Revista Ibero-Americana de Humanidades, Ciências e Educação — REASE

doi.org/10.51891/rease.v12i5.26771

A ESCOLA E AS INTERVENÇÕES TERAPÊUTICAS NO DESENVOLVIMENTO COGNITIVO DE CRIANÇAS COM TEA NÍVEL3

THE SCHOOL AND THERAPEUTIC INTERVENTIONS IN THE COGNITIVE DEVELOPMENT OF CHILDREN WITH ASD LEVEL3

Ruth da Silva Albuquerque[1]

RESUMO: O Transtorno do Espectro Autista (TEA) é uma condição do neurodesenvolvimento caracterizada por déficits persistentes na comunicação social e por padrões restritos e repetitivos de comportamento, interesses ou atividades, podendo ser classificado em três níveis de suporte, sendo o nível 3 o que demanda apoio substancial e contínuo em múltiplos contextos. O Transtorno do Espectro Autista (TEA) é uma condição do neurodesenvolvimento caracterizada por déficits persistentes na comunicação social e por padrões restritos e repetitivos de comportamento, interesses ou atividades, podendo ser classificado em três níveis de suporte, sendo o nível 3 o que demanda apoio substancial e contínuo em múltiplos contextos. Crianças com TEA nível de suporte 3 geralmente apresentam severos prejuízos cognitivos, comportamentais e adaptativos, exigindo intervenções especializadas e integradas desde os primeiros anos de vida. Nesse cenário, a escola e as terapias multidisciplinares assumem papel central no desenvolvimento dessas crianças. O ambiente escolar quando inclusivo e adaptado, não apenas oferecem oportunidades de socialização e aquisição de conhecimentos acadêmicos, mas também funciona como espaço para o desenvolvimento de habilidades cognitivas, emocionais e sociais. Paralelamente, intervenções terapêuticas individualizadas como as terapias: ocupacional, fonoaudiologia, a psicologia e a análise do comportamento aplicada (ABA) são fundamentais para promover avanços significativos na comunicação e na regulação comportamental. Este artigo tem por finalidade conhecer os aspectos pedagógicos escolares frente a alunos com TEA nível 3 de suporte.

Palavras-chave: TEA. Níveis de suporte. Inclusão escolar.

ABSTRACT: Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and by restricted and repetitive patterns of behavior, interests or activities, and can be classified into three levels of support, with level 3 requiring substantial and continuous support in multiple contexts. Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and by restricted and repetitive patterns of behavior, interests or activities, and can be classified into three levels of support, with level 3 requiring substantial and continuous support in multiple contexts. Children with ASD support level 3 usually have severe cognitive, behavioral and adaptive impairments, requiring specialized and integrated interventions from the first years of life. In this scenario, school and multidisciplinary therapies play a central role in the development of these children. The school environment, when inclusive and adapted, not only offers opportunities for socialization and acquisition of academic knowledge, but also works as a space for the development of cognitive, emotional and social skills. At the same time, individualized therapeutic interventions such as occupational therapies, speech therapy, psychology and applied behavior analysis (ABA) are fundamental to promote significant advances in communication and behavioral regulation. This article aims to know the school pedagogical aspects of students with ASD level 3 support.

Keywords: ASD. levels of support. School inclusion.

[1]Pedagoga. Especialista em Educação Especial e inclusiva.

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and by restricted and repetitive patterns of behavior, interests or activities, and can be classified into three levels of support, with level 3 requiring substantial and continuous support in multiple contexts.

Children with ASD support level 3 usually have severe cognitive, behavioral and adaptive impairments, requiring specialized and integrated interventions from the first years of life. In this scenario, school and multidisciplinary therapies play a central role in the development of these children. The school environment, when inclusive and adapted, not only offers opportunities for socialization and acquisition of academic knowledge, but also works as a space for the development of cognitive, emotional and social skills. At the same time, individualized therapeutic interventions such as occupational therapies, speech therapy, psychology and applied behavior analysis (ABA) are fundamental to promote significant advances in communication and behavioral regulation.

1.1 Research problem

How do school and therapeutic interventions contribute to the cognitive development of children diagnosed with autism spectrum disorder (ASD) at support level 3?

1.2 Objective of the research

Discuss the importance of the role of school and therapies in the level of cognitive development support for children with ASD level 3, emphasizing the need for collaborative strategies among the professionals involved.

