

Endang Purbaningrum

Universitas Negeri Surabaya (Indonesia)

ORCID: <https://orcid.org/0000-0001-5216-219X>

Khofidotur Rofiah

Pedagogical University of Cracow (Poland)

ORCID: <https://orcid.org/0000-0002-8554-0043>

Nur Fadhilah Tisnawati

Universitas Negeri Surabaya (Indonesia)

ORCID: <https://orcid.org/0000-0002-6048-513X>

Karina Wahyu Dewi

Universitas Negeri Surabaya (Indonesia)

ORCID: <https://orcid.org/0000-0002-9342-0957>

Evidence-Based for Early Intervention Children with Autism Spectrum: A Systematic Literature Review

ABSTRACT: Autism spectrum disorder (ASD) is a complex developmental disorder affecting communication and behavior extensively conducted for research. The systematic literature review aims to provide insight into the latest intervention trends for children with autism between 2011 and 2021 and to identify the main topics discussed in the literature. Ten studies were chosen for analysis using the PRISMA screening method. The findings showed that the primary focus of these studies has been on evidence-based early intervention for social communication, behavior management, and the role of parents and schools in the therapy process. The current review offers significant insights into the present state of knowledge in the field of autism intervention and proposes potential areas for future research.

KEYWORDS: Autism spectrum disorder (ASD), Evidence-based Interventions, Social Communication, Behavior Management, Parent/School involvement.

Kontakt:	Endang Purbaningrum endangpurbaningrum@unesa.ac.id Khofidotur Rofiah khofidotur.rofiah@doktorant.up.krakow.pl Nur Fadhillah Tisnawati nurfadhilahtisnawati@gmail.com Karina Wahyu Dewi karina.wahyudewi@gmail.com
Jak cytować:	Purbaningrum, E., Rofiah, K., Tisnawati, N.F., Dewi, K.W. (2023). Evidence-Based for Early Intervention Children with Autism Spectrum: A Systematic Literature Review. <i>Forum Oświatowe</i> , 36(1), 11–27. https://doi.org/10.34862/fo.2023.1.1
How to cite:	Purbaningrum, E., Rofiah, K., Tisnawati, N.F., Dewi, K.W. (2023). Evidence-Based for Early Intervention Children with Autism Spectrum: A Systematic Literature Review. <i>Forum Oświatowe</i> , 36(1), 11–27. https://doi.org/10.34862/fo.2023.1.1

INTRODUCTION

The lack of agreement on identifying and assessing scientifically reliable and efficient therapies is a major obstacle in implementing Evidence-based methods for individuals with autism spectrum disorder (ASD). Several organizations and frameworks have emerged to provide guidelines for assessing the reliability and effectiveness of therapy to address this issue. The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework, widely employed in healthcare, offers a systematic approach to evaluating research studies. It considers factors such as study design, risk of bias, consistency of results, and precision of estimation.

Another guideline, The Scottish Intercollegiate Guidelines Network (SIGN), is an organization that works collaboratively to create clinical guidelines based on evidence for healthcare professionals in Scotland. Their proper methodology involves systematic literature reviews, critical evaluation of evidence, and expert consensus to ensure the use of scientifically reliable and effective therapies in clinical practice.

By integrating the established frameworks and guidelines with the rigorous criteria specified in the No Child Left Behind Act of 2002 (NCLB), which emphasizes systematic, objective, and peer-reviewed techniques, stakeholders in the autism spectrum disorder (ASD) field can create a thorough and reliable approach in identifying and assessing reliable and effective therapies. This alignment aims to integrate research and practice, promoting evidence-based interventions for individuals with ASD to optimize outcomes.

Scientifically based procedures are validated using “gold standard” study designs, including the random sampling of individuals assigned to control and experimental groups or rigorous single-subject designs with repeated, well-controlled studies. The scientific validation process has faced criticism for its restrictive nature and potential negative impact on ASD research because it may not be applicable in situations in the real world.

The complexity of autism and its diagnosed individuals represent challenges in implementing these criteria to therapy process. Autism is a spectrum disorder characterized by various symptoms and behaviors in diagnosed individuals. The variability poses a challenge in developing a one-size-fits-all approach to therapy. Autistic individuals commonly experience comorbidities like intellectual disability, attention-deficit/hyperactivity disorder, or anxiety, which may affect their response to therapy. The challenges faced in assessing therapy's efficacy in a controlled setting hinder establishing consistent and favorable outcomes.

In this study, the emphasis was on finding the effective interventions for children with autism supported by robust scientific evidence. This paper provides a review of behavioral, cognitive, and educational therapies.

