personnel will enrich the comprehensive care of the student (Griful-Freixenet et al., 2020).

Curricular Adaptation and Use of Assisted Technologies: The adaptation of the curriculum, along with the incorporation of assisted technologies, are essential strategies to address the diversity of learning styles. The use of interactive materials and digital tools can improve both the academic performance and active participation of students with autism (Jofre, 2024).

Conclusions

According to the study carried out, it is concluded that families need more support in: emotional support, practical training, occupational therapies, and pedagogical guides from government organizations and schools. The implementation of these inclusive practices requires a joint commitment and a continuous update of pedagogical models, guaranteeing a comprehensive and inclusive quality education for all learners.

According to the results, it is evident that it is still unknown how to effectively implement strategies based on the Universal Design for Learning (UDA). However, among the teachers who are applying it, it was observed that students show greater interest in visual and structured activities. Teachers, in addition to continuing with visual supports, must implement activities that encourage social interaction and teamwork, which can also benefit the comprehensive development of students. It is essential to maintain fluid communication between families and teachers to adjust interventions according to the observed needs, both in the classroom and at home. In addition, the experiences shared by families and teachers seek to optimize the educational environment and promote the academic success of students with ASD.

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