2. Literature review

2.1 Research gap

The proposed article addresses a topic of extreme relevance and urgency: the intersection between the school environment and therapeutic interventions for children with Autism Spectrum Disorder (ASD) Level 3, focusing on cognitive development. However, even with the importance of the topic, there are several research gaps that could be explored to deepen knowledge and optimize practices.

The following are some of the main research gaps that could be addressed from the suggested title are: Training and Support for Teachers and School Teams; Curricular Integration and Effective Pedagogical Adaptations; Role of the Family and Interdisciplinary Collaboration in the School; Indicators of Success and Evaluation of Long-Term Results.

The success of therapeutic interventions in school depends directly on the ability of educators to implement them and to receive the necessary support. There is a considerable gap in research on the quality, effectiveness, and impacts of continuing education and the support offered to teachers and other members of the school team (such as assistants and mediators) to deal with the specificities of ASD Level 3 and integrate therapeutic interventions into daily life.

The article addresses curricular adaptation, but the research gap here focuses on the specificity and effectiveness of curricular adaptation strategies to promote the cognitive development of children with ASD Level 3, considering their heterogeneities and the challenges of generalizing skills. There is little detailed research on which curricular adaptations work best for different cognitive profiles within Level 3.

He will mention the importance of family-school-therapists collaboration. However, an important gap is the in-depth analysis of the dynamics and challenges of this collaboration, and how it translates into tangible cognitive outcomes for the child.

A major gap in research on Level 3 ASD interventions, especially in the school setting, is the clear definition of success indicators and the evaluation of long-term outcomes in cognitive development. Often, studies focus on short-term gains, but it is essential to understand the sustainability and generalization of these skills over time. By addressing these research gaps, future studies could contribute significantly to the enhancement of educational and therapeutic practices, ensuring a more inclusive and effective education for children with ASD Level 3 in Brazil.

2.2 Justification

This article is justified by the urgency and relevance of deepening the understanding and practices that involve the cognitive development of children with Autism Spectrum Disorder (ASD) Level 3 in the school environment. According to the Ministry of Health, the first evidence that permeates the beginning of the investigation may be between 2 and 3 years

of age, and it is requested that they be perceived and guided by qualified professionals. The Ministry of Health points out that:

> Identification of developmental delays, timely diagnosis of ASD, and referral to behavioral interventions and educational support at the earliest possible age, can lead to better long-term outcomes. Therefore, therapies at the early beginning of diagnosis are fundamental, as they are based on approaches that aim to improve social, communicative and behavioral skills. (2022, Ministry of Health).

From this identification, it is essential that these children have substantial support due to the marked difficulties in social communication and behavior patterns, as they face significant challenges that directly impact their cognitive development. Deficits in joint attention, executive functions, cognitive flexibility, and problem-solving ability are common and substantially limit learning and social participation. In view of this scenario, the inclusion of these children in the educational system, as recommended by Brazilian legislation, cannot be merely formal, it requires a strategic and qualified action by the school. Therefore, this article is justified by: Highlighting the critical importance of the school as the main space for cognitive and social development for children with ASD Level 3.

To explore the vital intersection between pedagogical practices and scientifically proven therapeutic interventions, seeking to demonstrate how this synergy can enhance development.

To provide an updated overview of the strategies and challenges faced in the implementation of a truly inclusive and effective education for this audience, contributing to the reflection and improvement of educational policies and practices in Brazil.

Encourage research and discussion on models of teacher training, interdisciplinary collaboration and evaluation of results that guarantee the right to education and full development of these children.

In short, the justification lies in the pressing need to deepen knowledge and guide practice so that the school is, in fact, a facilitating and transformative environment for the cognitive development of children with ASD Level 3, promoting their autonomy, participation and quality of life.

3. Theoretical Chapter

According to the DSM-5 (APA, 2013), ASD level 3 indicates children who have severe impairments in verbal and nonverbal communication, low autonomy and intense resistance to change. Such children require continuous and intensive support.

3.1. Cognitive Development and Neuroplasticity

Neuroplasticity is the brain's ability to reorganize itself in response to stimuli. Even in children with severe ASD, early and consistent interventions can promote advances in cognitive development (KLIN et al., 2020).