It is essential to review evidence-based best practices for interventions for autistic children. The research questions leading this systematic review are as follows:

1. What are the overall research trends on successful therapies for autistic children based on significant evidence collected worldwide?
2. What are the most prominent feature connected to effective interventions for autistic children based on considerable evidence in the Scopus, Web of Science (WoS), Ebsco, and Google Scholar databases that the previous researchers have addressed?
3. What are the recommendations for future research and studies on successful therapies for autistic children based on significant evidence?

By comprehensively examining and addressing these research questions, this systematic review aims to offer an extensive analysis and understanding of the present state of knowledge regarding evidence-based early intervention for children with autism. The findings and insights derived from this review will be highly valuable for researchers, practitioners, and policymakers involved in autism-related fields. By critically evaluating the existing literature, this review will identify gaps, limitations, and areas that require further investigation. Moreover, it will provide a comprehensive synthesis of the available evidence, highlighting the most effective and promising interventions for autistic children. Based on these findings, this review will present evidence-based recommendations for future research directions, emphasizing the need for rigorous studies, improved methodologies, and innovative approaches in the field of early intervention for autism. Ultimately, the outcomes of this systematic review will contribute to the advancement of knowledge, inform evidence-based practices, and ultimately improve the outcomes and quality of life for children with autism and their families.

RESEARCH METHODOLOGY

Searching Procedure

The literature review followed the PRISMA 2020 guidelines. The study presents a checklist consisting of 27 points and a four-step approach for examining and evaluating the articles (Moher et al., 2010). A systematic literature review (SLR) involves

identifying, selecting, and evaluating appropriate literature to address the research question. The study began by setting criteria and conducting a literature search on teachers' attitudes toward inclusion and psychological predictors in four databases: Web of Science (WoS), Scopus, Ebsco, and Google Scholar. The literature review followed the PRISMA protocol, which involved three phases: identification, screening, and inclusion.

Step 1: Identification

The search was conducted from June to August 2022. From January 2011 to December 2021, the publication of papers was required. The authors established pre-defined inclusion criteria to address the research questions and selected articles as necessary (Table 1).

Table 1. The inclusion and exclusion research criteria

Inclusion criteria	Exclusion criteria
<ol style="list-style-type: none"> 1. Articles published in English 2. Articles published in scientific journal 3. Articles published between January 2011 and December 2021 4. Articles focused on early intervention for autistic children 5. Articles were in empirical research 6. Article were focused on behavioral, cognitive, and educational therapies. 	<ol style="list-style-type: none"> 1. Articles were not published in English 2. Conference paper, Book, Book chapter, Review 3. Articles were not published between January 2007 and December 2021 4. Articles were not focused on early intervention for autistic children 5. Articles were not in empirical research 6. Article were not focused on behavioral, cognitive, and educational therapies.

All articles were accepted to ensure comprehensive ones, except for a small number that did not meet specified requirements. The criteria were considered essential for the research. The search for articles was performed using the Scopus database, which uses the following keywords: TITLE-ABS-KEY (autism AND early AND intervention) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015) OR LIMIT-TO (PUBYEAR, 2014) OR LIMIT-TO (PUBYEAR, 2013) OR LIMIT-TO (PUBYEAR, 2012) OR LIMIT-TO (PUBYEAR, 2011) AND (LIMIT-TO (PUBSTAGE, "final")).

Step 2. screening

We utilized Scopus, WoS, Ebsco, and Google Scholar to conduct a search across four databases, and the outcomes were obtained in the RIS format. Subsequently, the papers were exported to the Rayyan online application, which is a convenient and complimentary tool for efficiently reviewing abstracts and titles following the literature assessment process (Ouzzani et al., 2016). The combined results from the four databases yielded a total of 782 articles. Among these, 279 publications underwent a meticulous evaluation of their titles and abstracts by two independent reviewers

to determine if they met the inclusion criteria, after removing duplicates using the Rayyan web tool. Finally, 10 significant articles that focused on autism, education, and evidence-based early intervention were selected.

Step 3. included

We assessed the suitability of 79 complete publications to determine their eligibility. The primary reason for excluding research articles was their excessive focus on medical aspects. Eventually, a total of 10 articles were reviewed (Figure 1). These ten articles were selected for inclusion based on the predefined inclusion criteria.

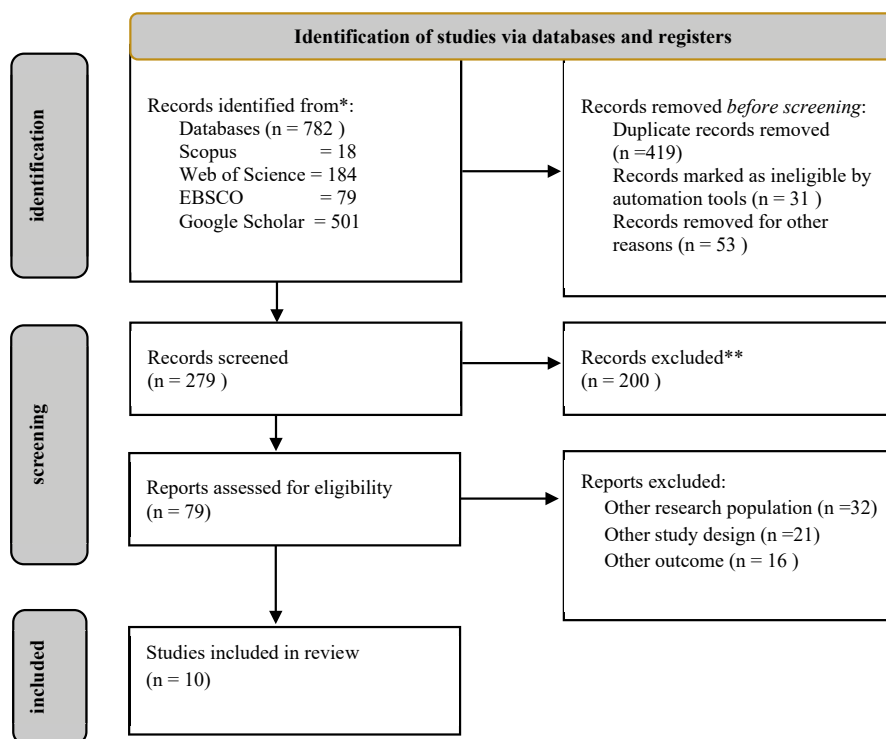


Figure 1. The systematic literature review process based on PRISMA

RESULTS OF RESEARCH

Between 2011 and 2021, a total of 782 articles were identified across four databases: Scopus (n=18), Web of Science (n=184), Google Scholar (n=501), and EBSCO (n=79). Our search used relevant keywords to identify best practices in interventions for children with autism. Duplicate articles were removed, resulting in a remaining

set of 279 unique articles. Next, we proceeded to review the titles and abstracts of these articles, excluding 200 articles that did not meet the inclusion criteria. Furthermore, 69 publications were omitted because they focused on different study populations and were irrelevant to our specific research focus. Ultimately, a selection of 10 articles was made based on the predefined inclusion and exclusion criteria.

After conducting a thorough analysis of the selected articles, three primary themes emerged. These themes will be extensively examined and analyzed in the discussion section of this paper. The first theme, referred to as Social-Communication, encompasses interventions and strategies aimed at enhancing the social and communicative abilities of children with autism. It explores various aspects such as improving social skills, facilitating effective communication, and fostering interaction with peers and caregivers. The second theme, known as Multidisciplinary, focuses on the collaborative and comprehensive nature of evidence-based early intervention programs. It highlights the importance of involving professionals from diverse disciplines, such as speech therapists, occupational therapists, psychologists, and educators, to address the multifaceted needs of autistic children.

The third theme, titled Parent and School Involvement, underscores the pivotal roles played by parents and educational institutions in the successful implementation of evidence-based early intervention. It delves into the significance of parental engagement, support, and empowerment, as well as the collaboration between parents and schools to create inclusive and supportive learning environments for children with autism. These three themes, derived from a meticulous analysis of the selected articles, will be thoroughly explored and discussed in the dedicated discussion section of this paper. To gain a comprehensive overview of these themes and their subtopics, please refer to Table 2. The detailed articles included in the systematic literature review can be seen in Table 3

Table 2. The number of articles themes related to evidence-based early intervention in autism taken from WoS, SCOPUS, Ebsco, and Google Scholar databases.

Articles themes	Number of articles
Social-Communication	3 Articles
Multidisciplinary	2 Articles
Parent And School Involvement	5 Articles
Total Number of articles	10 Articles