3.2. The Impact of ASD Level 3 on Cognitive Development.

Children with ASD Level 3 often exhibit a heterogeneous cognitive profile, but with common characteristics that directly affect the learning process. Among the main challenges, the following stand out:

- Deficits in joint attention: Difficulty sharing the focus of attention with another person on an object or event, which is critical for social learning and the acquisition of new skills; Impaired executive functions: These include problems with planning, organization, working memory, self-regulation, and cognitive flexibility, impacting the ability to initiate and complete tasks, adapt to change, and solve problems. Atypical sensory processing: Hypersensitivity or hyposensitivity to sensory stimuli can cause overload and make it difficult to pay attention and engage in cognitive activities. Difficulties in communication and language: Speech may be absent or minimal, and comprehension of abstract concepts may be limited, which hinders verbal instruction and interaction.

- Restricted interests and repetitive behaviors: While they may be strengths in some areas, inflexibility and rigidity can hinder the exploration of new knowledge and the development of broader cognitive repertoires.

- Recognizing these challenges is the first step to developing personalized and effective intervention strategies.

3. 3 The School as a Therapeutic and Inclusive Environment

An inclusive school is one that adapts to meet the needs of all students, regardless of their conditions. For children with ASD Level 3, this means going beyond mere enrollment, ensuring a structured, predictable, and individualized support environment. Effective inclusion in the school environment promotes not only access to the curriculum, but also social participation and integral development.

In Mantoan, 2015 says that the inclusive school, when structured with resources, teacher training and multiprofessional support, can function as a complementary therapeutic

environment, contributing to the construction of knowledge, interaction and development of skills.

The school can act as a therapeutic environment by incorporating principles and strategies used in evidence-based therapies. This includes:

Structuring and predictability: Well-organized environments, with visual and predictable routines, reduce anxiety and promote autonomy. Visual schedules, agendas, and clear signage help your child anticipate events and transitions.

Individualized learning: The Individual Development Plan (IDP) or Individualized Teaching Plan (IEP) is essential to set specific goals for each child, considering their strengths and challenges.

Visual aid: The use of visual aids, such as cards, pictograms, social stories, and multimedia resources, makes it easier to understand instructions, concepts, and social expectations.

Curricular adaptation: The curriculum should be made flexible and adapted to the child's capabilities, with activities that promote the development of functional cognitive skills that are relevant to their daily life.

Sensory-adapted environment: Minimizing excessive sensory stimuli, offering calm spaces, and allowing the use of sensory tools (such as headphones or squeezing toys) can aid in regulation and focus.

Focus on functional skills: Prioritize teaching skills that enhance independence and participation in everyday activities, such as self-care skills, functional communication, and basic social interaction.

3.4 Evidence-Based Therapeutic and Pedagogical Interventions

Collaboration between educators and therapists is key to the success of interventions. Therapeutic interventions must be integrated into the school routine, using scientifically proven methodologies. Some of the most effective approaches include:

- Applied Behavior Analysis (ABA)

ABA is an intensive, structured methodology that builds on the principles of learning to teach new skills and reduce challenging behaviors. In the school context, ABA can be applied through:

Teaching by Discrete Attempts (ETD): Breaking complex skills into smaller steps, with positive reinforcement for each correct answer, ideal for teaching specific cognitive skills (e.g., object identification, pairing).

Naturalistic Teaching: Application of ABA strategies in natural environments and situations, promoting the generalization of skills to different contexts.

Social Skills Training (HRT): Utilizing modeling, role-playing, and reinforcement to teach social interaction skills such as eye contact, greeting, and sharing.

Positive Reinforcement: Increasing the likelihood of a desired behavior occurring again through rewards or praise.

- Communication Skills Training (PECS, CAA)

For children with ASD Level 3 with severe difficulties in verbal communication, Alternative and Augmented Communication (AAC) systems are crucial.

Picture Exchange Communication System (PECS): Allows the child to communicate by exchanging pictures for desired items, evolving to the formation of more complex sentences and concepts, which stimulates communicative intentionality.

Speech-Generating Devices (DGf) or Vocalizers: Electronic devices that produce speech when the child selects images or symbols.

Signs and Gestures: The use of simple signs or gestures can complement or replace speech.

Not only do these systems provide a means of expression, but they can also stimulate the development of language and cognition associated with communication.