Table 3. Articles included in the systematic analysis of the literature review

No	Reseachers & Date	Country	Articles titles
1	Brian Barger, Catherine Rice, Rebecca Wolf, Andrew Roach (January 2018)	USA	Better together: Developmental screening and monitoring best identify children who need early intervention
2	Jessica R. Dykstra Steinbrenner, Linda R. Watson, Brian A. Boyd, Kaitlyn P. Wilson, Elizabeth R. Crais, Grace T. Baranek, Michelle Flippin, and Sally Flagler (2015)	USA	Developing Feasible and Effective School-Based Interventions for Children With ASD: A Case Study of the Iterative Development Process
3	Amanda Gulsrud, Themba Carr, Justin Williams, Jonathan Panganiban, Felica Jones, Jackie Kimbrough, Wendy Shih, and Connie Kasari (May 2019)	Los Angeles, California	Developmental Screening and Early Intervention in a Childcare Setting for Young Children At Risk for Autism and Other Developmental Delays: A Feasibility Trial
4	Tran Van Cong, Bahr Weiss, Khuc Nang Toan, Tran Thi Le Thu, Nguyen Thi Nha Trang, Nguyen Thi Kim Hoa, and Dao Thi Thu Thuy (2015)	Vietnam	Early identification and intervention services for children with autism in Vietnam
5	Miranda Stephens, Penny Allen, Kathryn Fordyce, Alice Minchin & Colleen Cheek (23 Mar 2016)	Australia	Early intervention for children with autism: An Australian rural hub and spokes model
6	Jane Lidstone, Mirko Uljarević, Hilary Kanaris, Julie Mullis, Laura Fasoli and Susan Leekam (February 03, 2014)	United Kingdom	Imitating the Child with Autism: A Strategy for Early Intervention?
7	Katherine E. Severini, MS, Jennifer R. Ledford, PhD, Erin E. Barton, PhD, and Kirsten C. Osborne, Med (2018)	Southeastern, United States	Implementing Stay-Play-Talk With Children Who Use AAC
8	Robert L. Koegel, Jessica L. Bradshaw, Kristen Ashbaugh, Lynn Kern Koegel (7 September 2013)	USA	Improving Question-Asking Initiations in Young Children with Autism Using Pivotal Response Treatment
9	Leonardo Favaa, Kristin Straussa (16 May 2014)	Italy	Response to Early Intensive Behavioral Intervention for autism—An umbrella approach to issues critical to treatment individualization
10	Amy L. Donaldson and Aubyn C. Stahmer (July 30, 2014)	State of Oregon, USA	Team Collaboration: The Use of Behavior Principles for Serving Students With ASD

the Voyant tool. The corpus shows a high frequency of the following words: “children” (660), “intervention” (656), “autism” (574), “child” (514), and “social” (402).

The Voyant toolkit uses the Trend tool, a data visualization method that shows the frequency of phrases throughout the paper corpus. The tool helped the researcher identify keyword trends related to teachers’ attitudes toward inclusion in all aspects. Figure 3. shows a trend graph indicating that nearly ten articles addressed interventions for children with autism, with varying degrees of emphasis on each topic.

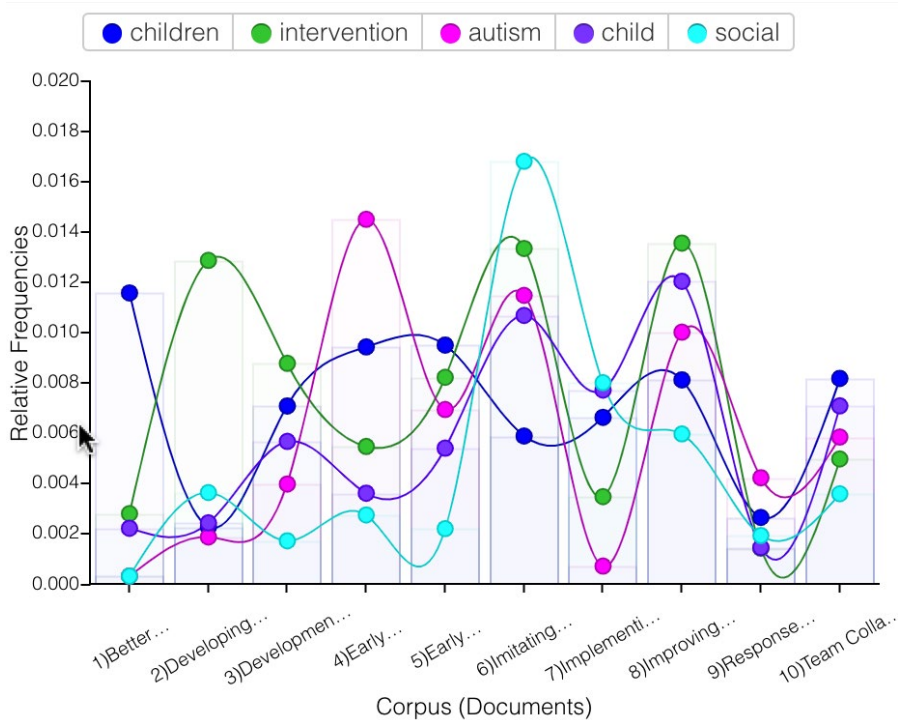


Figure 3. Trend graph of the corpus associated with the top five aspects

DISCUSSION

Social-communication

Through systematic enrichment of relevant articles, we identified similarities in research relating to monitoring early intervention and recognizing early childhood autism using similar methods to identify potential categories of affected children. Then, 2 of 3 articles on social communication focus on the importance of attentively observing the introductory and monitoring phases during early childhood before implementing any intervention. Deviation from the recommended screening and