- Cognitive-Behavioral Strategies (Adapted CBT)

While traditional CBT can be challenging for children with ASD Level 3 due to language and abstraction limitations, principles can be adapted to:

Emotion regulation: Using visual cues (anger thermometers, feelings scale) and social histories to help the child identify and manage their emotions, which indirectly improves cognitive focus.

Cognitive flexibility: Activities that promote the change of rules, perspectives or tasks, gradually and with support, can help reduce rigidity.

- Play-Based Interventions

Play is the language of childhood and a powerful vehicle for cognitive development.

Structured play: Guide the child through sequences of games with the aim of developing specific skills (e.g., symbolic play, turns, toy sharing).

Functional play: Teach the proper use of toys and objects, which encourages understanding of cause and effect and problem solving.

3.5 Interdisciplinary Collaboration: School, Family and Health Professionals. The success of interventions for children with ASD Level 3 depends on a collaborative and interdisciplinary approach.

Multiprofessional Team at School: The presence of psychologists, speech therapists, occupational therapists and special educators on the school staff, or the partnership with clinics and external professionals, is essential. These professionals can offer consultation, teacher training, assessments, and direct interventions.

Effective Communication: Open and regular communication channels between school, family, and therapists are essential to align strategies, share progress and challenges, and ensure consistency of interventions across settings.

Teacher Training: It is imperative that teachers receive ongoing training on ASD, adapted teaching strategies, behavior management, and the use of assistive technologies.

Family Involvement: The family is the main agent of the child's development. The school should support and involve parents, offering guidance, training and resources so that the strategies can also be applied at home.

3.6 Challenges and Future Prospects

Despite the advances, the inclusion and cognitive development of children with ASD Level 3 still face significant challenges:

Teacher Training: The lack of specific and continuous training to deal with the particularities of ASD Level 3 is an obstacle.

Material and Human Resources: The lack of financial resources to hire specialized professionals, acquire adapted materials, and implement assistive technologies.

4. Research methodology

This study is characterized as a **qualitative, descriptive and exploratory research**, with a theoretical and documentary approach. The choice for this methodology is justified by the complexity of the object of study — the cognitive development of children with ASD level 3

— which requires a deep understanding of the social, educational and therapeutic contexts in which these children are inserted.

Data collection was carried out through **a bibliographic and documentary review**, with the objective of analyzing scientific publications, educational legislation, clinical guidelines and official documents that deal with inclusive education and therapeutic interventions in Autism Spectrum Disorder. Sources such as:

Recent scientific articles (between 2020 and 2025) indexed in databases such as SciELO, PubMed, Consensus, and Google Scholar, with a focus on inclusive practices and specific therapies for ASD level 3;

Normative documents such as the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders), the National Policy on Special Education in the Perspective of Inclusive Education (MEC, 2008) and the parameters of Applied Behavior Analysis (ABA);

Data analysis was done through the **content analysis technique**, as proposed by Bardin (2011), enabling the identification of thematic categories such as: role of the school, therapeutic interventions, interdisciplinary articulation, and cognitive development. This approach allowed us to understand how the integration between school and specialized therapies can favor the learning and autonomy of children with severe support needs.

5. RESULTS

The integrative literature review allowed us to identify and synthesize significant evidence on the impact of the school environment and therapeutic interventions on the cognitive development of children with Autism Spectrum Disorder (ASD) Level 3.

5.1. The results were grouped into thematic categories that reflect the central axes of the study.

Cognitive Profile of Children with ASD Level 3 and Neuroplasticity Potential The studies analyzed corroborate the characterization of ASD Level 3, according to the DSM-5 (APA, 2013), showing that these children have severe impairments in verbal and non-verbal communication, low autonomy and intense resistance to change, requiring continuous and intensive support. The literature points out that, despite these challenges, brain neuroplasticity offers a window of opportunity for cognitive development. Research such as that by Klin et al. (2020) emphasizes that early and consistently applied interventions can promote significant

advances in brain reorganization and, consequently, in the cognitive development of children with severe ASD.

The results of the review confirm that the cognitive profile of children with ASD Level 3 is heterogeneous, but consistently marked by challenges that directly affect learning:

Deficits in joint attention are widely documented, impairing social learning and the acquisition of new skills.

Compromised executive functions, such as planning, organization, working memory, self-regulation, and cognitive flexibility, are core challenges that impact the ability to initiate and complete tasks and to adapt to new situations.