assessment procedures, which involve psychology professionals prior to early intervention, can significantly impact the effectiveness of early intervention for autistic children, even when using a social communication approach like the applied behavior analysis (ABA) method in California. The result was no significant improvement compared to the whole process that went through the previous screening and assessment (Williams et al., 2021).

Studies on autistic children aged 8 months to 3 years have shown that early identification, screening, and monitoring of social communication development can improve the effectiveness of early intervention. This study used qualitative methods to assess the effectiveness of interventions aimed at improving social communication skills in autistic children and was conducted in America (Barger et al., 2018), and examined the natural conditions of the intervention process and its monitoring. Studies on autistic children often examine their social skills and recommend early intervention through naturalistic approaches and antecedent-based strategies, as supported by evidence-based studies (Leaf et al., 2021).

Institutions with authority to provide early intervention prioritize interventions to improve social communication in autistic children. However, interventions addressing four other aspects of autism are also recognized and implemented in practice. Nevertheless, specific exercises are used to improve social communication skills. Here, toys can be utilized as means to investigate language development and attention in children during play. Children can improve their functional language use in real-life situations through this intervention. Effective early interventions require technology that can support social communication (Zervogianni et al., 2020).

The result of the study showed that early intervention through games or play positively impacts children's social communication skills with their surroundings, including teachers, peers, and adults. The Advancing Social-Communication and Play (ASAP) method, implemented in schools using a modified curriculum that includes natural play, has improved children's social communication skills and attention during the intervention (Dykstra Steinbrenner et al., 2015). Natural play interventions enhance children's social communication skills during assessments. The JASPER intervention (Gulsrud et al., 2019) provides play and social communication in a practical setting.

The Stay Play Talk intervention was found to improve stay-and-play behavior, thereby promoting social interaction among individuals with autism and their peers (Severini et al., 2019). Pivotal Response Therapy has demonstrated efficacy in improving social initiation skills among children diagnosed with autism (Koegel et al., 2014). The intervention led to an increase in targeted questioning among three research participants. Pivotal Response Therapy has a notable effect on communication abilities. Imitative interventions in children did not result in a significant change in their social attention (Leekam, 2014). Research suggests that evidence-based early intervention is the optimal approach for autistic children, with social communication being a primary concern for parents, as opposed to behavior (Ghanadzade et al., 2018).

A MULTIDISCIPLINARY APPROACH TO CHILD'S BEHAVIOR

The early intervention process for children with autism requires a diversity of opinions, with the method of including various groups being one option that can lead to better early intervention. Because of problems in social communication and bad behavior in children, early intervention is required to improve and educate autistic children so that they have good behavior control. Children's self-development and early intervention procedures cannot be carried out by a single area alone but require collaboration in fields linked to these features of children with autism.

The article review shows that the important improvement in children's behavior resulted from the involvement of multiple parties in the early intervention process. Two articles discuss early intervention for autistic children's behavior. The first study suggests that caregivers who provide early intervention after screening and with intervention modules can significantly improve children's social behavior and communication. The intervention process involving caregivers, parents, and institutions in Vietnam can facilitate the positive development of children's behavior, despite the presence of maladaptive behaviors (Tran et al., 2015).

Another article shows that successful early intervention requires a multidisciplinary approach to guide the process effectively. A comprehensive research study conducted in Australia examined various interventions for autistic children and found that behavioral development increased more than social communication and other aspects. The observed differences in results are attributed exclusively to demographic variations resulting from the intervention process implemented in both urban and rural areas. However, the impact of this intervention is limited due to the involvement of a limited number of institutions in providing early intervention services (Stephens et al., 2016).

A collaborative multidisciplinary approach involving parents, educators, medical and psychological professionals is used to assess the relationship between the child and relevant individuals. Early intervention is then provided through collaborative methods, using the Prevent Teach Reinforce approach as a comprehensive strategy for children with autism. The study in France produced results regarding the efficacy of this approach on children's behavior and the effectiveness of the collaborative effort in providing early intervention for autistic children (Rivard et al., 2021).

Early intervention in children with autism is essential for their subsequent development. However, the effectiveness of such intervention can be influenced by the prompt identification of the child's condition by parents and effective collaboration between parents and professionals. Another article shows that SLPs and behavior analysts are essential members of school-based teams that fulfill to children with autism (Donaldson & Stahmer, 2014).