Atypical sensory processing (hypersensitivity or hyposensitivity) is a recurring factor that can generate overload, making it difficult to pay attention and engage in cognitive activities.

Difficulties in communication and language, with absent or minimal speech and limited comprehension of abstract concepts, are primary barriers to verbal instruction and interaction.

Restricted interests and repetitive behaviors can sometimes be strong, but the inflexibility associated with them often prevents the exploration of new knowledge and the expansion of cognitive repertoires.

5.2. The School as a Catalyzing Environment for Cognitive and Therapeutic Development

The analysis of the literature reinforces that the inclusive school is not just a place of enrollment, but an environment with significant therapeutic potential for children with ASD Level 3. Studies, including the perspective of Mantoan (2015), indicate that when the school is structured with adequate resources, specific teacher training and multiprofessional support, it functions as a space that complements and reinforces therapeutic interventions.

The results demonstrate that the incorporation of therapeutic principles and strategies in the school routine is fundamental. The most effective practices identified include:

Structuring and Predictability: The creation of highly organized environments with visual routines (schedules, agendas) and clear signage is consistently pointed out as reducing anxiety, promoting autonomy and cognitive focus.

Individualized Learning: The use of Individual Development Plans (IDPs) or Individualized Teaching Plans (IEPs) is crucial for setting specific goals while respecting each child's strengths and challenges.

Visual Aids: The use of cards, pictograms, social stories, and multimedia resources facilitates the understanding of instructions and concepts, which are essential for cognitive engagement.

Curriculum Adaptation: Flexibility of the curriculum with activities that promote the development of functional and relevant cognitive skills for daily life is vital for meaningful learning.

Sensory-Adapted Environment: The minimization of excessive sensory stimuli and the offer of calm spaces or sensory tools are pointed out as facilitators of regulation and cognitive engagement.

Focus on Functional Skills: Prioritizing the teaching of skills that increase independence and participation in everyday activities directly contributes to autonomy and functional cognitive development.

5.3 Impact of Evidence-Based Therapeutic Interventions in the School Context.

The review showed that collaboration between educators and therapists is the main lever for the success of interventions. The integration of scientifically proven methodologies in everyday school life demonstrates positive results in cognitive development:

Applied Behavior Analysis (ABA): The application of ABA principles, such as Teaching by Discrete Attempts (ETD), has been shown to be effective for teaching specific cognitive skills (e.g., object identification, pairing) and Naturalistic Teaching for the generalization of skills. Positive reinforcement is key to increasing the likelihood of desired behaviors.

Communication Skills Training (PECS, CAA): For children with severe difficulties in verbal communication, AAC systems, including PECS, allow communication by picture exchange, stimulating communicative intentionality and the development of language and cognition. Speech-Generating Devices (FGD) and the use of signs and gestures also promote expression and thought associated with communication.

Cognitive-Behavioral Strategies (Adapted CBT): Although traditional CBT is challenging, adapting its principles for emotional regulation (with visual support) and for the

development of cognitive flexibility (with gradual and supported activities) indirectly contributes to focus and cognitive engagement.

Play-Based Interventions: Play, both structured and functional, is a powerful vehicle for cognitive development, aiding in the acquisition of turn-based skills, sharing, understanding cause and effect, and problem-solving.

5.4 Relevance of Interdisciplinary Collaboration and Continuing Education

The results highlight that the success of interventions for children with ASD Level 3 is directly linked to a collaborative and interdisciplinary approach. The presence of a multidisciplinary team in the school (psychologists, speech therapists, occupational therapists, special educators) or the partnership with external services is essential to offer consulting, training and direct interventions.

Effective and regular communication between school, family, and therapists is essential to align strategies and ensure consistency of interventions across settings. In addition, ongoing teacher training on ASD, adapted teaching strategies, and behavior management is imperative. Family involvement, with guidance and training, is also crucial for the generalization of strategies for the home environment, enhancing the results in the child's cognitive development.

5.5 Persistent Challenges in Effective Implementation

Despite the advances and the recognition of the importance of the school, the results of the review also point to significant challenges that still need to be overcome: The lack of specific and continuing training for teachers to deal with the particularities of ASD Level 3 is a recurring obstacle. The lack of material and human resources (specialized professionals, adapted materials, assistive technologies) is a significant barrier to the implementation of effective interventions.

These results demonstrate the need for continuous and strategic investment so that the school environment can effectively fulfill its role in the cognitive and integral development of children with ASD Level 3.