Collaboration can lead to better outcomes for children with autism who are served in schools by improving the developmental appropriateness of communication goals and instructions, addressing the functional use of these skills, increasing the use of evidence-based strategies, and improving challenging behaviors. Knowing

each professional's basic areas of knowledge, clinical abilities, and goals helps improve teamwork and, ultimately, child outcomes (Donaldson & Stahmer, 2014). The main determining factor is parental attention and professional access to early intervention services for children (Bejarano-Martín et al., 2020).

Collaborative program planning and integration can improve parent-professional relationships and lead to successful therapy adapted to the child's needs. This requires parent training and family support tailored to the parents' needs and involving parents in therapy provision. The goal is to transfer positive behavior results into community settings (Fava & Strauss, 2014). However, several things in the process of giving interventions are not effective enough if done in social conditions, so it is recommended to carry out interventions with their parents and in an individual program (Reichow & Barton, 2014).

PARENT AND SCHOOL INVOLVEMENT IN EARLY INTERVENTION

The first people with a significant role and obligation to their children are their parents. Parents dedicate more time to childcare activities. Parents can identify indicators of autism far before it is diagnosed, with a significant minority reporting a first alarm in the first year of life (Gulsrud et al., 2019b). They can identify whether the child is experiencing delays or not, and then they bring their children to a professional for a diagnosis. Collaborative program planning and integration may reinforce parent-professional relationships and improve therapy outcomes for children. This involves tailoring parent training and family support to meet individual needs and including parents in the intervention process to facilitate positive behavior outcomes in community settings (Fava & Strauss, 2014).

Parental participation is a crucial aspect of ongoing therapy for children, as they tend to interact more frequently with their parents at home and share a close emotional bond with them. This makes parental assistance an essential component following the implementation of other interventions. Active and regular participation of children and parents is positively associated with greater developmental progress (Ramey & Ramey, 1998). High-intensive programs that include parents in therapy are most effective for adaptive behavior change (Strauss et al., 2013). Similarly, active parent involvement and a child-oriented teaching style fostering self-initiation in sessions targeting play and social interaction led to more functional play, peer proximity, and social interaction overtures from the target child than a highly structured adult-directed teaching style in sessions where parents were excluded from active participation (Strauss et al., 2014).

Early intervention activities involving schools are crucial, particularly during the preschool and elementary school years. Teachers can conduct early identification and screening for symptoms of autism. Schools may implement specialized programs as a school-based intervention for children with autism. Early intervention services can enhance communication skills and behavior in low-income children. ASAP interventions implemented in school settings can enhance joint attention and symbolic

play skills, leading to improved social communication skills (Dykstra Steinbrenner et al., 2015).

A study has shown that school-based interventions can enhance social interaction among children with disabilities. SPT interventions have been found to enhance the social behaviors of preschool peers towards children with disabilities (Severini et al., 2019). School-based interventions may involve collaboration with professionals as a team. SLPs and behavior analysts serve as essential team members in schools that cater to children with ASD (Donaldson & Stahmer, 2014). Behavior analysts use ABA as a framework for assessment and intervention. A school-based intervention can assist low-income, low-resourced, and ethnically diverse populations in a metropolitan area's childcare system to provide early intervention services for their children without additional expenses. Early intervention is implemented concurrently in educational settings, such as schools or childcare centers, for preschool-aged children to prevent the need for supplementary services. The Blue School in Australia implements the following practices. Blue School provides early intervention and family support using a flexible hub and spokes model that accommodates families' needs and geographical limitations (Stephens et al., 2016).

Children attending Blue School were experiencing improvements in some of the assessed outcome measures. These outcomes were similar for children receiving autism-specific early intervention delivered in the Blue School regional hub and children receiving autism-specific early intervention at Blue School-supported satellite centers. Similar results were found in an urban low-income community preschool setting where teaching assistants were taught the JASPER intervention (Shire et al., 2017). Solutions and initiatives for developing a school-based intervention for children with autism spectrum disorder need to be implemented to support the activities of children with autism in the classroom. Parents will be optimistic about raising their children with school-based intervention.

CONCLUSION

Early intervention for autistic children significantly impacts educational practices and many development elements in social communication, behavior, language, and mobility. The objective of early intervention for children with autism is social concerns, focusing on the significance of parents and schools participating in evidence-based early intervention programs. This significant influence is related to intervention providers' misconceptions and practices, as determined by evidence-based studies, indicating a relationship between practices that are not in accordance with the basis of early intervention and the developmental effects in children.