6. DISCUSSION

The results of the present literature review confirm the irreplaceable role of the school in the cognitive development of children with Autism Spectrum Disorder (ASD) Level 3, as well as the pressing need to integrate evidence-based therapeutic interventions in this environment. The discussion of the findings reveals a potential synergy between education and therapy that, when well articulated, can mitigate the challenges inherent in ASD Level 3 and maximize the learning potential of these children.

Neuroplasticity as a Foundation for Early and Consistent Interventions. Understanding the cognitive profile of children with ASD Level 3, marked by severe deficits in joint attention, executive functions, and communication, is crucial to direct interventions. However, the discussion deepens when considering the concept of neuroplasticity, as emphasized by Klin et al. (2020). This finding is fundamental, as it reinforces that, even in the face of significant impairments, the brain has the capacity to reorganize. This validates the critical importance of early and consistently applied interventions in the school environment. Brain plasticity means that investment in adapted and therapeutic strategies in early childhood and during school can indeed remodel neural circuits, paving the way for cognitive gains previously thought unlikely. The school, being an environment of continuous and systematic exposure, becomes a living laboratory for neurodevelopmental stimulation.

6.1 The Inclusive School as a Structured Therapeutic Environment

The review highlights the school's transition from a mere instructional space to a proactive therapeutic environment. The view of Mantoan (2015), who defends a structured school with resources and multiprofessional support, is corroborated by the results. Evidence points out that structure and predictability (via visual routines and agendas) are not only facilitators of behavioral organization, but also free up the child's cognitive resources, reducing anxiety and allowing greater engagement in learning activities. The individualization of teaching, through IDPs/IEPs, and the use of visual aids emerge as indispensable pedagogical strategies that promote comprehension, communication and, consequently, cognitive development. Curriculum adaptation and a focus on functional skills ensure that learning is relevant and applicable to the child's daily life, solidifying knowledge and promoting autonomy.

6.2 The Synergy between Pedagogical Practices and Therapeutic Interventions

The central discussion lies in the integration of evidence-based therapeutic interventions in the school routine. Applied Behavior Analysis (ABA), in its various forms (Teaching by Discrete Attempts and Naturalistic Teaching), has proven to be a robust methodology for teaching specific cognitive skills and promoting generalization. Its application in school allows the principles of reinforcement and modeling to be used in natural contexts, which is crucial for children with ASD Level 3.

The importance of Alternative and Augmentative Communication (AAC) systems, such as PECS and Speech Generating Devices, cannot be underestimated. For children with severe verbal communication difficulties, AAC is not just a tool for expression; It is a vehicle for cognitive development, stimulating communicative intentionality, concept formation and symbolic language. The school, by incorporating AAC as an integral part of daily communication, validates and strengthens these systems.

Although challenging for Level 3, adapted cognitive-behavioural strategies and play-based interventions complement more structured approaches. Play, in particular, emerges as a powerful tool for the development of cognitive skills in a playful and motivating way, aiding flexibility and problem-solving in social contexts.

6.3 The Imperative of Interdisciplinary Collaboration and Teacher Training

The results of the review reinforce that the success of interventions is directly proportional to the quality of interdisciplinary collaboration. The multidisciplinary team (speech therapists, psychologists, occupational therapists) and effective communication between school, family and therapists are pillars for the consistency of the strategies. Without this collaboration, there is a risk of fragmentation of interventions, which can compromise the generalization and sustainability of cognitive gains.

The continuing education of teachers is pointed out as one of the challenges and, at the same time, one of the greatest needs. It is essential that educators are trained in the particularities of ASD Level 3 and in therapeutic methodologies. Training should not be seen as a cost, but as an investment that enhances inclusion and learning outcomes. Family involvement is also crucial, as the family is the main agent of child development. Supporting and empowering parents so that the strategies are replicated in the home environment expands learning opportunities and the generalization of cognitive skills.

6.4 Persistent Challenges and Future Directions

Despite theoretical and practical advances, the discussion points to persistent challenges. The lack of specific training and the lack of material and human resources are barriers that still need to be overcome so that the potential of inclusion and therapeutic interventions in school is fully explored in the Brazilian context. There is an ongoing need for robust public policies that ensure not only access to, but quality of inclusive education for children with ASD Level 3.

Future research should focus on longitudinal studies that assess the long-term effectiveness of integrated interventions in the school environment, as well as implementation research that investigates the most effective models for teacher training and interdisciplinary collaboration in the Brazilian educational context.

7. FINAL THOUGHTS

Children with ASD level 3 face significant barriers in the development process, but the integrated performance of the school and specialized therapies can promote significant advances. Investment in teacher training, the inclusion of support professionals and articulation with families are essential measures to guarantee the right to education and development of these children.

In short, the school has transformative potential for the cognitive development of children with ASD Level 3. However, this potential will only be fully realized through an ongoing commitment to structure, individualization, therapeutic integration, and robust cross-sectoral collaboration.

BIBLIOGRAPHIC REFERENCES

AMERICAN PSYCHIATRIC ASSOCIATION. Diagnostic and statistical manual of mental disorders: DSM-5. 5. ed. Porto Alegre: Artmed, 2014.

BARDIN, Laurence. Content analysis. São Paulo: Edições 70, 2011.

BRAZIL. National Policy on Special Education in the Perspective of Inclusive Education. Ministry of Education, Secretariat of Special Education. Brasília: MEC/SEESP, 2008.

KLIN, A., Micheletti, M., Klaiman, C., Shultz, S., Constantino, J. N., & Jones, W. (2020). Affording autism an early brain development re-definition. Development and Psychopathology, 32(4), 1175-1189.

MANTOAN, M. T. E. (2015). School inclusion: what is it? Why do it? How to do it?. Summus Editorial.

MINISTRY of Health. ASD: learn what Autism Spectrum Disorder is and how SUS has been assisting patients and families. https://www.gov.br/saude/pt-br/assuntos/noticias/2022/abril/tea-saiba-o-que-e-o-transtorno-do-espectro-autista-e-como-o-sus-tem-dado-assistencia-a-pacientes-e family members#:~:text=O%20TEA%20%C3%A9%20um%20dist%C3%BArbio,quality%20of%20life%20of%20child%C3%A7as.

SILVA, Maria Elenêuda . Federal Institute of Goiás, 2024.**The challenges of the teacher in the inclusion of students with Autism Spectrum Disorder (ASD) in education. https://repositorio.ifgoiano.edu.br/handle/prefix/235**

ALVES, Diogo de Moura , Silva, Ana Flávia Soares da, Seibert, Thalita Nunes Ruy . Multidisciplinary journal of the northeast of Minas Gerais, vol 6, 2024.**The impact of the family-school-therapy triad on the development of autistic children: A case study in Linhares-ES. file:///C:/Users/Educa%C3%A7%C3%A3o/Downloads/1-O+IMPACTO+DA+TR%C3%8DADE+FAM%C3%8DLIA-ESCOLA-TERAPIA+NO+DESENVOLVIMENTO+DE+CRIAN%C3%87AS+AUTISTAS.pdf**

- WEIZENMANN, Luana Stela , Pezzi, Fernanda Aparecida Szareski, Zanon, Regina Basso . article • Psicol. Esc. Educ. 24 • 2020. **School inclusion and autism: Feelings and teaching practices** • https://doi.org/10.1590/2175-35392020217841

THERAPEUTIC support for a student with autism spectrum disorder in an integrated and inclusive school. Evidence-based intervention procedure. Anna Bombińska-Domżał, Published on April 30, 2022 https://consensus.app/papers/therapeutic-support-for-a-student-with-autism-spectrum-bombi%C5%84ska-dom%C5%BCa%C5%82/1a763dbac56052099a0546f3060b19c7/?utm_source=share&utm_medium=clipboard

BEZERRA, D. da S., da Silva, L. G., de Amorim, M. E., & Lopes, C. B. (2023). **The role of the school in the educational process of children with Spectrum Disorder** Autistic .*CONTRIBUTIONS TO THE SOCIAL SCIENCES*,*16*(11), 28978–28993. https://doi.org/10.55905/revconv.16n.11-251

FAGUNDES, Ana Cléia Nascimento; Farias, Cláudia Cristiane Verçosa Simões de; Andrade, Monteiro, Lucianne Oliveira. A **Occupational therapy in the development of children with ASD: Role of the family, school and multidisciplinary team.** Vol. 10 No. 12 (2024): Ibero-American Journal of Humanities, Sciences and Education. https://periodicorease.pro.br/rease/article/view/17342