REFERENCE

- Barger, B., Rice, C., Wolf, R., & Roach, A. (2018). Better together: Developmental screening and monitoring best identify children who need early intervention. *Disability and Health Journal*, 11(3), 420–426. <https://doi.org/10.1016/j.dhjo.2018.01.002>
- Bejarano-Martín, Á., Canal-Bedia, R., Magán-Maganto, M., Fernández-Álvarez, C., Cilleros-Martín, M. V., Sánchez-Gómez, M. C., García-Primo, P., Rose-Sweeney, M., Boilson, A., Linertová, R., Roeyers, H., Van der Paelt, S., Schendel, D., Warberg, C., Cramer, S., Narzisi, A., Muratori, F., Scattoni, M. L., Moilanen, I., ... Posada de la Paz, M. (2020). Early Detection, Diagnosis and Intervention Services for Young Children with Autism Spectrum Disorder in the European Union (ASDEU): Family and Professional Perspectives. *Journal of Autism and Developmental Disorders*, 50(9), 3380–3394. <https://doi.org/10.1007/s10803-019-04253-0>
- Dykstra Steinbrenner, J. R., Watson, L. R., Boyd, B. A., Wilson, K. P., Crais, E. R., Baranek, G. T., Flippin, M., & Flagler, S. (2015). Developing Feasible and Effective School-Based Interventions for Children With ASD: A Case Study of the Iterative Development Process. *Journal of Early Intervention*, 37(1), 23–43. <https://doi.org/10.1177/1053815115588827>
- Fava, L., & Strauss, K. (2014). Response to Early Intensive Behavioral Intervention for autism-An umbrella approach to issues critical to therapy individualization. *International Journal of Developmental Neuroscience*, 39(C), 49–58. <https://doi.org/10.1016/j.ijdevneu.2014.05.004>
- Ghanadzade, M., Waltz, M., & Ragi, T. (2018). The intervention priorities of parents of children with autism spectrum disorders in Iran. *Research in Autism Spectrum Disorders*, 55(March), 14–24. <https://doi.org/10.1016/j.rasd.2018.08.002>
- Gulsrud, A., Carr, T., Williams, J., Panganiban, J., Jones, F., Kimbrough, J., Shih, W., & Kasari, C. (2019a). Developmental screening and early intervention in a child-care setting for young children at risk for autism and other developmental delays: A feasibility trial. *Autism Research*, 12(9), 1423–1433. <https://doi.org/10.1002/aur.2160>
- Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ*. 2008 Apr 26;336(7650):924-6
- Koegel, R. L., Bradshaw, J. L., Ashbaugh, K., & Koegel, L. K. (2014). Improving question-asking initiations in young children with autism using pivotal response therapy. *Journal of Autism and Developmental Disorders*, 44(4), 816–827. <https://doi.org/10.1007/s10803-013-1932-6>
- Leaf, J. B., Sato, S. K., Javed, A., Arthur, S. M., Creem, A. N., Cihon, J. H., Ferguson, J. L., & Oppenheim-Leaf, M. L. (2021). The evidence-based practices for children, youth, and young adults with autism report: Concerns and critiques. *Behavioral Interventions*, 36(2), 457–472. <https://doi.org/10.1002/bin.1771>

- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2010). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *International Journal of Surgery*, 8(5), 336-341. <https://doi.org/10.1016/j.ijisu.2010.02.007>
- No Child Left Behind Act of 2001, PL 107-110, 20 USC § 6319 (2002)
- Ouzzani, M., Hammady, H., Fedorowicz, Z. et al. (2016) Rayyan—a web and mobile app for systematic reviews. *Syst Rev* 5, 210. <https://doi.org/10.1186/s13643-016-0384-4>
- Paynter, J., Luskin, S., Deb, S., Kathryn, K., Grace, F., Christine, F., Miller, S., Sutherland, R., Trembath, D., Tucker, M., & Ecker, U. (2020). Brief Report : Perceived Evidence and Use of Autism Intervention Strategies in Early Intervention Providers. *Journal of Autism and Developmental Disorders*, 50(3), 1088–1094. <https://doi.org/10.1007/s10803-019-04332-2>
- Ramey, C. T., & Ramey, S. L. (1998). Early Intervention and Early Experience. *American Psychologist*, 53(2), 109–120. <https://doi.org/10.1037/0003-066X.53.2.109>
- Reichow, B., & Barton, E. E. (2014). Evidence-based psychosocial interventions for individuals with autism spectrum disorders. In *Handbook of Autism and Pervasive Developmental Disorders* (4th ed., pp. 969–992).
- Rivard, M., Mello, C., Mestari, Z., Terroux, A., Morin, D., & Forget, J. (2021). *Using Prevent Teach Reinforce for Young Children to Manage Challenging Behaviors in Public Specialized Early Intervention Services for Autism*. 3970–3988.
- Severini, K. E., Ledford, J. R., Barton, E. E., & Osborne, K. C. (2019). Implementing Stay-Play-Talk With Children Who Use AAC. *Topics in Early Childhood Special Education*, 38(4), 220–233. <https://doi.org/10.1177/0271121418776091>
- Shire, S. Y., Chang, Y. C., Shih, W., Bracaglia, S., Kodjoe, M., & Kasari, C. (2017). Hybrid implementation model of community-partnered early intervention for toddlers with autism: a randomized trial. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 58(5), 612–622. <https://doi.org/10.1111/jcpp.12672>
- Stephens, M., Allen, P., Fordyce, K., Minchin, A., & Cheek, C. (2016). Early intervention for children with autism: An Australian rural hub and spokes model. *Research and Practice in Intellectual and Developmental Disabilities*, 3(1), 71–84. <https://doi.org/10.1080/23297018.2016.1152501>
- Strauss, K., Esposito, M., Polidori, G., Vicari, S., Valeri, G., & Fava, L. (2014). Facilitating play, peer engagement and social functioning in a peer group of young autistic children: Comparing highly structured and more flexible behavioral approaches. *Research in Autism Spectrum Disorders*, 8(4), 413–423. <https://doi.org/10.1016/j.rasd.2014.01.002>
- Strauss, K., Mancini, F., & Fava, L. (2013). Parent inclusion in early intensive behavior interventions for young children with ASD: A synthesis of meta-analyses from 2009 to 2011. *Research in Developmental Disabilities*, 34(9), 2967–2985. <https://doi.org/10.1016/j.ridd.2013.06.007>
- Susan Leekam, J. L. (2014). Imitating the Child with Autism: A Strategy for Early Intervention? *Autism-Open Access*, 04(01), 1–4. <https://doi.org/10.4172/2165-7890.1000124>

- Tran, C. Van, Weiss, B., Khuc, T. N., Tran, T. T. Le, Nguyen, T. T. N., Nguyen, H. T. K., & Dao, T. T. T. (2015). Early identification and intervention services for children with autism in Vietnam. *Health Psychology Report*, 3(3), 191–200. <https://doi.org/10.5114/hpr.2015.53125>
- Vivanti, G. (2022). What does it mean for an autism intervention to be evidence-based? *Autism Research*, 15(10), 1787–1793. <https://doi.org/10.1002/aur.2792>
- Williams, M. E., Harley, E. K., Quebles, I., & Kanne, M. (2021). Policy and Practice Barriers to Early Identification of Autism Spectrum Disorder in the California Early Intervention System. *Journal of Autism and Developmental Disorders*, 51(10), 3423–3431. <https://doi.org/10.1007/s10803-020-04807-7>
- Zervogianni, V., Fletcher-Watson, S., Herrera, G., Goodwin, M., Pérez-Fuster, P., Brosnan, M., & Grynszpan, O. (2020). A framework of evidence-based practice for digital support, co-developed with and for the autism community. *Autism*, 24(6), 1411–1422. <https://doi.org/10.1177/1362361319898331>

WCZESNA INTERWENCJA U DZIECI Z AUTYZMEM OPARTA NA DOWODACH. SYSTEMATYCZNY PRZEGLĄD LITERATURY.

ABSTRAKT: Zaburzenie ze spektrum autyzmu (ASD) jest szeroko badanym, złożonym zaburzeniem rozwojowym wpływającym na komunikację i zachowanie. Systematyczny przegląd literatury ma na celu zapewnienie wglądu w najnowsze trendy wczesnej interwencji u dzieci z autyzmem w latach 2011-2021 oraz zidentyfikowanie głównych tematów omawianych w literaturze. Do analizy przy użyciu metody przesiewowej PRISMA zostało wybranych dziesięć badań. Wyniki wykazały, że prace te koncentrowały się głównie na opartej na dowodach wczesnej interwencji w zakresie komunikacji społecznej, kontroli zachowania oraz roli rodziców i szkół w procesie terapeutycznym. Obecny przegląd oferuje znaczący dostęp do aktualnego stanu wiedzy z zakresu wczesnej interwencji w przypadkach autyzmu i określa potencjalne obszary przyszłych badań.

SŁOWA KLUCZOWE: zaburzenie ze spektrum autyzmu (ASD), Interwencja oparta na dowodach, komunikacja społeczna, kontrola zachowania, zaangażowanie rodziców/szkoły